

Search history

Search 1: TAC=(closure) and IC=B65D and FT=((band or belt) and cap and (container* or bottle*)) (Results 4199)

Search 2: (1) and FT=sleeve (Results 767)

Search 3: TAC=((tamper W2 evident) or secur*) and closure) and FT=B65D and FT=(sleeve and cap and band) (Results 12)

Search 4: TAC=(tamper and evident and closure) and IC=B65D (Results 1721)

Search 5: (4) and FT=(ratchet) (Results 179)

Search 6: (4) and FT=((band or belt) W3 (remov* or detach*)) (Results 207)

Search 7: (6) and FT=(sleeve) (Results 27)

Search 8: (4) and FT=(sleeve and (weak* W3 lin*)) (Results 80)

- session log created:04 December 2017 19:54:46

- Update information:

PatBase Coverage at Update 2017 Week 48 (Year 2017 Week 48)

PatBase Coverage includes 100+ million documents from over 100 patent-issuing authorities and includes patent applications, granted patents, utility models and designs – detailed in the below coverage listings.

Major countries

Publishing body	Document type	Bibliographic publication date		Full-Text publication date	
		Earliest	Latest	Earliest	Latest
CN China	Patent Applications	19850910	20171201	19850910	20171201
	Patents	19930106	20171201	19930106	20171201
	Utility Model Applications	19850409	19921230	19850409	19921230
	Utility Models	19930106	20171201	19930106	20171201
	Designs	19850910	20171201	19850910	20150819
DE Germany	Patent Applications	19211221	20171130	19650317	20171130
	Patents	18770101	20171130	19200113	20171130
	Utility Models	19280626	20171130	19610831	20171130
	EP/WO Patents	19871217	20140410		
EP European Patent Office	Patent Applications	19781220	20171129	19781220	20171129
	Patents	19800109	20171129	19800109	20171129
FR France	Patent Applications	19690307	20171201	19810102	20171110
	Patents	18550227	20171201	19600502	20171201
	Utility Model Applications	19720107	20171201	19800104	20171110
	Utility Models	19730112	20171201	19690802	20171201

GB United Kingdom	Unpublished Patent Applications	19830209	20171122		
	Patent Applications	19790104	20171129	19790104	20171108
	Patents	17820704	20171129	19020911	19811216
JP Japan	Patent Applications	19710116	20171130	19930108	20171124
	Patents	19281026	20171115	19960529	20171115
	Utility Model Applications	19710723	20060209	19990817	20031107
	Utility Models	19640805	19960329		
	Registered Utility Models	19940726	20171116	19940726	20101216
	Designs	20141110	20171127		
KR Republic of Korea	Patent Applications	19781209	20171201	19801010	20171201
	Patents	19700820	20171201	19770628	20171201
	Utility Model Applications	19781127	20171201	19940730	20171201
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US United States of America	Patent Applications	20010315	20171130	20010315	20171130
	Patents	18360101	20171128	18560617	20171128
	Designs	18650912	20171128	19770719	20171128
WO World Intellectual Property Organization (WIPO)	Patent Applications	19781019	20171130	19781019	20171130
	Designs	20151023	20171201	20151023	20171201

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- Login to Patbase:04 December 2017 19:54:46
- **search:** SS1 TAC=(closure) and IC=B65D and FT=((band or belt) and cap and (container* or bottle*)) (Results 4199)
- List: SS1 1–50 (TAC=(closure) and IC=B65D and FT=((band or belt) and cap and (container* or bottle*))) (Results 4199)

0) US2010288060A – DEVICE FOR SAMPLING A SPECIMEN CONTAINER

1) Family number: 47633990 (US2010288060A)

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Title: DEVICE FOR SAMPLING A SPECIMEN CONTAINER

Priority: CN201080031707 20100514 CN201080031708 20100514 JP20120511054 20100514
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Family:

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A47B81/00 B01F11/00 B01F15/00 B01F15/06 B32B5/02 B65D85/00 B65G47/04 B65G49/00 C12M1/00 C12M1/02 C12M1/26 C12M1/34 C12M3/00 C12N1/00 C12Q1/00 C12Q1/02 C12Q1/04 C12Q1/06 C12Q1/24 G01N1/00 G01N1/12 G01N21/27 G01N21/64 G01N21/65 G01N33/48 G01N33/50 G01N35/00 G01N35/02 G01N35/04 G01N35/10 G06F17/00 G06F19/00 (Advanced/Invention);
G01N35/04 G01N35/10 (Advanced/Non-invention);

C12M1/00 C12M3/00 G01N35/00 (Core/Invention)

CPC:

C12Q1/24 Y10S901/30 C12M41/36 G01N2035/00148 G01N2035/0406 G01N2035/0453
G01N35/0099 G01N35/1079 G01N35/00603 C12Q1/02 G01N35/04 G01N2035/00356
G01N2035/0465 C12Q1/04 C12M3/00 C12Q1/00 G01N33/48 G01N35/10

European class:

C12Q1/04 G01N35/00R S01N35/00C7C S01N35/04A2 S01N35/04B7 S01N35/10P

US class:

1/1 206/486 206/486S 235/375 235/375S 248/346.03 248/346.030S 366/142 366/142S
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Abstract:

Source: US2010288060A A sampling device for a specimen container having a closure sealing the interior of the specimen container from the environment includes a needle, a body coupled to the needle and defining a chamber in fluid communication with the needle, the body further comprising a port forming an opening in the body, the port in fluid communication with the chamber. A multitude of the sampling devices may be stored in a cassette. The sampling devices may include a second chamber for separation and concentration of a microbial agent present in a sample. In this configuration second chamber is connected to the first chamber via a valve or the like.

2) Family number: 44044059 (US2011061764A)

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Title: FLUID TRANSFER ASSEMBLY AND METHODS OF FLUID TRANSFER

Priority: AU20090249194 20090519 AU20110206946 20110809 CN200980128499 20090519
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Family:

Publication number	Publication date	Application number	Application date
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Inventor(s): SPRINGER JOSHUA INDIANAPOLIS ; SPRINGER JOSHUAUS ; SPRINGER JOSH INDIANAPOLIS

Agent(s): SPRUSON AND FERGUSON; SMART AND BIGGAR; NORTON ROSE CANADA SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; HOFFMANN EITLE PATENT U RECHTSANWAELE PARTMBB; HOFFMANN EITLE; FUSTER GUSTAVO NICOLAS; KAWAGUTI AND PARTNERS; HOSHINO OSAMU; ONO SHINJIRO; TOMITA HIROYUKI; KOBAYASHI YASUSHI; MIYAMAE TORU; YAMAMOTO OSAMU; TAKEUCHI SHIGEO; SAKUMA SHIGERU; RUTAN AND TUCKER LLP; WIGHT TODD W

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [A47G19/22](#) [A47J31/41](#) [A61J1/10](#) [A61J1/14](#) [A61M39/00](#) [B65B1/04](#) [B65B3/04](#) [B65B3/12](#) [B65B3/22](#) [B65D](#) [B65D1/06](#) [B65D1/20](#) [B65D1/26](#) [B65D25/02](#) [B65D25/20](#) [B65D25/40](#) [B65D25/42](#) [B65D3/26](#) [B65D41/02](#) [B65D83/00](#) [B67B](#) [B67B1/10](#) [B67C3/00](#) [B67C3/02](#) [B67C3/22](#) [B67C3/26](#) [B67D1/00](#) [B67D1/04](#) [B67D1/06](#) [B67D1/07](#) [B67D1/08](#) [B67D1/12](#) [B67D1/14](#) [B67D3/00](#) [B67D7/08](#) [F16K](#) [F16K1/00](#) [F16K21/04](#) [F16K27/07](#) [F16K31/02](#) [F16K31/06](#) [F16K31/08](#) [F16K31/10](#) [F21V33/00](#) (Advanced/Invention); [B65B3/04](#) [B67D1/00](#) [B67D1/14](#) [F21K9/00](#) [F21K99/00](#) [G09F23/00](#) (Advanced/Non-invention); [B65B3/04](#) (Core/Invention); [A47G](#) [B65B](#) [B65D](#) [B67D](#) (Subclass/Invention)

CPC: [A47G19/2255](#) [B65D25/20](#) [F16K31/10](#) [B67D1/0007](#) [B67D1/0085](#) [B67D1/07](#) [B67D1/0877](#) [B67D1/0894](#) [B67D1/1236](#) [B67D1/124](#) [B67D1/1272](#) [B67D2001/1483](#) [B65D41/02](#) [B65D1/06](#) [Y10T137/7786](#) [B67C3/007](#) [B67C2003/2671](#) [B67D1/0888](#) [B67C3/264](#) [B67D1/0081](#) [B67D2210/00065](#) [F16K27/07](#) [A47G19/2205](#) [B67D1/06](#) [F16K31/084](#) [Y10T29/49826](#) [B67B1/10](#)

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US class: [1/1](#) [137/499](#) [141/1](#) [141/113](#) [141/113S](#) [141/1P](#) [141/2](#) [141/301](#) [141/349](#) [141/356](#) [141/383](#) [141/94](#) [206/459.5](#) [215/2](#) [220/230](#) [220/601](#) [222/1](#) [222/1P](#) [222/23](#) [222/23S](#) [251/129.01](#) [251/129.15](#) [251/129.150S](#) [251/129.2](#) [29/428](#)

[Classification Explorer](#)

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Abstract:

Source: US2011061764A A fluid transfer assembly and methods of fluid transfer is described. In one aspect, the fluid transfer assembly includes a fluid container having an opening in a bottom, a coupling device attached to the fluid container at the opening, and a filling device. The coupling device may include a valve biasing the coupling device in a closed fluid-tight position via magnetic attraction of opposing first and second components, each of the opposing first and second components including a magnetic material. The filling device may include a rigid member with a perimeter smaller than a perimeter of the fluid container opening, the rigid member including a passage along a longitudinal axis and one or more apertures through a sidewall in fluid communication with the passage, such that the coupling device is transitioned from the closed fluid-tight position to an open position by pressing the rigid member against one of the opposing first and second components, thereby placing the apertures in fluid communication with an interior of the fluid container.

3) Family number: 43360506 (US2009145163A)

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Title: METHODS OF MANUFACTURING TEMPERATURE-STABILIZED STORAGE CONTAINERS

Priority: CN201180016103 20110208 CN201480023041 20140327 US20070001757 20071211
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Family:

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A47G19/22 A47J39/00 A47J41/00 A61B19/00 A61B19/02 A61J1/00 A61J1/16 B01L9/06 B23P11/00 B29D22/00 B29D31/00 B31B41/00 B32B1/02 B32B1/08 B32B3/02 B32B3/10 B32B3/26 B32B5/00 B32B9/00 B32B9/04 B65B1/04 B65B11/00 B65B3/02 B65B31/02 B65B31/04 B65B41/18 B65B43/00 B65B63/08 B65D1/24 B65D1/36 B65D21/00 B65D21/02 B65D25/04 B65D25/14 B65D35/14 B65D43/00 B65D47/00 B65D51/00 B65D51/16 B65D57/00 B65D6/28 B65D79/00 B65D8/18 B65D81/18 B65D81/38 B65D83/00 B65D83/72 B65D85/00 B65D85/62 B65D90/00 B65G1/127 F16L59/02 F16L59/08 F17C1/00 F17C1/02 F17C11/00 F17C13/00 F17C3/00 F25B17/02 F25B17/08 F25B21/00 F25B21/02 F25B21/04 F25B27/02 F25B29/00 F25B49/00 F25D11/04 F25D19/02 F25D23/00 F25D23/12 F25D3/00 F25D3/06 F25D3/08 F25D3/12 F25D31/00 F26B25/06 F26B5/04 F28D15/02 F28F7/00 G01K13/00 G08C17/02 H01Q5/02 H01Q5/15 H01S1/00 H04B1/02 H04B1/034 H04B1/06 H04Q5/22 (Advanced/Invention) ; A61B17/00 F28D20/02 F28D21/00 F28F13/00 (Advanced/Non-invention) ; A47J39/00 A47J41/00 A61B19/00 B23P11/00 B31B41/00 B32B1/00 B32B3/02 B32B3/26

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H04B1/02 (Core/Invention);
A61J B65D (Subclass/Invention)

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Abstract:

Source: US2009145163A Methods disclosed herein include methods of manufacturing integrally thermally-sealed storage containers. Methods include creating at least one indentation in at least one layer of first thermal barrier sheet, wherein the at least one layer of first thermal barrier sheet includes at least one first ultra efficient insulation material and wherein the at least one indentation is in a size and shape substantially conforming with material to be stored; placing material to be stored within one or more of the at least one indentation; placing at least one layer of second thermal barrier sheet adjacent to the material to be stored, wherein the at least one layer of second thermal barrier sheet includes at least one second ultra efficient insulation material; and creating a thermal seal between at least two layers of thermal barrier sheet, substantially thermally sealing the material to be stored.

0) US2009032489A – MEDICAMENT ADMIXING SYSTEM

4) Family number: 42907052 (US2009032489A)

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Title: MEDICAMENT ADMIXING SYSTEM

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Publication number	Publication date	Application number	Application date
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Probable Assignee: HOSPIRA INC

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT HW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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CPC: [A61J1/10](#) [A61J1/1462](#) [A61J1/1475](#) [A61J1/2041](#) [A61J1/2051](#) [A61J1/2055](#) [A61M2039/0036](#) [B65D51/002](#) [B65D75/5883](#) [B65D81/3211](#) [A61J1/2093](#) [A61J1/2089](#) [B65B3/003](#)

European class: [A61J1/14P](#) [A61J1/20B](#) [B65D51/00B](#) [B65D75/58G3C](#) [B65D81/32B1](#) [K61J1/10](#) [K61J1/20A4F](#) [K61J1/20A6A](#) [K61J1/20A6B](#)

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Abstract:

Source: US2009032489A A system for mixing or reconstituting a drug contained in a first container with a diluent or fluid contained in a second container. The second container has a port docking assembly for engaging the first container. The first container is rotatable and axially slidable within the port docking assembly. The port docking assembly has an actuator to urge a stopper fluidly sealing the first container into the interior of the first container. The port docking assembly further includes a movable plug constructed to fluidly seal the second container in a first, docked position and to provide access to the interior of the second container in a second, activated position, whereby fluid communication between the first and second containers is provided when the first and second containers are in the second, activated position.

0) US2002110625A – CONTINUOUS PACKAGING IN ENCLOSED CONDUITS

5) Family number: 29750624 (US2002110625A)

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Title: CONTINUOUS PACKAGING IN ENCLOSED CONDUITS

Priority:

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Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; HERBERT SMITH FREEHILLS; SMART AND BIGGAR; CHRISTENSEN OCONNOR JOHNSON KINDNESS PLLC; FOLEY AND LARDNER; CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC; FOLEY AND LARDNER LLP; CHRISTENSEN; JOHNSON KINDNESS PLLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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CPC: A61L2/202 A61L2/22 B29C66/53461 B29C66/344 B29C2795/002 B29K2027/06 B29L2031/712 B01D21/262 B04B1/20 A22C17/00 A23L3/3445 B29C65/4815 B29C65/4825 A23V2200/10 A23V2250/11 A23B4/20 A23B4/26 A23J1/02 B29C65/7894 B29C66/83413 B29C66/83421 B29C66/83531 B01D21/34 B29C66/24244 A22C17/08 B01D21/02 B01D21/2405 B01D21/2433 B01D21/2444 B01D21/2461 B01D21/2494 B01D21/26 B01D221/06 B65D81/261 B65B7/162 B65B51/02 B65D81/263 B29C66/71 A23L13/00 A23L5/20 A23L13/60 A23L5/23 B65B7/164 A22B5/0029 A22B5/0041 A22C17/10 Y02E50/30 A23B4/10 A23L3/3409 A23V2002/00 B65B31/028 B65D77/2008 B65D77/2024 G06Q30/0621 B65D81/264 B65B25/067 B65D21/062 B65D21/066 B65D81/2076 B65D81/267 B65D81/268 B65D81/28 A23B4/12 A23B4/00 A23B4/16 A23B4/24 A23L3/0155 A23L3/3418 G01N33/12 B29C66/1122

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Abstract:

Source: US2002110625A The invention relates to a package having a first web defining a cavity and a second web bonded to the first web, wherein the second web includes microperforations at a location that is specific to minimize the escape of liquids from the cavity to the exterior of the package. In one particular embodiment, the first web defines a four sided cavity with walls and corresponding flaps attached to the walls that can be folded and bonded to the cavity walls. The second web is an overwrapping lidding web, wherein microperforations are provided on the web material so that the microperforations are aligned with a flap recess, which in turn is in communication with the interior of the tray cavity. In this manner, suitable gas exchange can occur with minimal to no escape of liquids from the tray cavity.

0) US2008053949A – PACKAGING ARTICLE

6) Family number: 31937683 (US2008053949A)

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Title: PACKAGING ARTICLE

Priority: EP20050755136 20050623 GB20040014065 20040623 GB20050005934 20050323
WO2005GB02471 20050623 WO2005GB02474 20050623 GB20050005930 20050323
WO2005GB02479 20050623

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<u>ZA200700292 A</u>	20100630	ZA20070000292	20070110

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65B7/28 B65D41/00 B65D41/04 B65D41/06 B65D41/08 B65D41/34 B65D41/38 (Advanced/Invention);
B65D41/04 B65D41/06 B65D41/08 B65D41/38 (Advanced/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D25/00 B65D41/06 B65D41/08

CPC: B65D41/065 B65D41/086 B65D41/06 B65D41/08
European class: B65D41/06 B65D41/06B B65D41/08 B65D41/08B
US class: 215/222 215/329 215/329S 215/332 215/335 215/347 215/347S 215/352 215/352S 215/384 215/384S 215/44 215/44P 220/252 220/296 220/298 220/300

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Forward Citations: WO17136590, WO17017415, WO16012810, WO14177854, WO13096398, WO12007708, WO12007707, WO11151630, WO09115811, WO08142413, WO08135761, WO08012539, WO07091068, WO07091068, US9802751, US9802750, US8985398, US8870030, US8702333, US8201710, US8051797, US2015014366, US2013134123, US2013068767, US2012282009, US2012199613, US2012199612, US2010162900, US2010089864, US2009184086, US2007144997, RU2618826, KR101800239, JP5689911, JP4927725, JP2013530891, JP2013166591, JP2008503407, GB2482048, CN105173426, CN104909066, CN103459268, CN103459268, CN103429506,

Abstract:

Source: US2008053949A A beverage container (1) comprises a container body (3) including an opening and a cap (5) to close the opening, the cap (5) or the container body (3) including one or more bayonet threads (57), and the container body (3) or the cap (5) respectively including one or more protrusions (19) arranged to engage with a respective bayonet thread (57) to secure the cap (5) to the container body (3). At least one of the bayonet threads (57) includes one or more stop members arranged to retain the, or each, protrusion (19) substantially fully engaged with the bayonet thread (57) such that the opening is substantially fully closed by the cap (5), until a releasing torque sufficient to overcome the retention is applied to the container.

7) Family number: 32022007 (US2002006353A)

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Title: METHOD AND APPARATUS FOR MANIPULATING PRE-STERILIZED COMPONENTS IN AN ACTIVE STERILE FIELD

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Publication number	Publication date	Application number	Application date
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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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Abstract:

Source: US2002006353A The connection, assembly, or fill of two or more pre-sterilized components having at least one terminal end each for attachment to another component, and an apparatus for performing such a connection, while maintaining the sterility of the components is disclosed. The resulting connection is made permanent by bonding the contacting components together using either a solvent bonding technique, a radio frequency sealer, a heat sealer, or any other suitable process. The connection is preferably made within an active sterile field. Using a low-voltage electron beam instrument, such as the MIN-EB(TM), a suitable sterile field sphere can be created. The terminal ends of the multiple components remain within the sterile field sphere until the possibility of contamination within the sealed components is significantly reduced to industry acceptable standards.

0) US2001000602A – SNAP–ON, SCREW–OFF CAP AND CONTAINER NECK

8) Family number: 30455912 (US2001000602A)

© PatBase

Title: Snap-on, screw-off cap and container neck

Priority:

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DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE
KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO
NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

International class
(IPC 8-9): B29C65/00 B29C65/02 B65B7/28 B65D1/02 B65D39/00 B65D41/04 B65D41/17
B65D41/34 B65D41/46 B65D41/47 B65D41/48 B65D51/18 B65D51/20 B65D55/08
B65D77/20 B67B3/00 B67B3/20 (Advanced/Invention);
B65D77/20 (Advanced/Non-invention);
B29C65/00 B29C65/02 B65D1/02 B65D41/02 B65D41/04 B65D41/32 B65D41/34
B65D51/18 (Core/Invention);
B65D77/10 (Core/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65B7/28 B65D B65D1/02 B65D39/00 B65D41/00 B65D41/16 B65D41/17 B65D41/22
B65D41/34 B65D41/46 B65D41/47 B65D41/48 B65D51/00 B65D51/18 B65D55/08
B67B3/00 B67B3/20

CPC: B29C65/561 B29C65/58 B29C66/542 B29L2031/7158 B65D41/485 B29C66/5346
B29C66/53461 B29C66/545 B29C65/366 B29C66/72321 B29C65/3644 B29C65/3656
B29C65/368 B65D41/47 B65D51/20 B67B3/2046 B65B7/2878 B67B3/00 B67B3/20
B29C66/83423 B29C66/8322 B29C66/24221 B65D41/3409 B29C66/65 B65D1/023
B65D41/0421 B65D41/0471 B65D41/17 B65D41/34 B65D41/3404 B65D2101/0023
B65D2101/0038 B65D2101/0053 B65D2251/0015 B65D2251/0093 B65D2501/0081
B65D2577/205 B29C66/112 B29C66/131 B29C66/1122

European class: B29C65/02T4 B29C65/36B12 B29C65/36F2F B29C66/534 B29C66/65 B29C66/72321
B65B7/28F4 B65D1/02D1 B65D41/04B1A B65D41/04E B65D41/17 B65D41/34
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B67B3/20G2 L65D101/00A3 L65D101/00A3C L65D101/00A3E L65D251/00Y2D
L65D251/00Y6M L65D501/02Y9 L65D577/20M1

US class: 156/69 215/232 215/254 215/256 215/307 215/318 215/32 215/320 215/329 215/332
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[Classification Explorer](#)

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 GB2305167, GB2305167, GB2304337, GB2304337, GB2290782, FR2865457,
 FR2796363, FR2796362, FR2767792, EP3153304, EP2123569, EP1990288,
 EP1968865, EP1847469, EP1623930, EP1515900, EP1399368, EP1399368,
 EP1282562, EP1194341, EP1186546, EP1114781, EP1107919, EP1069052,
 EP1069046, EP0899204, EP0846628, EP0645318, DE102006017259, CN102849329,
 BE1016618, BE1016618, AU768786, AU2010202765,

Abstract:

Source: US2001000602A A tamper-evident, snap-on, screw-off closure is used with a specially shaped

container neck. The neck has double lead external threads and, below the threads, a conical wall having external ratchet teeth. The closure has an upper skirt having internal threads mating with the neck threads. A conical lower skirt is connected to the upper skirt by a plurality of frangible bridges. The lower skirt has internal ratchet teeth to mate with the neck ratchet teeth. The cap skirt threads are double pitch and slightly over 360 degrees in length. When the cap is applied to the neck it snaps on in two stages. The lower skirt has a tear tab which, when pulled, fractures the lower skirt on a vertical line. Continued pulling on the tab sequentially fractures the bridges.

9) Family number: 31777066 (US2007089467A)

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Title: SECURITY MEANS

Priority: AU20040273763 20040920 AU20100200931 20100311 NZ20030528386 20030919
 NZ20030528433 20030924 NZ20030530363 20031223 NZ20040534005 20040708
 NZ20040535492 20041220 NZ20040565033 20040920 NZ20040565034 20040920
 NZ20040565035 20040920 NZ20040534006 20040708 NZ20040535493 20040920
 NZ20040535494 20040920 NZ20040535495 20040920 US20060572463 20060901
 US20090604956 20091023 WO2004NZ00226 20040920

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2004273763 AA</u>	20050331	AU20040273763	20040920
	<u>AU2004273763 BB</u>	20100520	AU20040273763	20040920
	<u>AU2010200931 AA</u>	20100408	AU20100200931	20100311
	<u>CA2539653 AA</u>	20060320	CA20042539653	20040920
	<u>CN101647670 A</u>	20100217	CN200910166627	20040920
	<u>CN1882271 A</u>	20061220	CN200480034091	20040920
	<u>EP1662949 A1</u>	20060607	EP20040775151	20040920
	<u>EP1662949 A4</u>	20100106	EP20040775151	20040920
	<u>HK1084308 A3</u>	20060728	HK20060106656	20060609
	<u>IN00314MN2006 A</u>	20070629	IN2006MN00314	20060317
	<u>IN235107 B</u>	20090710	IN2006MN00314	20060317
	<u>NZ528386 A</u>	20090228	NZ20030528386	20030919
	<u>NZ565033 A</u>	20090925	NZ20040565033	20040920
	<u>NZ565034 A</u>	20090925	NZ20040565034	20040920
	<u>NZ565035 A</u>	20090925	NZ20040565035	20040920
	<u>US2007089467 AA</u>	20070426	US20040572463	20040920
	<u>US2010037665 AA</u>	20100218	US20090604956	20091023
	<u>WO05027700 A1</u>	20050331	WO2004NZ00226	20040920
	<u>ZA200602821 A</u>	20081126	ZA20060002821	20060406
	<u>ZA200800949 A</u>	20080925	ZA20080000949	20060406
	<u>ZA200800951 A</u>	20090930	ZA20080000951	20060406
	<u>ZA200800952 A</u>	20090527	ZA20080000952	20060406
	<u>ZA200800953 A</u>	20080925	ZA20080000953	20060406

Probable Assignee: WAYNE ACE KIRKER

Assignee(s):^(std): ACE KIRKER ; ACE KIRKER WAYNE L ; ACE KIRKER WAYNE LIONEL ; ACE KIRKER WAYNE LIONEL NZ ; LIONEL ACE KIRKER WAYNE ; LIONEL WAYNE ; WAYNE ACE KIRKER ; WAYNE LIONEL ACE KIRKER

Assignee(s): WAYNE LIONEL

Inventor(s):^(std): ACE KIRKER WAYNE LIONEL ; LIONEL ACE KIRKER WAYNE ; LIONEL WAYNE ; ACE KIRKER WAYNE L ; ACE KIRKER

Inventor(s): ACE KIRKER WAYNE ; WAYNE LIONEL ACE KIRKER ; WAYNE LIONEL

Agent(s): MIDDLETONS; K AND L GATES; BATTISON WILLIAMS DUPUIS; YOUNG AND THOMPSON

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A47G29/10 A47G29/14 B22D11/12 B60R25/00 B65D88/12 E05B17/00 E05B19/00 E05B65/00 E05B65/14 E05B65/48 E05B65/52 E05B67/00 E05B67/10 E05B67/38 E05G1/00 E05G1/02 E05G7/00 G07C9/00 (Advanced/Invention);
E05B13/00 E05B65/16 (Advanced/Non-invention);
A47G29/00 B22D11/12 B60R25/00 B65D88/00 E05B17/00 E05B19/00 E05B65/00 E05B65/12 E05B67/00 E05G1/00 E05G7/00 G07C9/00 (Core/Invention);
E05B13/00 (Core/Non-invention);
A47G E05G (Subclass/Invention)

International class
(IPC 1-7): A47G29/14 E05G1/00 E05G1/02 E05G7/00

CPC: Y10T29/49988 B60R25/093 A47G29/10 E05B13/002 E05B19/0005 E05B67/38 E05B67/383 E05B83/02 E05B83/10 E05G1/02 G07C9/00142 G07C9/0069 G07C9/00896 G07C2009/0092 Y10T70/498 Y10T70/5031 Y10T70/80

European class: A47G29/10 B60R25/09B E05B19/00B E05B67/38 E05B83/02 E05G1/02 G07C9/00C2B P05B13/00C P05B67/38B P05B83/10 S07C9/00E12C4 S07C9/00E20 S07C9/00E20D

US class: 29/527.5 29/527.500S 70/431 70/431S 70/56 70/56P 70/63 70/63P

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Forward Citations: WO14006583, WO14006583, WO12047850, WO12047850, US9371681, US7385507, US2016347540, US2014014008, US2010264728, US2006145847, CN103608538, CN103608538,

Abstract:

Source: US2007089467A A method of bracing a security container relative to the structural features of a building in a substantially tamper-proof manner wherein said security container including at least one container means (2) having an interior (3) for storing valuables therein, said container means (2) having at least one opening (7) thereinto, a closure means (8) covering said at least one opening (7) into the container means (2), and locking means (16) to secure the closure means (8) over the opening (7), said security container being configured to be fitted into a recess within a surface and the security container further including retention means, said retention means including bracing means (30 a), said bracing means (30 a) characterized by effecting a brace relative to one or more permanent structural features associated with the surface to impede forced removal of the security container from said recess.

0) US2002023409A – MEDICAMENT VIAL HAVING A HEAT-SEALABLE CAP, AND...

10) Family number: 30775440 (US2002023409A)

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Title: MEDICAMENT VIAL HAVING A HEAT-SEALABLE CAP, AND APPARATUS AND METHOD FOR FILLING THE VIAL

Priority:

AU20010247981	20010216	AU20030299041	20030903	AU20080212024	20080905
CA20032497664	20030903	AU20060202172	20060523	AU20120254948	20121122
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AU2001247981 CI	20061116	AU20010247981	20010216
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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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Abstract:

Source: US2002023409A A resealable cap for a medicament vial has a base portion formed of vulcanized rubber or like material known for providing a stable environment for the medicament contained within the vial, and a resealable portion overlying the base portion. The resealable portion is made of low-density polyethylene or like material, and can be punctured by a needle or like injection member for dispensing medicament into the vial. Prior to filling, the cap is assembled to the vial and the cap/vial assembly is sterilized. Then, a needle is inserted through the cap and medicament is introduced through the needle and into the vial. Upon withdrawal of the needle, the penetrated region of the cap is fused by laser or direct heat sealing to hermetically seal the needle hole in the cap.

0) US2001017817A – PRODUCT LABELING METHOD AND APPARATUS

11) Family number: 28313446 (US2001017817A)

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Title: PRODUCT LABELING METHOD AND APPARATUS

Priority: CA19972225353 19971219 US19960033491P 19961220 US19980007290 19980114
 US19970834634 19970414 US19970832613 19970328 US19970955475 19971021
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: B BRAUN MEDICAL INC

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Inventor(s):^(std): SORKIN FELIX L ; HUERGA CARLOS DE LA ; DELAHUERGA CARLOS ; DE LA HUERGA CARLOS ; DE LA HUERGA CARLOS A

Inventor(s): CARLOS DE LA HUERGA

Agent(s): MBM AND CO; MOFFAT AND CO; QUARLES AND BRADY LLP; ANDRUS SCEALES STARKE AND SAWALL LLP; QUARLES AND BRADY; RATNERPRESTIA

Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

International class
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T04L63/10D

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Abstract:

Source: US2001017817A A method and apparatus for configuring indicating configurations for containers wherein at least a subset of indicating configurations include an enhanced indicating device such as an electronic storage device, the containers to include enhanced devices being a function of whether or not the end user uses an interacting device capable of receiving information from the enhanced devices, the method and system indicating whether or not standard or enhanced containers should be used for specific prescriptions or orders and, in some cases, automatically providing the correct container and specifying (i.e., printing and writing) information to the containers.

- **search:** SS2 (1) and FT=sleeve (Results 767)
- **List:** SS2 1–50 ((1) and FT=sleeve) (Results 767)

0) US2010288060A – DEVICE FOR SAMPLING A SPECIMEN CONTAINER

1) Family number: 47633990 (US2010288060A)

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Title: DEVICE FOR SAMPLING A SPECIMEN CONTAINER

Priority: CN201080031707 20100514 CN201080031708 20100514 JP20120511054 20100514
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Family:

Publication number	Publication date	Application number	Application date
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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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G01N35/04 G01N35/10 (Advanced/Non-invention);

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European class: C12Q1/04 G01N35/00R S01N35/00C7C S01N35/04A2 S01N35/04B7 S01N35/10P

US class: 1/1 206/486 206/486S 235/375 235/375S 248/346.03 248/346.030S 366/142 366/142S
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Locarno class: 24/01

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Forward Citations: WO17151920, WO17048673, WO17004057, WO16201193, WO15059799, WO15054082, WO14181897, WO14176152, WO14126851, WO14070514, WO14070513, WO14039082, WO13148648, WO13148634, WO13148575, WO13093913, WO13070756, WO13070754, USD762081, USD740434, USD737960, USD701319, USD700710, USD693020, USD693019, USD689621, USD674912, USD672471, USD670400, USD652947, USD648035, US9810706, US9791468, US9783839, US9772342, US9714420, US9677975, US9671364, US9636062, US9619781, US9605294, US9588038, US9577143, US9574219, US9564064, US9541536, US9528972, US9523110, US9519000, US9506943, US9497990, US9482684, US9475334, US9470510, US9460633, US9457359, US9446418, US9436170, US9429920, US9428287, US9427184, US9414623, US9404910, US9386948, US9382571, US9365883, US9358738, US9332842, US9285382, US9274132, US9228935, US9189604, US9171061, US9140715, US9121840, US9121827, US9082710, US9080997, US9075020, US9072317, US9069340, US9046506, US9046455, US9023673, US9016193, US8996320, US8992684, US8973736, US8962308, US8956570, US8935001, US8932541, US8840848, US8709748, US8709344, US8662818, US8627740, US8209196, US7391337, US2017097372, US2017095931, US2016368150, US2016040210, US2015360502, US2015210410, US2015177123, US2015111198, US2015004644, US2014295417, US2014171829, US2014159860, US2014150539, US2014145574, US2014134670, US2014098252, US2014094960, US2013288295, US2013260448, US2013252796, US2013248863, US2013126712, US2013125675, US2011199222, US2011154934, US2011035237, KR20160134542, KR20150056479, KR101476927, KR101289905, JP6214623, JP6198408, JP6178161, JP5563637, JP5495453, JP2016127844, JP2015519544, JP2015059799, JP2015040733, JP2014137349, JP2014122897, JP2014079177, JP2014064518, JP2013512685, JP2013231711, EP3196651, EP3061805, EP3037516, DE102010054360, DE102010054359, CN106257290, CN106226541, CN105683351, CN105403544, CN105278375, CN104335052, CN104272114, CN104053997, CN104040352, CN104040352, CN103568007, CN103364255, CN103364255, CN103105330, CN103048157, CN103048157, CN103007371, CN102517375, AU2013239998, AU2013239965, AU2013239894,

Abstract:

Source: US2010288060A A sampling device for a specimen container having a closure sealing the interior of the specimen container from the environment includes a needle, a body coupled to the needle and defining a chamber in fluid communication with the needle, the body further comprising a port forming an opening in the body, the port in fluid communication with the chamber. A multitude of the sampling devices may be stored in a cassette. The sampling devices may include a second chamber for separation and concentration of a microbial agent present in a sample. In this configuration second chamber is connected to the first chamber via a valve or the like.

2) Family number: 34574644 (US4497621A)

© PatBase

Title: Apparatus for simultaneously driving valve means through co-injection nozzles of a multi-cavity injection molding machine

Priority:

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Family:

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Probable Assignee: AMERICAN NATIONAL CAN COMPANY

Assignee(s):^(std): AMERICAN NAT CAN CO ; AMERICAN NATIONAL CAN CO ; AMERICAN NATIONAL CAN ; AMERICAN NAT CAN COMPANY ; AMERICAN CAN CO ; PECHINEY PLASTIC PACKAGING INC ; PRIMERICA CORP ; PECHINEY EMBALLAGE FLEXIBLE EU

Assignee(s): PURAIMERIKA CORP ; ALCAN PACKAGING FLEXIBLE FRANCE ; PECHINEY PLASTIC PACKAGING INC ; TENNANT WILLIAM A ; TUNG THOMAS T ; VELLA JOHN JR ; PFUTZENREUTER HENRY III ; PECHINEY EMBALLAGE FLEXIBLE EUROPE ; AMERICAN CAN COMPANY ; AMERICAN CAN PACKAGING INC ; AMERICAN NATIONAL CAN CO CHICAGO ILL US ; BALL CORP ; LATREILLE MAURICE G ; KUDERT FREDERICK G ; MCHENRY ROBERT J ; NAHILL GEORGE F ; AMERICAN NATIONAL CAN COMPANY

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Agent(s): PHILLIPS ORMONDE FITZPATRICK; MARKS AND CLERK; MEIR ORENSTEIN ADV

Designated states: AT BE CH DE FR GB IT LI LU NL SE

International class
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International class
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Abstract:

Source: US4497621A Apparatus for unit cavity and multi-cavity, multi-layer injection molding and injection blow molding machines are provided, which, in preferred embodiments, include: Coinjection nozzle means, each for plural polymers, valve means for each nozzle, the valve means being adapted to move through a nozzle central channel to clear the nozzle channel of melt, a feed-block for each nozzle, polymer melt splitters, drive means for each valve means, a free floating runner system and a force compensation system to provide an effective pressure seal between the nozzles and the cavity block.

3) Family number: 32022007 (US2002006353A)

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Title: METHOD AND APPARATUS FOR MANIPULATING PRE-STERILIZED COMPONENTS IN AN ACTIVE STERILE FIELD

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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Abstract:

Source: US2002006353A The connection, assembly, or fill of two or more pre-sterilized components having at least one terminal end each for attachment to another component, and an apparatus for performing such a connection, while maintaining the sterility of the components is disclosed. The resulting connection is made permanent by bonding the contacting components together using either a solvent bonding technique, a radio frequency sealer, a heat sealer, or any other suitable process. The connection is preferably made within an active sterile field. Using a low-voltage electron beam instrument, such as the MIN-EB(TM), a suitable sterile field sphere can be created. The terminal ends of the multiple components remain within the sterile field sphere until the possibility of contamination within the sealed components is significantly reduced to industry acceptable standards.

4) Family number: 44044059 (US2011061764A)

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Title: FLUID TRANSFER ASSEMBLY AND METHODS OF FLUID TRANSFER

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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Abstract:

Source: US2011061764A A fluid transfer assembly and methods of fluid transfer is described. In one aspect, the fluid transfer assembly includes a fluid container having an opening in a bottom, a coupling device attached to the fluid container at the opening, and a filling device. The coupling device may include a valve biasing the coupling device in a closed fluid-tight position via magnetic attraction of opposing first and second components, each of the opposing first and second components including a magnetic material. The filling device may include a rigid member with a perimeter smaller than a perimeter of the fluid container opening, the rigid member including a passage along a longitudinal axis and one or more apertures through a sidewall in fluid communication with the passage, such that the coupling device is transitioned from the closed fluid-tight position to an open position by pressing the rigid member against one of the opposing first and second components, thereby placing the apertures in fluid communication with an interior of the fluid container.

5) Family number: 43360506 (US2009145163A)

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Title: METHODS OF MANUFACTURING TEMPERATURE-STABILIZED STORAGE CONTAINERS

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A47G19/22 A47J39/00 A47J41/00 A61B19/00 A61B19/02 A61J1/00 A61J1/16 B01L9/06 B23P11/00 B29D22/00 B29D31/00 B31B41/00 B32B1/02 B32B1/08 B32B3/02 B32B3/10 B32B3/26 B32B5/00 B32B9/00 B32B9/04 B65B1/04 B65B11/00 B65B3/02 B65B31/02 B65B31/04 B65B41/18 B65B43/00 B65B63/08 B65D1/24 B65D1/36 B65D21/00 B65D21/02 B65D25/04 B65D25/14 B65D35/14 B65D43/00 B65D47/00 B65D51/00 B65D51/16 B65D57/00 B65D6/28 B65D79/00 B65D8/18 B65D81/18 B65D81/38 B65D83/00 B65D83/72 B65D85/00 B65D85/62 B65D90/00 B65G1/127 F16L59/02 F16L59/08 F17C1/00 F17C1/02 F17C11/00 F17C13/00 F17C3/00 F25B17/02 F25B17/08 F25B21/00 F25B21/02 F25B21/04 F25B27/02 F25B29/00 F25B49/00 F25D11/04 F25D19/02 F25D23/00 F25D23/12 F25D3/00 F25D3/06 F25D3/08 F25D3/12 F25D31/00 F26B25/06 F26B5/04 F28D15/02 F28F7/00 G01K13/00 G08C17/02 H01Q5/02 H01Q5/15 H01S1/00 H04B1/02 H04B1/034 H04B1/06 H04Q5/22 (Advanced/Invention) ; A61B17/00 F28D20/02 F28D21/00 F28F13/00 (Advanced/Non-invention) ; A47J39/00 A47J41/00 A61B19/00 B23P11/00 B31B41/00 B32B1/00 B32B3/02 B32B3/26

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H04B1/02 (Core/Invention);
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Abstract:

Source: US2009145163A Methods disclosed herein include methods of manufacturing integrally thermally-sealed storage containers. Methods include creating at least one indentation in at least one layer of first thermal barrier sheet, wherein the at least one layer of first thermal barrier sheet includes at least one first ultra efficient insulation material and wherein the at least one indentation is in a size and shape substantially conforming with material to be stored; placing material to be stored within one or more of the at least one indentation; placing at least one layer of second thermal barrier sheet adjacent to the material to be stored, wherein the at least one layer of second thermal barrier sheet includes at least one second ultra efficient insulation material; and creating a thermal seal between at least two layers of thermal barrier sheet, substantially thermally sealing the material to be stored.

0) US2002110625A – CONTINUOUS PACKAGING IN ENCLOSED CONDUITS

6) Family number: 29750624 (US2002110625A)

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Title: CONTINUOUS PACKAGING IN ENCLOSED CONDUITS

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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Abstract:

Source: US2002110625A The invention relates to a package having a first web defining a cavity and a second web bonded to the first web, wherein the second web includes microperforations at a location that is specific to minimize the escape of liquids from the cavity to the exterior of the package. In one particular embodiment, the first web defines a four sided cavity with walls and corresponding flaps attached to the walls that can be folded and bonded to the cavity walls. The second web is an overwrapping lidding web, wherein microperforations are provided on the web material so that the microperforations are aligned with a flap recess, which in turn is in communication with the interior of the tray cavity. In this manner, suitable gas exchange can occur with minimal to no escape of liquids from the tray cavity.

0) US2008053949A – PACKAGING ARTICLE

7) Family number: 31937683 (US2008053949A)

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Title: PACKAGING ARTICLE

Priority: EP20050755136 20050623 GB20040014065 20040623 GB20050005934 20050323
WO2005GB02471 20050623 WO2005GB02474 20050623 GB20050005930 20050323
WO2005GB02479 20050623

Family:

Publication number	Publication date	Application number	Application date
AT455048 E	20100115	AT20050755188T	20050623
AT457011 E	20100215	AT20050755404T	20050623
AT534585 E	20111215	AT20050755136T	20050623
AU2005256821 AA	20060105	AU20050256821	20050623
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<u>RU2388672 C2</u>	20100510	RU20070102280	20050623
<u>US2008053949 AA</u>	20080306	US20050570636	20050623
<u>US2008197102 AA</u>	20080821	US20050570638	20050623
<u>US2008257848 AA</u>	20081023	US20050570633	20050623
<u>US8245860 BB</u>	20120821	US20050570636	20050623
<u>US8875920 BB</u>	20141104	US20050570633	20050623
<u>WO06000774 A1</u>	20060105	WO2005GB02471	20050623
<u>WO06000775 A1</u>	20060105	WO2005GB02474	20050623
<u>WO06000778 A1</u>	20060105	WO2005GB02479	20050623
<u>ZA200700291 A</u>	20100630	ZA20070000291	20070110
<u>ZA200700292 A</u>	20100630	ZA20070000292	20070110

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Inventor(s): DANDO UILL JAM DZHORDZH ; ANTHONY HENRY JOSEPH FRASER ; FRASER ANTHONY HJ ; PETER ANTONY FARRAR ; WILLIAM GEORGE DANDO ; FARRAR PETER ANTONY GLENELG ; FARRAR PETER ANTONY GLENELG LOW BARN ; FARRAR PETER ANTONY HEIN JOHN DANDO WILLIAM

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; RIDOUT AND MAYBEE LLP; PATENTANWALTE WALLACH KOCH AND PARTNER; UNWIN STEPHEN GEOFFREY; MEADWESTVACO ALEXANDRA B URBAN ESQ CORP; MEADWESTVACO ATTN IVETTE REYES CORP; MEADWESTVACO CORP; DICKSTEIN SHAPIRO LLP; QUARLES AND BRADY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65B7/28 B65D41/00 B65D41/04 B65D41/06 B65D41/08 B65D41/34 B65D41/38 (Advanced/Invention);
B65D41/04 B65D41/06 B65D41/08 B65D41/38 (Advanced/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D25/00 B65D41/06 B65D41/08

CPC: B65D41/065 B65D41/086 B65D41/06 B65D41/08
European class: B65D41/06 B65D41/06B B65D41/08 B65D41/08B
US class: 215/222 215/329 215/329S 215/332 215/335 215/347 215/347S 215/352 215/352S 215/384 215/384S 215/44 215/44P 220/252 220/296 220/298 220/300

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Forward Citations: WO17136590, WO17017415, WO16012810, WO14177854, WO13096398, WO12007708, WO12007707, WO11151630, WO09115811, WO08142413, WO08135761, WO08012539, WO07091068, WO07091068, US9802751, US9802750, US8985398, US8870030, US8702333, US8201710, US8051797, US2015014366, US2013134123, US2013068767, US2012282009, US2012199613, US2012199612, US2010162900, US2010089864, US2009184086, US2007144997, RU2618826, KR101800239, JP5689911, JP4927725, JP2013530891, JP2013166591, JP2008503407, GB2482048, CN105173426, CN104909066, CN103459268, CN103459268, CN103429506,

Abstract:

Source: US2008053949A A beverage container (1) comprises a container body (3) including an opening and a cap (5) to close the opening, the cap (5) or the container body (3) including one or more bayonet threads (57), and the container body (3) or the cap (5) respectively including one or more protrusions (19) arranged to engage with a respective bayonet thread (57) to secure the cap (5) to the container body (3). At least one of the bayonet threads (57) includes one or more stop members arranged to retain the, or each, protrusion (19) substantially fully engaged with the bayonet thread (57) such that the opening is substantially fully closed by the cap (5), until a releasing torque sufficient to overcome the retention is applied to the container.

8) Family number: 30071089 (US2001013500A)

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Title: Apparatus for opening a bottle sealed with a cork stopper

Priority: US19960746799 19961118 US19990273838 19990322 US20010760375 20010112
 US20020306633 20021127 US20030443461 20030521 US20020433020P 20021213
 US20020382410P 20020521 US20030735283 20031212 US20030443020P 20030127
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Family:

Publication number	Publication date	Application number	Application date
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WO03099671 A1	20031204	WO2003US16154	20030521

Probable Assignee: GARDNER WILLIAM**Assignee(s):^(std):** GARDNER TECHNOLOGIES INC ; GARDNER WILLIAM A ; NOVAK PAUL K ; VIRDEE ALAN ; WHELAN PATRICK M**Assignee(s):** STATISTICAL SIGNAL PROCESSING INC ; GILLEY GIL G ; GARDNER WILLIAM**Inventor(s):^(std):** GARDNER WILLIAM A ; GILLEY GIL G ; WILLIAM A GARDNER ; ALAN VIRDEE ; WHELAN PATRICK M ; VIRDEE ALAN ; NOVAK PAUL K ; PAUL K NOVAK ; PATRICK M WHELAN**Inventor(s):** GARDNER WILLIAM ; WHELAN PATRICK**Agent(s):** GRIFFITH HACK; MARKS AND CLERK; JOHN P OBANION OBANION AND RITCHEY LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
(IPC 8-9): [B65D1/02](#) [B65D39/00](#) [B65D39/16](#) [B67B7/06](#) (Advanced/Invention);
[B65D1/02](#) [B65D39/00](#) [B67B7/00](#) (Core/Invention)**International class**
(IPC 1-7): [B65B7/28](#) [B65D1/02](#) [B65D39/00](#) [B65D39/16](#) [B65D41/62](#) [B67B7/06](#)**CPC:** [B65D1/0246](#) [B65D39/16](#) [B67B7/06](#) [B65D39/0011](#)**European class:** [B65D1/02D1B](#) [B65D39/00F1](#) [B65D39/16](#) [B67B7/06](#)

US class: 215/211 215/215 215/277 215/296 215/297 215/299 215/32 215/320 215/320S 215/364 215/44 215/44P 8/1.345 81/3.45 81/3.450S

[Classification Explorer](#)

Cited documents: WO9728056 A1, WO0032489 A1, USD457067 S1, USD451400 S1, USD450589 S1, USD383067 S1, USD331367 S1, US884322 A, US778593 A, US773857 A, US6510957 BB, US6415935 BA, US6355320 BA, US6325247 BA, US624384 A, US6179140 BA, US6153275 A, US604062 A, US6029836 A, US5975322 A, US5974322 A, US5944208 A, US5884789 A, US5803281 A, US5755348 A, US5662233 A, US5570798 A, US5495958 A, US5480915 A, US5455180 A, US5431305 A, US5346083 A, US5269429 A, US5209997 A, US5109997 A, US5096083 A, US5080245 A, US5071017 A, US5056676 A, US5012942 A, US4948000 A, US4889251 A, US4844273 A, US4834251 A, US4830970 A, US4812408 A, US4809858 A, US4771923 A, US4767016 A, US4733787 A, US4664276 A, US4605135 A, US4592477 A, US4574662 A, US4493427 A, US4446980 A, US4446673 A, US4436401 A, US4392579 A, US4373641 A, US4360114 A, US4084717 A, US4076142 A, US3994709 A, US3954200 A, US3946891 A, US3944104 A, US3940005 A, US3847295 A, US3831796 A, US3736899 A, US3695475 A, US3612325 A, US3604585 A, US3589983 A, US3556334 A, US3499568 A, US3339772 A, US33364 A, US3307727 A, US3255909 A, US3137748 A, US3101856 A, US3039648 A, US3032225 A, US2987175 A, US2801017 A, US2742170 A, US2521523 A, US2193381 A, US2151826 A, US2001013500 AA, US1942810 A, US1866770 A, US1833971 A, US1818626 A, US1464646 A, US1416616 A, US1341680 A, US1204712 A, US1131985 A, GB128179 A, FR620803 A, FR2766163 A1, FR2444081 A1, FR2280 A, FR2240871 A1, FR1237031 A, EP0842861 A1, DE3123902 A1, DE297516 A, DE2541318 A1, DE2444081 A1, DE197203 A, DE19609487 C1,

Forward Citations: WO9961363, WO14001859, WO13179104, WO11074998, WO11022307, WO11022307, WO10028243, WO07077489, WO07077489, WO06115467, WO06061858, WO06008095, WO03099671, USD474084, US9415904, US9346591, US8915167, US8807363, US8714382, US8672160, US7988019, US7314661, US7290463, US7134362, US6763961, US6568549, US6530295, US6510957, US2016116201, US2015158622, US2014352590, US2013153576, US2011036839, US2011036805, US2011017698, US2009065466, US2009051159, US2009045159, US2008203113, US2008035599, US2007131639, US2007107556, US2007071939, US2006261029, US2006243098, US2005247662, US2004031770, US2003129291, US2003084179, ITVR20130063, EP2588421, EP2467309, EP1716221, EA8461, EA008461, DE102006047040, CN105600102, CN104354976, CN102871547, CN102871547, CN102770349,

Abstract:

Source: US2001013500A An apparatus for removing a cork from a bottle in which an anchor is embedded in the cork and a cork-pulling sleeve is provided for engaging the anchor for removal of the cork. The cork-pulling sleeve includes inner threads that mate with external threads on the neck of the bottle, and rotation of the cork-pulling sleeve in relation to the bottle extracts the cork.

0) US2001017817A – PRODUCT LABELING METHOD AND APPARATUS

9) Family number: 28313446 (US2001017817A)

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Title: PRODUCT LABELING METHOD AND APPARATUS

Priority: CA19972225353 19971219 US19960033491P 19961220 US19980007290 19980114
 US19970834634 19970414 US19970832613 19970328 US19970955475 19971021
 US19980200881 19981130 US19980170169 19981013 US19980168783 19981008
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 WO1999US25875 19991102

Family:

Publication number	Publication date	Application number	Application date
AU200018118 A1	20000522	AU20000018118	19991102
AU200018118 A5	20000522	AU20000018118	19991102
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Inventor(s): CARLOS DE LA HUERGA

Agent(s): MBM AND CO; MOFFAT AND CO; QUARLES AND BRADY LLP; ANDRUS SCEALES STARKE AND SAWALL LLP; QUARLES AND BRADY; RATNERPRESTIA

Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

International class
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Abstract:

Source: US2001017817A A method and apparatus for configuring indicating configurations for containers wherein at least a subset of indicating configurations include an enhanced indicating device such as an electronic storage device, the containers to include enhanced devices being a function of whether or not the end user uses an interacting device capable of receiving information from the enhanced devices, the method and system indicating whether or not standard or enhanced containers should be used for specific prescriptions or orders and, in some cases, automatically providing the correct container and specifying (i.e., printing and writing) information to the containers.

10) Family number: 32365737 (US2006065992A)

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Title: MONO AND MULTI-LAYER ARTICLES AND COMPRESSION METHODS OF MAKING THE SAME

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Probable Assignee: CONCENTRATE MFG CO OF IRELAND

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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International class
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Abstract:

Source: US2006065992A In preferred embodiments methods and apparatuses can produce articles that have formable material. The articles may be mono and multilayer. The articles can be formed by various methods.

11) Family number: 30143977 (US2003097314A)

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Title: BEVERAGE DISENSING APPARATUS HAVING FLUID DIRECTOR

Priority:

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Publication number	Publication date	Application number	Application date
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<u>WO03048027 A3</u>	20030724	WO2002US37766	20021121

Probable Assignee: BEVERAGE WORKS IN C

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

International class
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International class
(IPC 1-7): A47J31/00 B08B3/02 B65D35/28 B65D37/00 B65D83/14 B67D1/00 B67D5/06 B67D5/08 B67D5/14 B67D5/56 B67D5/62 B67D5/66 F25B41/04 F25B49/00 F25D11/00 G01F11/00 G06F17/00 G06F17/60

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European class: B67D1/00F4 B67D1/00H2 B67D1/00H2C2 B67D1/00H4 B67D1/00H4D B67D1/00H6B B67D1/04 B67D1/04B B67D1/08D2 B67D1/12 B67D3/00B2 F25D23/12B G06Q10/087 G06Q20/20 G06Q20/203 G06Q20/208 G06Q20/209 G06Q30/04 L67D1/08A32B L67D1/08A32F L67D210/00D2B2 R25D23/12B R25D29/00 R25D331/803 R25D400/06

US class: 1/1 134/113 134/200 134/56.00D 134/56D 134/57 134/57.00D 134/57.00DP 134/57D 134/58 134/58.00DS 134/58D 134/93 134/94.1 134/94.100S 134/99.2 222/129 222/129.1 222/129.100P 222/129.100S 222/129.3 222/129.300S 222/129.4 222/132 222/135 222/136 222/146.1 222/146.6 222/146.600S 222/23 222/23S 222/25 222/25P 222/325 222/399 222/482 222/484 222/52 222/61 222/61S 235/381 251/310 251/310S 62/125 62/125S 62/3.64 62/364 62/389 62/389.9 62/389P 62/389S 62/390 62/390P 62/390S 62/392 62/398 62/398P 62/399 623/890 68/12.01 68/17.00R 68/17R 70/52.8 700/231 700/231S 700/236 700/237 700/239 700/240 700/241 700/241S 700/242 700/283 700/283P 700/285 700/285S 705/16 705/16P 705/22 705/22P 705/23 705/24 705/26 705/26P 705/28 705/28P 705/34 705/34P

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Abstract:

Source: US2003097314A The present invention provides a beverage dispensing apparatus for a residential refrigerator. The beverage dispensing apparatus includes a drink supplier including a drink supply canister holder for holding a plurality of drink supply canisters, a plurality of valve actuators for causing the drink supply to be selectively released from the drink supply canisters, a water supplier for selectively supplying carbonated water and non-carbonated water for producing the beverages, a gas supplier for supplying CO₂ gas to carbonate the carbonated water provided by the water supplier and for supplying CO₂ gas or other gas for pressurizing the drink supply canisters to provide a consistent flow rate of the drink supply from the drink supply canisters, a fluid director for facilitating the mixing of the drink supply from one of the drink supply canisters and the carbonated or non-carbonated water from the water supplier and one or more beverage requesters for enabling users to request one of a plurality of beverages.

0) US2001025862A – DISPENSING VALVE

12) Family number: 30431452 (US2001025862A)

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Title: DISPENSING VALVE

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Abstract:

Source: US2001025862A A dispensing package is provided for fluid products such as liquid soaps, shampoos and conditioners, household detergents, cleaners, polishes, moisturizing creams, and the like, and includes a container with a self-sealing dispensing valve mounted therein. The valve includes a marginal portion, a head portion with a discharge orifice therein, and a generally J-shaped connector sleeve having one end connected with the marginal portion and the opposite end connected with the head portion. The connector sleeve has a resiliently flexible construction, with first and second leg portions that are oriented at an acute included angle, and join one another at an arcuate base portion to facilitate movement of the head portion of the valve when dispensing product from the container. A top dispense embodiment of the package has an inverted J-shaped configuration at the top of the upper leg, which extends arcuately into the head portion of the valve for dispensing products from the top of the container.

13) Family number: 31347806 (US2004222234A)

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Title: MIXING MODULE DRIVE MECHANISM AND DISPENSING SYSTEM WITH SAME

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Family:

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Assignee(s): PREGIS INNOVATIVE PACKAGING INC ; US BANK NATIONAL ASSOCIATION ; PREGIS INTELLIPACK CORP NDGESDSTAATES DELAWARE DEERFIELD ; PREGIS INTELLIPACK LLC ; PREGIS INNOVATIVE PACKAGING LLC F K A PREGIS INNOVATIVE PACKAGING INC ; PREGIS INTELLIPACK LLC F K A PREGIS INTELLIPACK CORP ; PREGIS LLC F K A PREGIS CORPORATION ; WELLS FARGO CAPITAL FINANCE LLC AGENT AS ; PREGIS CORP ; PREGIS HOLDING II CORP ; PREGIS INTELLIGPACK CORP ; GENERAL ELECTRIC CAPITAL ADMINISTRATIVE AGENT CORP AS ; FS INVESTMENT ADMINISTRATIVE AGENT AS CORP ; GENERAL ELECTRIC CAPITAL ADMINISTRATIVE AGENT AS CORP ; CREDIT SUISSE ; BANK OF NEW YORK MELLON TRUST CO ; BANK OF NEW YORK MELLON TRUST CO NA ; BARCLAYS BANK PLC COLLATERAL AGENT AS ; HEXACOMB CORP ; GENERAL ELECTRIC CAPITAL ADMINISTRATIVE AGENT C AS ; FS INVESTMENT ADMINISTRATIVE AGENT CORP AS

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Agent(s): THOMSON NEIL DAVID; THOMSON NEIL DAVID ET AL; SMITH GAMBRELL AND RUSSELL LLP; SMITH GAMBRELL AND RUSSELL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC

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Abstract:

Source: US2004222234A A foam dispenser component drive mechanism which includes a foam dispenser component drive transmission comprising a crank and slide assembly, and wherein said drive transmission includes a transmission housing and the crank and slide assembly includes a crank pivotably supported by said housing and a slide assembly. The invention also features an apparatus for driving a reciprocating rod of a foam dispenser having a full retraction position and a full extension position relative to a mixing module of the dispenser, having a driver, a drive transmission system with said drive transmission system being arranged to

coincide maximum rod reciprocation force application coincident with the full extension and full retraction positions of the reciprocating rod. The invention includes also a method for reciprocating a mixing module reciprocation component, including rotating a crank with a drive assembly, driving a slide assembly with the rotating crank so as to move in linear fashion, and moving the reciprocation component together with the slide assembly.

0) US2005258201A – BOTTLE, RETAINING DEVICE AND ASSOCIATED ELEMENT...

14) Family number: 32436151 (US2005258201A)

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Title: BOTTLE, RETAINING DEVICE AND ASSOCIATED ELEMENTS FOR CARRYING CONTAINERS AND OTHER ITEMS

Priority: US20040566378P 20040428 US20040579054P 20040610 US20100945604 20101112
US20120409469 20120301 US20050117261 20050427 US20140175912 20140207
US20140222976 20140324 US20150617383 20150209 US20160356317 20161118

Family:	Publication number	Publication date	Application number	Application date
	US2005258201 AA	20051124	US20050117261	20050427
	US2011056907 AA	20110310	US20100945604	20101112
	US2012228345 AA	20120913	US20120409469	20120301
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	US2015150356 AA	20150604	US20150617383	20150209
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	US8727153 BB	20140520	US20120409469	20120301
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	US9526317 BB	20161227	US20140222976	20140324
	US9737128 BB	20170822	US20150617383	20150209

Probable Assignee: AMPHIPOD INC

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Inventor(s): WILLOWS KEITH

Agent(s): KEITH WILLOWS; BLACK LOWE AND GRAHAM PLLC; LOWE GRAHAM JONES PLLC

International class
^(IPC 8-9): [A45F3/16](#) [A45F3/18](#) [A45F5/00](#) [A45F5/02](#) [A47K1/08](#) [B65D1/02](#) [B65D1/40](#) [B65D23/00](#) [B65D25/22](#) [B65D90/02](#) [F41C33/02](#) ^(Advanced/Invention);
[A45F3/00](#) [F41C33/00](#) ^(Core/Invention)

International class
^(IPC 1-7): [A45F3/16](#) [A45F3/18](#) [F41C33/02](#)

CPC: [B65D1/0223](#) [A45F3/18](#) [B65D25/22](#) [A45F2200/0583](#) [B65D23/003](#) [B65D2501/0081](#) [B65D1/0246](#) [B65D1/40](#) [A45F5/021](#) [A45F3/16](#)

European class: [A45F3/18](#)

US class: [1/1](#) [119/477](#) [215/371](#) [215/382](#) [215/383](#) [215/384](#) [215/390](#) [215/395](#) [224/148.4](#) [224/148.400P](#) [224/148.7](#) [224/148.700S](#) [224/414](#) [248/311.2](#)

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Abstract:

Source: US2005258201A An improved bottle, retaining device and associated elements for carrying items is disclosed. The retaining device is adapted for holding a container (or containers) or other items; the retaining device being adapted to affix the container by way of the retaining device to a person or a personal item so ready access is provided for the held container/item. The improved foundation/retaining device portion has means of retaining a bottle, container or other item and means of attaching the foundation/retaining device portion onto a user's body or other article or being. The bottle, container or fluid carrying portion is adapted for mating engagement with the retaining device. There are also disclosed a number of desirable optional features of the novel invention which can be used in combination with the disclosed retaining device and associated container or the like, or alone—the features in combinations together, alone, etc. incorporated into belts packs, bags, personal, item carriers/holders, military items or the like. Some of these optional disclosed features/elements include: a system/way of constructing a belt portion with stretch-limiting, bounce limiting means, a belt, strap or the like with an interchangeable closure element that can incorporate a pocket or the pocket can be alone incorporated into a belt, strap or the like.

0) US2003000907A – VENTED BEVERAGE CONTAINER

15) Family number: 30110170 (US2003000907A)

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Title: VENTED BEVERAGE CONTAINER

Priority: AU20030243374 20030603 AU20080246256 20081120 JP20040509324 20030603
 US20030388609P 20030603 US20020162119 20020603 US19970933639 19970919
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Family:

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<u>WO03102480 C1</u>	20040729	WO2003US17544	20030603
<u>ZA200409770 A</u>	20051020	ZA20040009770	20041202
<u>ZA200410421 A</u>	20051014	ZA20040010421	20041202

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Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; SIM AND MCBURNEY; CAREY Y CIA; SEVINC ERKAN; ARENT FOX PLLC; G L LOOMIS AND ASSOCIATES INC; GARY L; LOOMIS GARY L

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A41D13/00 A41D13/005 A45F3/20 A47D13/00 A47G19/22 A47G21/18 A61J1/14 A61J9/00 A61J9/04 B65B63/08 B65D1/32 B65D23/00 B65D47/06 B65D47/24 B65D47/26 B65D51/16 B65D51/18 B65D65/00 B65D81/18 B65D81/38 C08J9/00 C12L9/00 F16L11/04 F17C13/00 F25D23/12 F25D3/00 F25D3/08 F25D7/00 F28C1/00 F28D3/08 F28D5/00 (Advanced/Invention); B65D51/16 B65D51/18 B65D65/00 B65D81/18 F25D3/00 F25D7/00 (Advanced/Non-invention); A41D13/00 A41D13/005 A47D13/00 A47G19/22 A47G21/00 A61J1/14 A61J9/00 B65D81/18 B65D81/38 F16L11/04 F25D23/12 F25D7/00 F28C1/00 F28D5/00 (Core/Invention)

International class
(IPC 1-7): A41D13/00 A41D13/005 A47J41/02 A61J11/02 A61J9/00 A61J9/04 B65D1/32 B65D23/00 B65D47/24 B65D51/16 B65D51/18 B65D65/00 B65D81/18 C08J9/00 C12L9/00 F25D3/00 F25D7/00

CPC: A45F2003/166 A45F3/04 A45F3/18 Y10S215/902 A61J9/006 A61J11/001 A61J11/0025 A61J11/145 A61J11/1456 C02F1/003 C02F2307/02 A45F3/20 A47G19/2266 A47G19/2272 A47G21/18 A47G2400/027 A61J9/04 A61M2207/00 B65D1/323 B65D47/06 B65D47/242 B65D47/265 B65D51/1616 B65D81/3886 B65D2205/00 F25D2331/803 F25D2331/806 F25D2331/808 F25D2400/26 F28D5/00 A41D13/0053 F25D7/00 B65D81/18

European class: A41D13/005C A45F3/18 A45F3/20 A47G19/22B12 A47G19/22B12G A47G21/18 A61J11/00F A61J11/00G A61J9/00D A61J9/04 B65D1/32C B65D47/06 B65D47/24A1 B65D47/26D4 B65D51/16C2 B65D81/18 B65D81/38K4 F25D7/00 F28D1/053E6D F28D5/00 K45F3/04 K45F3/16H K47G400/02F K61J1/14F2 K61J1/14F4 K61M207/00 L65D205/00 R25D331/803 R25D331/806 R25D331/808 R25D400/26 R28D5/00

US class: 215/11.1 215/11.100S 215/11.5 215/11.500P 215/111 215/12.1 215/12.100P 215/308 215/902 62/259.3 62/259.300P 62/304 62/304S 62/315 62/315P 62/315S 62/316 62/371 62/457.9 62/457.900S 62/60

[Classification Explorer](#)

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US2013199220, US2013056505, US2012186285, US2012088974, US2012047891, US2011297698, US2011233219, US2011219742, US2011180032, US2011171087, US2011146231, US2011087193, US2011036836, US2011005195, US2011005194, US2010275577, US2010230405, US2010227027, US2010224510, US2010219149, US2010218964, US2010205933, US2010175850, US2010084125, US2010071319, US2010038336, US2010018939, US2009312662, US2009308878, US2009264705, US2009230081, US2009230079, US2009219693, US2009199843, US2009194533, US2009133788, US2009062892, US2009039048, US2009008287, US2008271476, US2008173612, US2008173020, US2008087623, US2008083692, US2008077210, US2007262090, US2007187418, US2007158292, US2007074989, US2007033959, US2006280885, US2006261026, US2006243694, US2006213913, US2006201187, US2006201178, US2006178645, US2006156449, US2006043091, US2005284835, US2005263480, US2005263479, US2005242123, US2005051476, US2004226906, US2004173636, US2004173556, US2004007553, US2003000907, RU2481816, KR200458968, KR101105729, KR100936080, JP2017001752, JP2007528945, GB2467174, GB2462329, GB2461005, GB2461005, GB2397995, GB2397995, FR2975383, ES2264318, EP2832341, EP2060503, EP1773588, EP1704795, EP1676789, EP1676789, EP1537030, EP1454839, DE102014224270, DE102013114552, DE102004050679, CN105813949, CN103662419, CN103171819, CN103110524, AU2008244578, AU2003269157,

Abstract:

Source: US2003000907A A beverage container is provided with a hydrophobic vent consisting of a relatively thick and rigid disc-shaped piece of macroporous plastic having pore sizes averaging from 7–350 microns. The vent can be welded, molded or secured to the sidewall, bottom or cap of a plastic beverage container thus eliminating all moving parts. The macroporous plastic is resistant to oxidative abrasion, contamination and wetting and is strong enough to resist breakage. In one embodiment a baby bottle is provided which consists of a plastic bottle body, a nipple, and means for fastening the nipple to the bottle body. The bottle body is provided with a macroporous plastic vent which can be welded, molded or secured to the sidewall or bottom of the bottle body thus eliminating all moving parts. The bottle body can be washed repeatedly as a single unit with the vent intact.

16) Family number: 58512180 (US2016185494A)

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Title: CONTAINER FOR TRANSPORTING AND STORING A LIQUID

Priority: EP20130180473 20130814 EP20130180477 20130814 EP20130180478 20130814
 EP20140172542 20140616 EP20140752841 20140814 EP20140752317 20140814
 WO2014EP67404 20140814 WO2014EP67405 20140814 WO2014EP67424 20140814
 EP20140755793 20140814

Family:	Publication number	Publication date	Application number	Application date
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	CA2920716 AA	20160208	CA20142920716	20140814
	CA2920717 AA	20160208	CA20142920717	20140814
	EP3033297 A1	20160622	EP20140752841	20140814
	EP3033298 A1	20160622	EP20140755793	20140814
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	WO15022402 A1	20150219	WO2014EP67424	20140814

Probable Assignee: SCHOLLE IPN IP BV

Assignee(s):^(std): IPN IP BV ; BASF SE

Assignee(s): GARNETT RICHARD ; HUBER ROBERT ; METCALF ROY ; SASTURAIN JUAN ; KROGER HARALD ; SCHOLLE IPN IP BV

Inventor(s):^(std): GARNETT RICHARD ; HUBER ROBERT ; KROEGER HARALD ; KROGER HARALD ; METCALF ROY ; SASTURAIN JUAN

Agent(s): PHILLIPS ORMONDE FITZPATRICK; ROBIC; EP AND C; MAIWALD PATENTANWALTS GMBH; EXTER POLAK AND CHARLOUIS BV

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): [B65D43/02](#) [B65D45/02](#) [B65D47/14](#) [B67D1/08](#) [B67D3/00](#) [B67D7/02](#) (Advanced/Invention)

CPC: [B65D47/14](#) [B65D43/0277](#) [B65D45/02](#) [B67D3/0051](#) [B67D7/0288](#) [B67D1/0802](#) [B67D3/0032](#)

US class: [220/254.1](#) [220/254.2](#) [220/254.7](#) [222/1](#) [285/124.1](#)

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Forward Citations: US2016347603, US2016194118,

Abstract:

Source: US2016185494A A container is provided which allows for draining the liquid via one of the openings of the cap and allows for venting the container simultaneously via the other opening of the cap. Advantageously, also rigid containers, even large sized ones, can be used due to the venting function provided by the dual function closure of the container and the cap. In other words, a container with a dual function closure comprised by the cap

itself is presented which facilitates draining and venting the container. The cap comprises a locking means adapted to engage with a locking interface of a coupling device. Thus, engaging a locking interface of the coupling device with the locking means of the cap such that the coupling device and the cap of the container are fixed is comprised. This provides a secure and reliable fastening means. Advantageously, the cap can be permanently fixed to the container, i.e. before, during and after draining, venting and/or washing the container. Further, such a container comprising the cap with the two closure inserts facilitates that upon disconnecting the container from a coupling device an automatic resealing of the container is caused. The container as presented herein facilitates the provision and use of a valuable closed transfer system for transferring the liquid from the container. Moreover, this embodiment of the invention provides for a reliable and cheap closing mechanism which is permanently fixed at the container.

17) Family number: 30141675 (US4343754A)

© PatBase

Title: PROCESS AND APPARATUS FOR MOLDING LINERS IN CONTAINER CLOSURES

Priority: CA19800360433 19800917 CA19820407905 19820723 CA19820407931 19820723
 CA19860515832 19860812 EP19820106577P 19820720 JP19800502288 19800908
 EP19820106577 19820720 EP19820106577 19820720 CA19820515832 19820723
 US19810286375 19810726 US19810270241 19810604 JP19820127821 19820723
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Family:

Publication number	Publication date	Application number	Application date
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<u>AU198285551 A1</u>	19830127	AU19820085551	19820702
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<u>AU538906 B2</u>	19840830	AU19800063343	19800908
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<u>CA1190519 A1</u>	19850716	CA19820407905	19820723
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<u>DE3277686 D1</u>	19871223	DE19823277686	19820720
<u>DE3279680 D1</u>	19890615	DE19823279680	19820720
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<u>ZA8204808 A</u>	19830427	ZA19820004808	19820706
<u>ZA8205312 A</u>	19830727	ZA19820005312	19820723

Probable Assignee: HC IND

Assignee(s):^(std): HC IND

Assignee(s): H C PLASTIC INC ; H C INDUSTRIES INC ; HC IND INC ; H C PLASTIC INC A DE CORP ; H C INDUSTRIES INC CRAWFORDSVILLE IND US ; WILDE SHELDON L ; MCCANDLESS THOMAS J ; SAUNDERS ROBERT M ; EICHI SHII IND INC ; ETSUCHI SHII IND INC ; H C IND ; H C IND INC ; H C IND INC A CORP INDIANA ; H C IND INC A

CORP OF IN ; H C IND INC A CORP OF IND ; H C IND INC AN CORP

Inventor(s):^(std): SHERUDON ERU WAIRUDO ; SHIERUDON ERU WAIRUDO ; SL WILDE ; SOUNDERS ROBERT M ; THOMAS J MCCANDLESS ; TJ MCCANDLESS ; TOOMASU JEI MATSUKIYANDORES ; TOOMASU JIEI MATSUKIYANDORES ; WAIRUDO TSUERUDON ERU ; WILDE S ; WILDE SHELDON ; WILDE SHELDON L ; WILDE SL MCCANDLESS TJ SAUNDERS RM ; MCCANDLESS T ; MCCANDLESS THOMAS ; MCCANDLESS THOMAS J ; ROBAATO EMU SAUNDAAZU ; SAUNDERS R ; SAUNDERS ROBERT ; SAUNDERS ROBERT M ; SHELDON L WILDE ; SAUNDERS SHELDON L WILDE THOMA ; SAUDERS R ; MACCANDLESS T ; MCCANDLESS T J ; WILDE S L MCCANDLESS T J SAUND ; WAIRUDO SHIERUDON ERU ; WAIRUDO SHERUDON ERU ; SAUNDAAZU ROBAATO EMU ; MATSUKANDORES TOOMASU JIEI ; MATSUKANDORES TOOMASU JEI ; WILDE S L ; SAUNDERS R M ; ROBERT M SAUNDERS ; RM SAUNDERS

Inventor(s): R M SAUNDERS ; T J MCCANDLESS ; SHELDON L WILDE THOMAS J MCCANDLESSROBERT M... ; M SOUNDERS ROBERT ; L WILDE SHELDON ; WILDE S L MCCANDLESS T J SAUNDERS R M ; S L WILDE ; SHELDON WILDE THOMAS MCCANDLESS ET ROBERT SAUNDERS ; SHELDON L WILDE THOMAS J MCCANDLESSROBERT M SAUNDE

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; FETHERSTONHAUGH AND CO

Designated states: AU BR DE FR GB IT JP NL SE

International class
(IPC 8-9): B29C33/00 B29C37/00 B29C41/20 B29C43/00 B29C43/02 B29C43/14 B29C43/18 B29C43/36 B29C43/40 B29C43/42 B29C43/50 B29C53/02 B29C55/00 B29C57/00 B29C59/02 B29C63/26 B29C65/00 B29C65/56 B29C67/00 B29C69/02 B29C70/80 B29D99/00 B65D41/02 B65D41/04 B65D41/20 B65D41/34 B65D41/38 B65D41/40 B65D49/12 B65D53/00 B65D53/04 B65D53/06 B65D55/02 B65D55/08 G09F3/03 (Advanced/Invention); B29C33/00 B29C37/00 B29C43/00 B29C43/02 B29C43/18 B29C53/02 B29C55/00 B29C59/02 B29C63/26 B29C65/00 B29C65/56 B29C67/00 B29L31/56 B65D41/04 B65D53/00 G09F3/03 (Advanced/Non-invention); B29C33/00 B29C37/00 B29C43/00 B29C43/02 B29C43/14 B29C43/18 B29C43/32 B29C43/36 B29C55/00 B29C57/00 B29C59/02 B29C63/26 B29C65/00 B29C65/56 B29C67/00 B29C69/02 B29C70/00 B29D99/00 B65D41/02 B65D41/04 B65D41/32 B65D41/34 B65D49/00 B65D53/00 B65D55/02 G09F3/03 (Core/Invention); B29C43/18 B29C53/00 (Core/Non-invention)

International class
(IPC 1-7): B29C13/02 B29C27/00 B29C3/00 B29C41/20 B29C43/00 B29C43/10 B29C63/26 B29C67/00 B29D1/00 B29D3/00 B29D31/00 B29D7/16 B29D9/08 B29L31/56 B65D39/00 B65D41/02 B65D41/04 B65D41/20 B65D41/32 B65D41/34 B65D41/38 B65D41/40 B65D49/12 B65D53/00 B65D53/04 B65D53/06 B65D55/02 B65D55/08 B65D55/12 B67B3/02 G09F3/03

CPC: B65D41/3423 Y10S425/809 Y10S425/058 B29C43/361 B65D41/04 B65D41/34 B29C43/146 B26F2210/04 B29C37/0014 B29C37/0017 B29C43/18 B29C43/184 B29C53/02 B29C57/00 B29C69/02 B29C2791/001 B29C2793/009 B29L2031/56 B65D41/0407 B65D41/3428 B65D2101/0046 B65D2101/0053 B65D41/045 B29C37/0082 B29C43/021 B29C43/42 B29C59/022 B29C67/0003 B29C67/0044 B29C70/80 B29L2001/00 B29L2031/565 B65D41/0435 B65D41/3466

European class: B29C37/00B3 B29C37/00B4 B29C37/00K2 B29C43/02B B29C43/14C B29C43/36C B29C43/42 B29C57/00 B29C59/02C B29C67/00B B29C67/00K B29C69/02 B29C70/80 B65D41/04 B65D41/04B B65D41/04D B65D41/04D2 B65D41/34 B65D41/34C B65D41/34C1 B65D41/34E1 L26F210/04 L29C37/00K2 L29C43/18 L29C43/18B2 L29C53/02 L29C66/71 L29C791/00B L29C793/00J L29L1/00 L29L31/56 L29L31/56B L65D101/00A3D L65D101/00A3E

US class: 215/246 215/252 215/329 215/343 215/350 248/163.2 249/59 264/154 264/230 264/250 264/266 264/268 264/274 264/291 425/110 425/112 425/127 425/291 425/809 425/DIG.58

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Abstract:

Source: US4343754A A process for making a composite closure having a plastic cap with specially configured pedestals that are interconnected to a plastic liner. In one embodiment, the pedestals are each formed with an overhang, such as a mushroom-shaped overhang, to provide a mechanical interlock with the liner. In other embodiments, the pedestals are each formed with a fusible heat concentration zone that is fused to the liner as the liner is compression molded and heated in the cap. In one embodiment, each of the fusible pedestals are formed with a cylindrical configuration. In another embodiment, each of the fusible pedestals are formed in the shape of a pyramid.

0) US2002033374A – TAMPER EVIDENCING CLOSURE

18) Family number: 28185285 (US2002033374A)

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Title: Tamper evidencing closure

Priority: EP20030770468 20030924 KR20007000005U 20000522 US19970904878 19970801
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<u>ZA200205290 A</u>	20030410	ZA20020005290	20020702	

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; ADAMS BRIAN M ; MA MIKE X ; MA MIKE XIAOLI

Assignee(s): MA XIAOLI ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL CORP ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; WAYZATA INVESTMENT PARTNERS LLC ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO Foothill LLC AS AGENT ; WELLS FARGO Foothill LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS

Inventor(s):^(std): MIKE X MA ; MA XIAOLI ; MA MIKE XIAOLI ADAMS BRIAN M ; MA MIKE X ; ADAMS BRIAN M ; XIAOLI MA ; MA MIKE XIAOLI ; BRIAN M ADAMS

Inventor(s): THE DESIGNATION OF THE INVENTOR HAS NOT YET BEEN FILED ; MA MIKE ; ADAMS BRIAN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL; DAVID J BREZNER DORSEY AND WHITNEY LLP; ADAM K SACHAROFF MUCH SHELST FREED DENENBERG AMENT AND RUBENSTEIN PC; DORSEY AND WHITNEY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B28B13/06 B28B7/10 B29C41/42 B29C45/44 B65D1/00 B65D39/00 B65D41/00 B65D41/32 B65D41/34 B65D49/12 B65D50/00 B65D51/00 B65D51/16 B65D55/02 (Advanced/Invention); B65D41/34 (Advanced/Non-invention); B65D39/00 B65D41/34 B65D50/00 B65D55/02 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B28B13/06 B28B7/10 B29C41/42 B65D0/0000 B65D1/00 B65D39/00 B65D41/00 B65D41/34 B65D50/00 B65D55/02

CPC: B65D41/3428 B29C43/42 B29C43/50 B29C45/4407 B29L2031/565 B65D41/3409 B65D2101/0046

European class: B29C43/42 B29C43/50 B29C45/44B B65D41/34A1 B65D41/34C1 L29C43/50 L29L31/56B L65D101/00A3D

US class: 215/252 215/254 215/256 215/258 215/258S 215/307 215/307S 215/329 215/344 215/344S 215/43 215/44 264/328.1 264/328.100S 264/334 264/334S

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Forward Citations:

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Abstract:

Source: US2002033374A A container including a neck and an opening, in combination with a tamper-evidencing closure including a top, a depending annular skirt and a tamper-evidencing band frangibly connected to the annular skirt. The container includes a first securing structure on the neck spaced from the opening. The tamper-evidencing band includes an inwardly turned retaining rim that extends at least partially upwardly. The retaining rim has a free edge for engagement with the locking surface as the closure is removed from the neck. The retaining rim includes a plurality of outwardly directed flutes spaced circumferentially thereon and a second securing structure located on the retaining rim between the flutes.

19) Family number: 56489381 (US2014138274A)

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Title: PRODUCT AND PACKAGE WITH A PHOTSENSITIVE USE–EVIDENT FEATURE

Priority: AU20130345212 20131105 AU20170202839 20170428 US20120679506 20121116
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Family:	Publication number	Publication date	Application number	Application date
	<u>AR093510 AA</u>	20150610	AR2013P104218	20131115
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	<u>AU2017202839 AA</u>	20170518	AU20170202839	20170428
	<u>AU2017202839 BB</u>	20171019	AU20170202839	20170428
	<u>AU2017228651 AA</u>	20171005	AU20170228651	20170914
	<u>CA2889324 AA</u>	20150423	CA20132889324	20131105
	<u>CL2015001260 A1</u>	20150925	CL20150001260	20150511
	<u>CN104781156 A</u>	20150715	CN201380059846	20131105
	<u>CO7350634 A2</u>	20150810	CO20150086358	20150417
	<u>EP2920083 A1</u>	20150923	EP20130805633	20131105
	<u>EP2920083 B1</u>	20170830	EP20130805633	20131105
	<u>ID201604055 A</u>	20160617	ID2015P0003577	20131105
	<u>MX2015005718 A1</u>	20150820	MX20150005718	20131105
	<u>NZ706383 A</u>	20170428	NZ20130706383	20131105
	<u>PE09852015 A1</u>	20150620	PE20150000628	20131105
	<u>PH2015500980 A</u>	20150713	PH20150500980	20150504
	<u>SG10201708767V A1</u>	20171129	SG20171008767	20131105
	<u>SG11201502964V A1</u>	20150528	SG20151102964	20131105
	<u>TH156632 A</u>	20160920	TH20151002510	20131105
	<u>TW201429831 A</u>	20140801	TW20130140855	20131111
	<u>TW201726506 A</u>	20170801	TW20170105463	20131111
	<u>WI574891 B</u>	20170321	TW20130140855	20131111
	<u>UA114826 C2</u>	20170810	UA20150005766	20131105
	<u>US2014138274 AA</u>	20140522	US20120679506	20121116
	<u>US2016251129 AA</u>	20160901	US20160149377	20160509
	<u>US9365314 BB</u>	20160614	US20120679506	20121116
	<u>WO14078128 A1</u>	20140522	WO2013US68472	20131105

Probable Assignee: OWENS BROCKWAY GLASS CONTAINER

Assignee(s):^(std): OWENS BROCKWAY GLASS CONTAINER INC ; OWENS BROCKWAY GLASS CONTAINER ; OWENS BROCKWAY GLOSS CONTAINER INC

Assignee(s): SOLUNIN ANATOLY ; SMITH ROGER P ; FEYGENSON OLEG ; ANDERSON CHRIS D ; BRYANT JESSICA R ; CLARK TERENCE J ; COOPER SCOTT

Inventor(s):^(std): ANATOLY SOLUNIN ; ANDERSON CHRIS D ; BRYANT JESSICA R ; CLARK TERENCE J ; COOPER SCOTT ; FEYGENSON OLEG ; SCOTT COOPER ; SMITH ROGER P ; SOLUNIN ANATOLY ; OLEG FEYGENSON ; BRYANT JESSICA ROSE

Inventor(s): ROGER P SMITH ; TERENCE J CLARK ; JESSICA R BRYANT ; CHRIS D ANDERSON

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; GOWLING LAFLEUR HENDERSON LLP; JOHANSSON AND LANGLOIS LTDA; BLUMBACH ZINNGREBE; DREW AND NAPIER LLC; SMITH SUSAN L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE

GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ
LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ
NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG
SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA
ZM ZW

International class B65B43/00 B65D25/00 B65D49/00 B65D51/24 B65D55/02 B65D65/38 B65D81/00
(IPC 8-9) B65D85/00 (Advanced/Invention);
B65D49/00 B65D51/24 (Core/Invention)

CPC: B65D81/00 B65B43/00 B65D49/00 B65D55/026 B65D2101/00 B65D2203/00
B65D2203/02 B65D2203/04 B65D2203/12 B65D51/248 B65D25/00

US class: 1/1 206/459.1 206/524.6 53/452 53/492

[Classification Explorer](#)

Cited documents: WO11135250 A1, WO07021294 A1, WO04110892 A1, US8292100 BB, US8292100,
US824838 A, US7335322 BB, US7258458 BB, US6964492 BA, US6405867 BA,
US6254247 BA, US5292018 A, US520219 A, US4740401 A, US3399811 A, US3325299
A, US2515937 A, US2515936 A, US2099669 A, US2032478 A, US2012168333 AA,
US2011228518 AA, US2011215054 AA, US2010219195 AA, US2010147725 AA,
US2009284732 AA, US2008121816 AA, US2007206372 AA, US2007201220 AA,
US2006139928 AA, US2006102582 AA, US2005285050 AA, US2005145525 AA,
US2004238380 AA, US2003142267 AA, US2003095253 AA, US2003063460 AA,
US2002079692 AA, CN2688623 Y, CN1431130 A, CN102112803 A, CN101291857 A,

Forward Citations: WO16186892, WO16186855, WO16036230, USD789791, USD771494, US9815593,
US9637271, US9367849, US9334084, US2016340082, US2016221718, US2014263158,
US2014262897,

Abstract:

Source: US2014138274A A product includes a container, a photosensitive material carried by the container and responsive to ultraviolet light, and a UV protector carried by the container to protect the photosensitive material from exposure to UV light.

20) Family number: 64368147 (US2016361231A)

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Title: MULTI-MONODOSE CONTAINERS

Priority: US20150736542 20150611 US20150963689 20151209 US20150963768 20151209

Family:

Publication number	Publication date	Application number	Application date
TW201726500 A	20170801	TW20160140178	20161206
US2016361231 AA	20161215	US20150736542	20150611
US2016361232 AA	20161215	US20150963689	20151209
US2016361233 AA	20161215	US20150963768	20151209
WO16200771 A1	20161215	WO2016US36151	20160607
WO16200775 A1	20161215	WO2016US36157	20160607
WO17100408 A1	20170615	WO2016US65534	20161208

Probable Assignee: TOKITAE LLC

Assignee(s):^(std): TOKITAE LLC

Inventor(s):^(std): CHOU FONG LI ; ECKHOFF PHILIP A ; ECKHOFF PHILIP ANDREW ; FOWLER LAWRENCE MORGAN ; LIU SHIENG ; NATARAJAN KRISHNAN ; PETERSON NELS R ; WOOD JR LOWELL L ; WOOD LOWELL L ; WOOD LOWELL L JR

Agent(s): MALASKA STEPHEN L ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [A61J1/05](#) [A61J1/06](#) [A61J1/14](#) [A61J1/16](#) [A61J1/18](#) [A61J3/00](#) [B65B11/50](#) [B65B31/00](#) [B65B31/02](#) [B65B5/06](#) [B65B51/10](#) [B65B61/04](#) [B65B63/04](#) [B65D1/09](#) [B65D3/02](#) [B65D77/22](#) [B65D81/05](#) (Advanced/Invention)

CPC: [A61J1/1406](#) [A61J2200/72](#) [B65B63/04](#) [A61J2205/30](#) [A61J1/1412](#) [A61J2200/70](#) [A61J1/067](#) [B65B3/006](#) [B65B5/045](#) [B65B5/067](#) [B65B51/146](#) [B65B2220/16](#) [B65B61/04](#) [B65B5/06](#) [A61J1/18](#) [A61J1/1481](#) [B65B31/048](#)

US class: [53/415](#) [604/403](#) [604/404](#)

[Classification Explorer](#)

Cited documents: WO14145906 A2, US6234333 BA, US5852590 A, US4415085 A, US2009100802 AA, US2006177610 AA, US2005261659 AA, KR930003779 Y1, JP2006271781 A2, JP2000206652 A2, CN204250524 U,

Abstract:

Source: US2016361231A Multi-monodose containers are described including a row of at least two vials, a first vial connected to an adjacent second vial through an articulating joint, the articulating joint sufficiently flexible to reversibly mate a planar outer surface of the first vial with a planar outer surface of the adjacent second vial; wherein the row of the at least two vials is configured to form a first rectangular packing cross-sectional area in an expanded configuration and configured to form a second rectangular packing cross-sectional area in a folded configuration, the second rectangular packing cross-sectional area smaller than the first rectangular packing cross-sectional area.

0) US2005167390A – CONTAINER, PARTICULARLY A BEVERAGE BOTTLE

21) Family number: 29988252 (US2005167390A)

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Title: CONTAINER, PARTICULARLY A BEVERAGE BOTTLE

Priority: DE20012019909U 20011210 DE20012019969U 20011210 DE20021002902 20020125
 DE20025005606 20021016 DE20025006100 20021210 US20020497879 20021210
 DE20021012877 20020322 DE20021024369 20020528 DE20021035515 20020729
 WO2002EP11583 20021016 US20050497879 20050328 US20100751499 20100331
 WO2002EP14004 20021210 WO2002EP11583 20021010

Family:

Publication number	Publication date	Application number	Application date
AR037769 AA	20041201	AR2002P104776	20021210
AR037781 AA	20041201	AR2002P104788	20021210
AT315529 E	20060215	AT20020782932T	20021016
AT320383 E	20060415	AT20020795143T	20021210
AU2002346930 AA	20030709	AU20020346930	20021016
AU2002346930 BB	20060105	AU20020346930	20021016
AU2002361041 AA	20030623	AU20020361041	20021210
AU2002361041 BB	20080612	AU20020361041	20021210
AU2002361041 CA	20081127	AU20020361041	20021210
DE10212877 A1	20030626	DE20021012877	20020322
DE10224369 A1	20031211	DE20021024369	20020528
DE20119909 U1	20020808	DE20012019909U	20011210
DE20119969 U1	20020221	DE20012019969U	20011210
DE50205606 D1	20060406	DE20025005606	20021016
DE50206100 D1	20060511	DE20025006100	20021210
EP1451081 A1	20040901	EP20020782932	20021016
EP1451081 B1	20060111	EP20020782932	20021016
EP1456092 A2	20040915	EP20020795143	20021210
EP1456092 B1	20060315	EP20020795143	20021210
ES2256562 T3	20060716	ES20020782932T	20021016
ES2260504 T3	20061101	ES20020795143T	20021210
HU0402243 AB	20050228	HU20040002243	20021016
HU0402243 AC	20051228	HU20040002243	20021016
HU0402414 AB	20050329	HU20040002414	20021210
HU0402414 AC	20050428	HU20040002414	20021210
HU228292 B1	20130828	HU20040002243	20021016
HU230187 B1	20150928	HU20040002414	20021210
NZ533178 A	20061130	NZ20020533178	20021016
NZ533678 A	20050324	NZ20020533678	20021210
PT1456092 T	20060731	PT20020795143T	20021210
US2005167390 AA	20050804	US20050497879	20050328
US2006043054 AA	20060302	US20040498241	20040610
US2006043054 AA	20060302	US20020498241	20021010
US2006043054 AA	20060302	US20040498241	20040610
US2010252524 AA	20101007	US20100751499	20100331
US8356722 BB	20130122	US20100751499	20100331
US8573424 BB	20131105	US20020497879	20021210
WO03050009 A2	20030619	WO2002EP14004	20021210
WO03050009 A3	20030918	WO2002EP14004	20021210

<u>WO03053810 A1</u>	20030703	WO2002EP11583	20021016	
<u>ZA200404442 A</u>	20050606	ZA20040004442	20040604	
<u>ZA200404442 A</u>	20050831	ZA20040004442	20040604	
<u>ZA200405000 A</u>	20050624	ZA20040005000	20040624	
<u>ZA200405000 A</u>	20050831	ZA20040005000	20040624	

Probable Assignee: ALCOA DEUTSCHLAND GMBH

Assignee(s):^(std): ALCOA DEUTSCHLAND GMBHVERPACKU ; DUBS HANS DIETER ; ALCOA GMBH VERPACKWERKE ; KARL MATHEIS ; MATHEIS KARL ; LAUTH WERNER ; SOLDAN JUERGEN ; SOLDAN JURGEN ; ALCOA DEUTSCHLAND GMBH ; PRECIOSA GULF FZCO

Assignee(s): ALCOA DEUTSCHLAND GMBH VERPACKUNGSWERKE ; ALCOA DEUTSCHLAND GMBH VERPACKUNGSWERKE WORMS ; MATHEIS KARL ALZEY WEINHEIM ; CLOSURE SYSTEMS INT ; CREDIT SUISSE SYDNEY BRANCH ; CLOSURE SYSTEMS INT INC ; ALCOA DEUTSCHLAND GMBHVERPACKUNGSWERKE

Inventor(s):^(std): DUBS HANS DIETER ; SOLDAN JURGEN ; SOLDAN JUERGEN ; MATHEIS KARL ; KARL MATHEIS ; JURGEN SOLDAN ; JUERGEN SOLDAN ; HANS DIETER DUBS

Agent(s): GRIFFITH HACK; PHILLIPS ORMONDE FITZPATRICK; HARNESS DICKEY AND PIERCE PLC; ECKERT SEAMANS CHERIN AND MELLOTT LLC, ALCOA TECHNICAL CENTER; ECKERT SEAMANS CHERIN AND MELLOTT LLC ALCOA TECHNICAL CENTER

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B01D29/01 B01D29/41 B01D63/16 B65D23/00 B65D41/62 B65D45/02 B65D45/30 B65D51/18 B65D81/24 B67B7/02 C12G1/00 (Advanced/Invention);
B65D23/00 B65D39/00 B65D41/02 B65D45/00 B65D51/18 B65D53/00 B65D81/24 B67B7/00 C12G1/00 (Core/Invention);
B65D B67B C12G (Subclass/Invention)

International class
(IPC 1-7): B01D35/30 B65B B65D B65D23/00 B65D39/00 B65D39/02 B65D41/02 B65D41/28 B65D41/62 B65D45/00 B65D45/02 B65D45/30 B65D51/18 B65D53/00 B65D53/02 B65D81/24 B67B B67B7/02 C12G C12G1/00

CPC: B65D39/00 B65D39/0047 B65D39/025 B65D41/28 B65D45/30 B65D53/02 B65D2539/006 B01D29/01 B01D29/41 B01D63/16

European class: B01D29/01 B01D29/41 B01D63/16 B65D39/00 B65D39/00F8 B65D39/02B B65D41/28 B65D45/30 B65D53/02 L65D339/06 L65D539/00Y6 L65D539/06

US class: 215/274 215/277 215/298 215/354 215/355 215/355S 215/363 215/364 215/387 215/387S 220/234 220/803 220/804

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Cited documents: WO9722398 A1, WO9421361 A1, USD412850 S1, US824210 A, US746332 A, US7426999 BB, US722596 A, US7124905 BB, US7121419 BB, US709162 A, US701101 A, US6499618 BA, US6426049 BA, US6158604 A, US6024235 A, US5975322 A, US5884786 A, US5868264 A, US5845797 A, US5826739 A, US580456 A, US573239 A, US5662233 A, US5654022 A, US5645022 A, US5603422 A, US5405033 A, US5370252 A, US5316163 A, US5288466 A, US5261547 A, US5232111 A, US5109997 A, US5038952 A, US4883641 A, US4838442 A, US4801040 A, US4724028 A, US4650083 A, US4573602 A, US4506797 A, US4441621 A, US4342400 A, US4231486 A, US4228910 A, US4108325 A, US4059124 A, US3995762 A, US3937350 A, US3900124 A, US3760969 A, US3618814 A, US3603469 A, US3559834 A, US3533528 A, US34227 A, US3415405 A, US3392859 A, US3245569 A, US3109549 A, US307428 A, US3073473 A, US3015403 A, US3001659 A, US2822104 A, US281333 A, US2774501 A, US2734649 A, US2666542 A, US265118 A, US2584522 A, US2549404 A, US2536426 A, US2234485 A, US2149378 A, US2116421 A, US2010257 A, US2006151422 AA, US2002023893 AA, US1963886 A, US1803225 A, US1654720 A, US1645720 A, US1603116 A, US1240072 A, US1124173 A, US1025942 A, GB575393 A, FR9306866, FR2705645 A1, FR2598137 A1, EP1057785 A1, EP0861811 B1, EP0861811 A1, EP0798225 A1, DE9315073 U, DE9315073, DE88716207, DE8816207 U, DE8716207 U, DE8712572 U, DE8712572, DE8703422 U, DE8703422, DE67786 A, DE4027907 A1, DE3538358 A1, DE29515494 U1, DE20119969 U1, DE19649030 A1, DE19616616 A1, DE1786702 U, DE1786702, DE1757413 A1, DE1743126 U, DE1743126, DE1273354 B,

Forward Citations: WO16180908, WO16034172, WO14019713, WO12063026, WO12063026, WO11103964, WO10010355, WO10010355, WO08065019, WO08065019, WO07039030, USD734154, USD725472, USD725471, USD708945, USD702553, USD697407, USD697404, USD696946, USD696116, USD688949, USD686079, USD686078, US9751655, US9636609, US9617027, US9376305, US9340323, US9120591, US9067254, US8997998, US8903528, US8857232, US8726710, US8726709, US8714383, US8627697, US8573424, US8448487, US8381561, US8360266, US8356722, US7934614, US2015329233, US2015129592, US2014190570, US2014091097, US2013146070, US2013043215, US2013026167, US2012168399, US2011114649, US2011113732, US2010100213, US2010095735, US2010095734, US2010095728, US2010095723, US2010095514, US2010095502, US2010050576, US2007284330, RU2577693, FR3036385, EP3093253, EP2873629, EP2706017, EP2692659, EP2692657, EP2552799, EP2552799, EP1950173, EP1767258, DE202010002640, DE202008016290, DE10224369, DE102014112798, DE102011018528, DE102010014876, CN103662341, CN102105226,

Abstract:

Source: US2005167390A A container, particularly a beverage bottle, can be closed in a bottle opening of a bottle body with a closure made of a plastic material or glass. A fixing element is detachable fastened to the bottle body and holds the closure in the bottle opening. Such a bottle closure solves the problems involving, in particular, wine bottles and which arise when otherwise common bottle cork stoppers are used.

0) US2007283666A – READY TO DRINK CONTAINER WITH NIPPLE AND NEEDLE...

22) Family number: 40747155 (US2007283666A)

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Title: READY TO DRINK CONTAINER WITH NIPPLE AND NEEDLE PENETRABLE AND LASER RESEALABLE PORTION, AND RELATED METHOD

Priority: US20060790684P 20060410 US20070786206 20070410 WO2007US08961 20070410
US20100861354 20100823 US20130770510 20130219 US20160006945 20160126

Family:	Publication number	Publication date	Application number	Application date
	BRPI0709820 A2	20110816	BR2007PI09820	20070410
	CA2648750 AA	20081008	CA20072648750	20070410
	CA2648750 C	20120327	CA20072648750	20070410
	CN101472799 A	20090701	CN200780019644	20070410
	EP2013081 A2	20090114	EP20070755287	20070410
	EP2013081 A4	20130109	EP20070755287	20070410
	IN08439DN2008 A	20090522	IN2008DN08439	20081007
	MX2008013131 A1	20090511	MX20080013131	20070410
	US2007283666 AA	20071213	US20070786206	20070410
	US2010316774 AA	20101216	US20100861354	20100823
	US2014027402 AA	20140130	US20130770510	20130219
	US2016220450 AA	20160804	US20160006945	20160126
	US7780023 BB	20100824	US20070786206	20070410
	US8376003 BB	20130219	US20100861354	20100823
	US9241874 BB	20160126	US20130770510	20130219
	WO07120719 A2	20071025	WO2007US08961	20070410
	WO07120719 A3	20080221	WO2007US08961	20070410
	ZA200808636 A	20100331	ZA20080008636	20070410

Probable Assignee: MEDINSTILL DEV LLC

Assignee(s):^(std): ADAMO BENOIT ; GUTHY JOHN ; HOULE NATHANIEL ; MEDICAL INSTILL TECH INC ; PY DANIEL ; TULLEY BRIAN ; PY DANIEL C ; MEDINSTILL DEV LLC ; MEDLNSTILL DEV LLC ; WILLEY JEFFREY ; WILLEY JEFFREY

Assignee(s): MEDLNSTILL DEVELOPMENT LLC ; MEDINSTILL DEVELOPMENT LLC ; MEDICAL INSTILL TECHNOLOGIES INC

Inventor(s):^(std): ADAMO BENOIT ; BENOIT ADAMO ; BRIAN TULLEY ; DANIEL PY ; GUTHY JOHN ; HOULE NATHANIEL ; JEFFREY WILLEY ; JOHN GUTHY ; NATHANIEL HOULE ; PY DANIEL ; TULLEY BRIAN ; WILLEY JEFFREY ; WILLEY JEFFREY ; WILLEY JEFREY

Inventor(s): JEFREY WILLEY

Agent(s): RIDOUT AND MAYBEE LLP; BAUER WULF ET AL; MCCARTER AND ENGLISH LLP, CITYPLACE I; MCCARTER AND ENGLISH LLP CITYPLACE I; MCCARTER AND ENGLISH LLP HARTFORD CITYPLACE I; MCCARTER AND ENGLISH LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
^(IPC 8-9): [A23B5/00](#) [A23B5/005](#) [A61J1/14](#) [A61J11/00](#) [A61J11/04](#) [A61J9/00](#) [B65B1/04](#) [B65B3/04](#) [B65B55/02](#) [B65B55/08](#) [B65D51/00](#) ^(Advanced/Invention);
[A23B5/00](#) [A23B5/005](#) [A61J11/00](#) [A61J9/00](#) [B65B1/04](#) [B65B55/02](#) ^(Core/Invention);
[A23B](#) [B65B](#) ^(Subclass/Invention)

International class
^(IPC 1-7): [B65B1/04](#)

CPC: [A61J9/003](#) [B65D51/002](#) [A61J11/04](#) [A61J11/0005](#) [A61J1/1406](#)

European class: A61J1/14B A61J11/00C B65D51/00B

US class: 1/1 141/18 141/2 141/330 215/11.1 215/11.100 215/11.100S 215/11.4 426/117 426/234 426/234P 426/394 426/394S 426/399 426/399S 53/284.5 53/373.7 53/373.700 53/373.700S 53/423 53/425 53/425P 53/467

[Classification Explorer](#)

Cited documents: WO07120719 A2, WO03101858 A2, US98317804, US9241874 BB, US8376003 BB, US7954521 BB, US7780023 BB, US76617204, US7445405 A, US72789905 P, US7186241 BB, US7108676 BB, US7100646 BB, US7044005 A, US7032631 BB, US6971551 BB, US6929040 BB, US6786344 BB, US6708833 BB, US6684916 BB, US6616319 BB, US6604561 BB, US65545503, US6551639 BA, US6536484 BB, US6499615 BA, US6481571 BA, US6401949 BA, US6286697 BA, US6257428 BA, US6098795 A, US6032810 A, US5950689 A, US5881893 A, US5747083 A, US5641004 A, US5419445 A, US5354274 A, US5275298 A, US5190174 A, US5178291 A, US5101991 A, US4877065 A, US4834099 A, US4821895 A, US4706827 A, US4700202 A, US4620638 A, US4519513 A, US4427039 A, US4078566 A, US3747791 A, US3645262 A, US3586196 A, US3532242 A, US3424329 A, US33996606, US3334764 A, US3266910 A, US3200860 A, US2619088 A, US2014246435 AA, US2010213157 AA, US2010094245 AA, US2009139883 AA, US2008054001 AA, US2007283666 AA, US2006137998 AA, US2005194341 AA, US2004256026 AA, US2004188372 AA, US2004124168 AA, US2003071006 AA, US2002035997 AA, RU2223902 C2, GB2185889 A1, GB2164325 A1,

Forward Citations: WO16156242, WO11137413, WO09055833, WO09055832, WO09055830, USD766451, USD699857, USD681834, USD670815, USD667559, USD644334, USD636885, USD626246, USD625830, USD620125, US9801787, US9604740, US9415885, US9241874, US8966866, US8910810, US8827093, US8735850, US8596314, US8573421, US8376003, US8251235, US7779609, US2016220450, US2015175281, US2014163463, US2014027402, US2013283733, US2013233898, US2013180618, US2013140260, US2013126461, US2013008137, US2012152881, US2011252695, US2011006225, US2010316774, US2009139995, US2009139883, US2008283537, RU2481816, RU2467938, EP2238041, EP2238041, EP2207520, EP2207520, EP2205520, EP2205519, CN104773404,

Abstract:

Source: US2007283666A A container is provided for storing a product, such as a fat containing liquid product, and includes a body defining a chamber for receiving the product; and a container closure including a sealing portion for sealing the product within the chamber. The container closure includes a member forming a substantially fluid-tight seal between the container closure and the body; a nipple in fluid communication with the chamber that seals the chamber with respect to the ambient atmosphere during storage of the product in the chamber and that can be opened to dispense product from the chamber therethrough; and a needle penetrable and laser resealable portion that is penetrable by the needle for aseptically filling the chamber with the product, and that is thermally resealable by the application of laser radiation thereto to seal the product within the chamber.

23) Family number: 42239557 (US2009005747A)

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Title: FLUID COLLECTION AND DISPOSAL SYSTEM HAVING INTERCHANGEABLE COLLECTION AND OTHER FEATURES AND METHODS RELATING THERETO

Priority: EP20080742213 20080324 US20070919607P 20070323 US20070963325P 20070803
US20080076841 20080324 US20080076842 20080324 US20130908708 20130603
WO2008US03818 20080324 WO2008US03817 20080324 US20130908752 20130603

Family:

Publication number	Publication date	Application number	Application date
<u>AU2008232360 AA</u>	20081002	AU20080232360	20080324
<u>AU2008232361 AA</u>	20081002	AU20080232361	20080324
<u>AU2008232361 BB</u>	20130516	AU20080232361	20080324
<u>CA2681734 AA</u>	20081002	CA20082681734	20080324
<u>CA2681735 AA</u>	20090923	CA20082681735	20080324
<u>CA2681735 C</u>	20160524	CA20082681735	20080324
<u>CN101765465 A</u>	20100630	CN200880017134	20080324
<u>CN101765547 A</u>	20100630	CN200880017034	20080324
<u>DE602008041544 D1</u>	20160121	DE200860041544T	20080324
<u>DK2139620 T3</u>	20160307	DK20080742213T	20080324
<u>EP2139620 A1</u>	20100106	EP20080742213	20080324
<u>EP2139620 A4</u>	20120905	EP20080742213	20080324
<u>EP2139620 B1</u>	20151209	EP20080742213	20080324
<u>EP2142438 A1</u>	20100113	EP20080727105	20080324
<u>IL201097 A0</u>	20100517	IL20080201097	20080324
<u>IL201135 A0</u>	20100517	IL20080201135	20080324
<u>JP2010522060 T2</u>	20100701	JP20100500950T	20080324
<u>JP2010522061 T2</u>	20100701	JP20100500951T	20080324
<u>JP5329522 B2</u>	20131030	JP20100500951T	20080324
<u>US2009005747 AA</u>	20090101	US20080076841	20080324
<u>US2009012485 AA</u>	20090108	US20080076842	20080324
<u>US2013341330 AA</u>	20131226	US20130908708	20130603
<u>US2013345651 AA</u>	20131226	US20130908752	20130603
<u>US8500706 BB</u>	20130806	US20080076842	20080324
<u>US9604778 BB</u>	20170328	US20130908752	20130603
<u>WO08118397 A1</u>	20081002	WO2008US03817	20080324
<u>WO08118398 A1</u>	20081002	WO2008US03818	20080324
<u>ZA200907405 A</u>	20101027	ZA20090007405	20091022
<u>ZA200907407 A</u>	20100825	ZA20090007407	20091022

Probable Assignee: ALLEGIANCE CORP**Assignee(s):^(std):** FEDENIA ADAM S ; GARRETT FRANK ; JOHNSON RUSS A ; KUDRNA OTAKAR ; MICHAELS THOMAS L ; TANG WEN ; MICHAEL THOMAS L ; ALLEGIANCE CORP**Assignee(s):** ALLEGIANCE MCGAW PARK CORP ; THOMAS L MICHAELS ; RUSS A JOHNSON**Inventor(s):^(std):** WEN TANG ; OTAKAR KUDRNA ; FRANK GARRETT ; MICHAELS THOMAS L ; KUDRNA OTAKAR ; JOHNSON RUSS A ; GARRETT FRANK ; FEDENIA ADAM S ; TANG WEN**Inventor(s):** RUSS A JOHNSON ; ADAM S FEDENIA ; THOMAS L MICHAELS ; FEDENIA ADAM S MCGAW PARK ; GARRETT FRANK MCGAW PARK ; JOHNSON RUSS A MCGAW PARK ; KUDRNA OTAKAR MCGAW PARK ; MICHAELS THOMAS L MCGAW PARK ; TANG WEN MCGAW PARK**Agent(s):**

PHILLIPS ORMONDE FITZPATRICK; GRIFFITH HACK; GOWLING LAFLEUR
HENDERSON LLP; GOWLING WLG CANADA LLP; MARKS AND CLERK
LUXEMBOURG LLP; VIERING JENTSCHURA AND PARTNER; PROCK THOMAS;
ARENT FOX LLP; JACOB; ROWE SHEREE T ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH
GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC
LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE
NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY
SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A61G12/00 A61M1/00 B08B3/00 B08B5/04 B08B9/08 B65D25/14
B65F1/06 (Advanced/Invention);
A61F13/02 A61M25/00 A61M27/00 (Advanced/Non-invention);
A61G12/00 A61M1/00 B08B3/00 B65D25/14 (Core/Invention);
A61M B08B B65D (Subclass/Invention)

CPC: B65F1/06 A61M1/0001 A61M1/0017 A61M1/005 A61M1/0052 A61M2205/7536 B08B9/08
A61M1/0005 A61M1/0009

European class: A61M1/00A B08B9/08 K61M1/00A8 K61M1/00H12C K61M1/00H12D K61M205/75D

US class: 220/495.06 604/313 604/319 604/319P 604/320 604/320P 604/321 604/321S 604/322

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US7673030 BB, US7497340 BB, US7469727 BB, US7468330 BB, US7461164 BB,
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Forward Citations: WO17134462, WO14145014, WO14066337, WO12012908, WO11008961, WO08118398, USD678792, US9770540, US9604778, US9474837, US9457135, US9304223, US9220821, US9199009, US9194627, US8991239, US8920394, US8905413, US8827972, US8685746, US8647574, US8500706, US8460256, US8025173, US2016067022, US2015196315, US2014184192, US2014155847, US2013289536, US2013165860, US2012193487, US2012165642, US2011178482, US2011118680, US2010255484, US2010248216, US2010201090, US2009198095, US2009188098, US2009012485, US2009005747, KR101492806, JP2015024085, EP2968710, CN105636870, CN105636870, CN105209087, CN104936631, CN104936631, CN104700210, CN103052413, CN103052413, CH703478,

Abstract:

Source: US2009005747A Various implementations of a fluid collection system having a flexible liner are disclosed. In one exemplary variation, the fluid collection system may include a flexible liner configured to collapse, a plurality of containers, back storage, specimen collection containers, and/or automatic connection to a suction source to reduce the volume of medical wastes, reduce the frequency of disposal cycles, reduce risk of exposure to potentially hazardous waste.

0) US5662230A – CRIMP TOP SEAL FOR VIALS

24) Family number: 11380970 (US5662230A)

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Title: Crimp top seal for vials

Priority: CA19962178431 19960606 CA19962479825 19960606 US19900553451 19900713
US19910801674 19911202 WO1991US04933 19910712 US19970872301 19970610
US19950477079 19950607 US19930104727 19930811 US19920960940 19921014
US19950545118 19951019

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2087262 AA</u>	19930113	CA19912087262	19910712
	<u>CA2178431 AA</u>	19961208	CA19962178431	19960606
	<u>CA2178431 C</u>	20041130	CA19962178431	19960606
	<u>CA2479825 AA</u>	19961208	CA19962479825	19960606
	<u>CA2479825 C</u>	20070313	CA19962479825	19960606
	<u>DE69607519 D1</u>	20000511	DE19966007519	19960607
	<u>DE69607519 T2</u>	20001102	DE19966007519T	19960607
	<u>EP0538388 A1</u>	19930428	EP19910913971	19910712
	<u>EP0747293 A1</u>	19961211	EP19960109184	19960607
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	<u>US5662230 A</u>	19970902	US19950477079	19950607
	<u>US5772057 A</u>	19980630	US19950545118	19951019
	<u>US5857579 A</u>	19990112	US19970872301	19970610
	<u>WO9200889 A1</u>	19920123	WO1991US04933	19910712
	<u>WO9311053 A1</u>	19930610	WO1992US10442	19921130
	<u>WO9504685 A1</u>	19950216	WO1994US09066	19940811

Probable Assignee: FINNERAN J G ASS

Assignee(s):^(std): J G FINNERAN ASSOCIATES ; J G FINNERAN ASSOCIATES INC ; J G FINNERAN ASSOCIATES VINELA ; FINNERAN J G ASS

Assignee(s): FINNERAN J G ASSOCIATES ; FINNERAN JAMES G ; JG FINNERAN ASSOCIATES INC ; J G FINNERAN ASSOCIATES VINELAND INDUSTRIAL PARK ; JG FINNERAN ASSOCIATES VINELAND INDUSTRIAL PARK ; JG FINNERAN ASSOCIATES ; J G FINNERAN ASSOCIATES VINELAND

Inventor(s):^(std): FINNERAN JAMES G

Agent(s): FETHERSTONHAUGH AND CO

Designated states: AT BE CA CH DE DK ES FR GB GR IE IT JP LI LU MC NL PT SE

International class
(IPC 8-9): B65D1/02 B65D41/02 B65D41/10 B65D41/12 B65D41/16 B65D41/17 B65D41/20 B65D45/32 B65D51/00 B65D51/14 B65D53/04 (Advanced/Invention);
B65D41/02 B65D51/00 B65D53/00 (Core/Invention)

International class
(IPC 1-7): B65D1/02 B65D41/00 B65D41/10 B65D41/12 B65D41/16 B65D41/34 B65D45/02 B65D45/30 B65D45/32 B65D45/34 B65D51/00

CPC: B65D41/20 B65D51/145 B65D53/04 B65D1/0246 B65D41/02 B65D41/10 B65D41/17 B65D45/322 B65D51/002

European class: B65D1/02D1B B65D41/02 B65D41/10 B65D41/17 B65D41/20 B65D45/32A B65D51/00B B65D51/14B B65D53/04

US class: 215/252 215/321

[Classification Explorer](#)

Cited documents: WO9504685 A1, US5088612 A, US5085332 A, US4923072 A, US4699286 A, US4669286 A, US4462502 A, US4303167 A, US4291813 A, US4121729 A, US4106622 A, US4037746 A, US3966082 A, US3913771 A, US3833142 A, US3480172 A, US3301425 A, US3277303 A, US3243070 A, US3227303 A, US2738089 A, US2726001 A, US2665023 A, US2659511 A, US2439845 A, US2109805 A, US1862620 A, US1661977

A, US1335538 A, GBA279495, GBA2073157, GB279495 A, GB2073157 A1, FR2705646 A1, EP0098810 A2,

Forward Citations: WO9953886, WO9604189, WO14022229, WO13068454, WO13036364, WO13007806, WO12065930, WO12065930, WO04058586, WO0012405, WO0012405, US9757306, US9463138, US9327886, US9233776, US8673242, US8652423, US8591835, US7934614, US7889519, US7350428, US6957745, US6945417, US6904662, US6681946, US6681475, US6626309, US6601721, US6588614, US6571837, US6382442, US6382438, US6378714, US6354603, US6341706, US6265225, US6234335, US6209738, US6090093, US6003566, US5947274, US5857579, US5772057, US5662230, US2014263319, US2013140208, US2012216633, US2010326868, US2010282707, US2008308444, US2008308443, US2008150680, US2007284330, US2007171680, US2006272431, US2004228208, US2004129343, US2003177629, US2002121496, JP4060247, JP2005027877, GB2283968, FR2782700, ES2302590, EP2879795, EP2592015, EP2319774, EP1094012, EP0909584, EP0837008, EP0768980, EP0747293, EP0611167, DE112007001341, DE102014110327, DE102014110327, DE102011079031, CN104736248, CN104590684, CN104260989, CN102933464, BE1015467,

Abstract:

Source: US5662230A A crimp top seal which can be applied to a variety of different containers. Circumferentially displaced points or lines of contact between the crimp top seal and the container at axially displaced positions provide self-alignment and secure retention of the crimp top seal on the container. The resilient crimp top seal includes a top member, angular locking ribs, and a crimp ring or lugs—all of which engage the neck finish on the container. The inner diameter of the skirt of the crimp top seal, the angle of the locking ribs, and the crimp ring or lugs provide the multiple, axially displaced lines of contact and allow the crimp top seal to engage a variety of containers.

25) Family number: 33511256 (US2006231519A)

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Title: CONTAINER CLOSURE WITH OVERLYING NEEDLE PENETRABLE AND THERMALLY RESEALABLE PORTION AND UNDERLYING PORTION COMPATIBLE WITH FAT CONTAINING LIQUID PRODUCT, AND RELATED METHOD

Priority: CN200680006859 20060125 US20050647049 20050125 US20100894224 20100930
US20120419204 20120313 US20060339966 20060125 US20050647049P 20050125
WO2006US02766 20060125 US20150704549 20150505

Family:

Publication number	Publication date	Application number	Application date
AU2006332049 AA	20071018	AU20060332049	20060125
AU2006332049 AB	20071122	AU20060332049	20060125
AU2006332049 AH	20090305	AU20060332049	20060125
BRPI0607233 A2	20090825	BR2006PI07233	20060125
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US2006231519 AA	20061019	US20060339966	20060125
US2011052768 AA	20110303	US20100894224	20100930
US2012186697 AA	20120726	US20120419204	20120313
US2016090205 AA	20160331	US20150704549	20150505
US7954521 BB	20110607	US20060339966	20060125
US8132600 BB	20120313	US20100894224	20100930
US9022079 BB	20150505	US20120419204	20120313
WO07117228 A2	20071018	WO2006US02766	20060125
WO07117228 A3	20080925	WO2006US02766	20060125
ZA200707123 A	20081231	ZA20070007123	20060125

Probable Assignee: PY DANIEL C

Assignee(s):^(std): ASSION NORBERT ; GUTHY JOHN ; HARTMAN ERIC E ; HOULE NATHANIEL ; MEDICAL INSTILL TECH INC ; SAHOO DEBASHIS ; PY DANIEL C ; MEDIKAL INSTILL TEKNOLODZHIS I ; PY DANIEL ; MEDLNSTILL DEV LLC ; WILLEY M J ; WILLEY M JEFFREY ; MEDINSTILL DEV LLC

Assignee(s): MEDLNSTILL DEVELOPMENT LLC ; WILLEY M ; MEDINSTILL DEVELOPMENT LLC ; MEDIKAL INSTILL TEKNOLODZHIS INK ; MEDICAL INSTILL TECHNOLOGIES INC

Inventor(s):^(std): DANIEL PY ; DEBASHIS SAHOO ; EHSSION NORBERT ; ASSION NORBERT ; ASSION NORBERT M ; GUTHY JOHN ; GUTI DZHON ; HARTMAN ERIC E ; HOULE NATHANIEL ; JEFFREY WILLEY M ; JOHN GUTHY ; KHARTMAN EHRIK E ; NATHANIEL HOULE ; NOBERT ASSION ; NORBERT ASSION ; PAJ DEHNIEL ; PY DANIEL ; SAHOO DEBASHIS ; SAKHOO DEBASHIZ ; VILLEJ M DZHEFFRI ; KHOULI NATANIEHL ; WILLEY M J ; WILLEY M JEFFREY

Inventor(s): KHOULI NATANIEHL' ; M JEFFREY WILLEY ; WILLEY M ; ASSION NOBERT ; NORBERT M ASSION ; HARTMAN ERIC ; DABUEK PY ; ERIC E HARTMAN

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; RIDOUT AND MAYBEE LLP; KAYSER MARTIN; MCCARTER AND ENGLISH LLP, CITYPLACE I; MCCARTER AND ENGLISH LLP CITYPLACE I; MCCARTER AND ENGLISH LLP; MCCARTER AND ENGLISH LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61J1/00 B65B1/04 B65B1/20 B65B3/00 B65B51/22 B65B55/02 B65B55/08 B65B55/10 B65D39/00 B65D41/20 B65D43/18 B65D47/36 B65D51/00 B65D51/18 B65D51/20 B65D53/00 B67C3/02 B67C3/22 B67C3/26 (Advanced/Invention);
B65B7/28 B65D43/18 (Advanced/Non-invention);
A61J1/00 B65B3/00 B65D41/02 B65D43/14 B65D47/00 B65D51/00 B65D51/18 B65D53/00 B67C3/02 (Core/Invention);
B65D43/14 (Core/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D43/18 B65D51/00 B65D53/00

CPC: B65B3/003 B65B7/2842 B65B51/22 B65B55/025 B65D51/18 B65D2251/0015 B65D2251/0078 B65B55/10 B65D51/002 B65D47/36 B65D41/20 B65D51/20

European class: B65D51/00B B65D51/18 L65D251/00Y2D L65D251/00Y6D

US class: 141/1 141/11 141/130 141/1S 141/329 141/329S 141/69 141/85 141/89 141/91 141/92 215/247 215/252 215/252S 215/341 215/342 220/256.1 220/256.100S 220/259.3 220/259.300S 220/304 220/304S 250/455.11 250/492.1 422/177 422/28 422/292 422/30 422/302 426/234 426/234P 53/425 53/426

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Forward Citations: WO12177933, WO12126707, WO12092394, WO09052521, WO09046386, WO09018192, WO08061041, WO08061041, USD634200, USD634199, USD633386, US9802739, US9725228, US9676540, US9676531, US9668914, US9604740, US9561901, US9561884, US9555941, US9555940, US9480962, US9417332, US9415885, US9275356, US9241874, US9205437, US9139316, US9022079, US8966866, US8863994, US8690468, US8678245, US8672158, US8646243, US8616417, US8616416, US8602266, US8573449, US8498729, US8453875, US8286839, US8261952, US8240518, US8231020, US8225966, US8181431, US8132695, US8132600, US8007193, US7569342, US7458801, US2016200489, US2016194121, US2016185536, US2015175281, US2015140182, US2014319142, US2014311617, US2013333796, US2013175299, US2013059259, US2012295343, US2012273494, US2012085418, US2011253666, US2011113729, US2011052768, US2010252577, US2010206911, US2010178097, US2010108722, US2010063613, US2010038385, US2010012680, US2009294480, US2009212075, US2009166383, US2009139953, US2009098250, US2009094940, US2009051127, US2009032488, US2008203051, US2008118299, EP2481484, EP2207427, EP2207427, DE102011014886, CN105802834, CN105475802, CN105026280, CN103813811, CN103221134, CN103221134,

Abstract:

Source: US2006231519A A container and method are provided for storing fat containing liquid products, such as infant or baby formula, or other milk-based products. The container includes a body defining a storage chamber for receiving the aseptic fat containing liquid product, and a first aperture in fluid communication with the storage chamber. The body does not leach more than a predetermined amount of leachables into the fat containing liquid product and does not undesirably alter a taste profile of the fat containing liquid product. A container closure assembly includes a stopper receivable within the first aperture for hermetically sealing the storage chamber. The stopper includes a first material portion defining an internal surface in fluid communication with the storage chamber forming at least most of the surface area of the container closure that can contact any fat containing

liquid product within the storage chamber and that does not leach more than a predetermined amount of leachables into the fat containing liquid product or undesirably alter a taste profile of the fat containing liquid product. A second material portion of the stopper either (i) overlies the first material portion and cannot contact any product within the storage chamber, or (ii) forms a substantially lesser surface area of the container closure that can contact any product within the storage chamber in comparison to the first material portion. The second material portion is needle penetrable for filling the storage chamber with product, and a resulting needle aperture formed in the second material portion is thermally resealable such as by the application of laser energy to seal the product within the storage chamber. A sealing portion of the container closure is engageable with the body prior to needle filling the storage chamber to thereby form a substantially dry hermetic seal between the container closure and body.

0) US2002107127A – SUBSTANTIALLY TRIANGULAR-SHAPED OVER-CAP

26) Family number: 30141688 (US2002107127A)

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Title: SUBSTANTIALLY TRIANGULAR-SHAPED OVER-CAP

Priority: EP20010274042 20011113 US20000202394P 20000508 US20000248026P 20001113
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Family:

Publication number	Publication date	Application number	Application date
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<u>US7866128 BB</u>	20110111	US20070702403	20070205
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<u>WO0238462 A2</u>	20020516	WO2001US47051	20011113
<u>WO0238462 A3</u>	20020919	WO2001US47051	20011113
<u>WO0238463 A2</u>	20020516	WO2001US47060	20011113
<u>WO0238463 A3</u>	20030227	WO2001US47060	20011113

Probable Assignee: KELLOGG NORTH AMERICA CO

Assignee(s):^(std): BUISSON GERARD L ; BUISSON GERARD LAURENT ; MACZEK ELIZABETH D ; MACZEK ELIZABETH DOMINIQUE ; ROMANACH BENITO ALBERTO ; PROCTER AND GAMBLE ; PROCTER AND GAMBLE CO ; THE PROCTER AND GAMBLE COMPANY ; SETTELMAYER JAMES W JR ; MILLER BRIAN A ; SENA DOUGLAS D ; MCINTYRE JAMES C ; ROMANACH BENITO A ; MILLER BRIAN ADRIAN ; MCINTYRE JAMES CALVIN ; SETTELMAYER JR JAMES WAGNER ; SENA DOUGLAS DAVID

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Inventor(s): BRIAN A MILLER ; BENITO ALBERTO ROMANACH ; ANDREW MARTIN BOYER ; PETER MICHAEL SEARLES ; GERALD LAURENT BUISSON ; BUISSON GERARD ; GERARD LAURENT BUISSON ; ELIZABETH DOMINIQUE MACZEK ; DOUGLAS DAVID SENA ; CHARLES MICHAEL GARRISON ; MACZEK ELIZABETH ; JAMES WAGNER SETTELMAYER JR ; JAMES CALVIN MCINTYRE ; MCINTYRE JAMES ; MILLER BRIAN ; ROMANACH BENITO ; RIKKI DYAN GIBBS ; SENA DOUGLAS ; SETTELMAYER JAMES ; JR JAMES WAGNER SETTELMAYER ; STEPHEN PAUL ZIMMERMAN ; SETTELMAYER JR ; SETTELMAYER JAMES WJR

Agent(s): DIMOCK STRATTON LLP; PROCTER AND GAMBLE CO INTELLECTUAL PROPERTY DIVISION WEST BLDG; KIM WILLIAM; ADAM W

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

International class
(IPC 8-9):

A23B4/00 A23G3/00 A23G3/34 A23L1/164 A23L1/217 A23P1/08 B65B1/04 B65B23/10 B65B5/06 B65D1/00 B65D1/14 B65D1/26 B65D17/34 B65D17/40 B65D25/00 B65D41/32 B65D43/00 B65D43/02 B65D43/08 B65D43/10 B65D51/20 B65D53/00 B65D77/20 B65D81/02 B65D81/00 B65D85/36 B65D85/62 B65D90/02 (Advanced/Invention); B65D81/02 B65D85/36 (Advanced/Non-invention); A23B4/00 B65B5/06 B65D1/00 B65D1/22 B65D25/00 B65D43/02 B65D51/18 B65D8/04 B65D85/30 B65D85/62 (Core/Invention); B65D81/02 (Core/Non-invention)

International class
(IPC 1-7):

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CPC:

B65D11/10 B65D85/62 B65D2543/00842 A23L19/19 A23L7/13 B65B5/064 B65D1/14 B65D1/26 B65D43/0212 B65D51/20 B65D77/20 B65D85/36 B65D2251/0018 B65D2251/0093 B65D2543/00027 B65D2543/00074 B65D2543/00111 B65D2543/00157 B65D2543/00296 B65D2543/00416 B65D2543/00527 B65D2543/00537 B65D2543/00574 B65D2543/00638 B65D2543/00685 B65D2543/00731 B65D2543/00805 B65D2577/205

European class:

A23L1/164E A23L1/217B B65B5/06D B65D1/14 B65D1/26 B65D11/10 B65D43/02S3E B65D51/20 B65D77/20 B65D85/36 B65D85/62 L65D251/00Y2F L65D251/00Y6M L65D543/00Y10B2 L65D543/00Y1A L65D543/00Y1F2 L65D543/00Y1F2E L65D543/00Y1F4B L65D543/00Y1M6 L65D543/00Y2K3 L65D543/00Y8D1N L65D543/00Y8D3 L65D543/00Y8L L65D543/00Y8S1B6 L65D543/00Y8S1D2 L65D543/00Y8S3B2 L65D543/00Y8S3D4 L65D577/20M1

US class:

220/258.2 220/258.200P 220/359.2 220/359.200S 220/660 426/124 426/124P 426/285 426/285P 493/80 493/80P 53/247 53/467 53/473 53/473P 53/475 53/531 53/540

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WO16124958, WO11063546, WO06117818, WO06086425, USD770240, USD747888, USD742257, USD682090, USD651248, US9700397, US9618428, US8403161, US8318229, US7770722, US7703619, US7700143, US7625590, US7451870, US2013036919, US2012274125, US2011076380, US2010330237, US2010203199, US2010176125, US2010166932, US2007181446, US2006278562, US2006219725, US2006177552, US2006165859, US2005074537, US2004208958, US2002168453, TWI326586, CN102730301, CN102730301,

Abstract:

Source: US2002107127A A substantially triangular-shaped over-cap includes a body having a substantially triangular-shaped perimeter with three perimeter corners and three perimeter sides. The over-cap also includes a skirt with a skirt corner extending substantially downwardly from one of the perimeter corners. The skirt corner includes at least one inner extension extending toward an area adjacent the body.

27) Family number: 30388262 (US2004094146A)

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Title: APPARATUS FOR THE DISPENSING OF LIQUIDS, CONTAINER CARTRIDGE
SUITABLE FOR THIS, AND SYSTEM COMPRISING THE APPARATUS FOR THE
DISPENSING OF LIQUIDS AND THE CONTAINER CARTRIDGE

Priority: AU20030264106 20030826 AU20080230008 20081020 DE20021041640 20020905
EP20030793758 20030826 DE20022041640U 20020905 NZ20030539128 20030826
EP20020027030 20021203 US20020430564P 20021203 DE20035013589 20030826
WO2003EP09442 20030826 US20090645133 20091222 US20030648132 20030826

Family:

Publication number	Publication date	Application number	Application date
AR041162 AA	20050504	AR2003P103226	20030905
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EP1536894 B1	20110330	EP20030793758	20030826
ES2361156 T3	20110614	ES20030793758T	20030826
HK1084908 A1	20100611	HK20060103376	20060317
HK1084908 A3	20060811	HK20060103376	20060317
HR20050216 A2	20060630	HR20050000216	20050304
IL167217 A0	20060205	IL20030167217	20030826
IN00442DN2005 A	20081205	IN2005DN00442	20050204
IN08874DN2007 A	20080404	IN2007DN08874	20071119
IN259529 B	20140321	IN2005DN00442	20050204
JP2005537834 T2	20051215	JP20040533407T	20030826
KR20050057225 A	20050616	KR20057003851	20030826
MXPA05002348 A1	20050523	MX2005PA02348	20030826
MY140823 A	20100129	MY20030003330	20030903
NO20051635 A	20050401	NO20050001635	20050401
NZ539128 A	20070330	NZ20030539128	20030826
NZ552261 A	20080829	NZ20030552261	20030826
PE03892004 A1	20040810	PE20030000893	20030903
PL375495 A1	20051128	PL20030375495	20030826
RS20050192 A	20070604	YU20050000192	20030826

<u>TH65192 A</u>	20041129	TH20031003311	20030904
<u>TW200413100 A</u>	20040801	TW20030124475	20030904
<u>TWI293577 B</u>	20080221	TW20030124475	20030904
<u>UA88866 C2</u>	20091210	UA20050003010	20030826
<u>US2004094146 AA</u>	20040520	US20030648132	20030826
<u>US2010096408 AA</u>	20100422	US20090645133	20091222
<u>US7699052 BB</u>	20100420	US20030648132	20030826
<u>UY27963 A1</u>	20040531	UY20030027963	20030902
<u>WO04022244 A1</u>	20040318	WO2003EP09442	20030826
<u>ZA200500666 A</u>	20060726	ZA20050000666	20050124

Probable Assignee: BOEHRINGER INGELHEIM PHARMA GMBH AND CO KG

Assignee(s):^(std): BOEHRINGER INGELHEIM INT ; BOEHRINGER INGELHEIM PHARMA ; BOEHRINGER INGELHEIM PHARMA BM ; SCHIEWE JOERG ; ZIERENBERG BERND ; WERGEN HORST ; WUTTKE GILBERT ; DUNNE STEPHEN ; BOEHRINGER INGELHEIM PHARMA GMBH AND CO KG ; CO KG ; BOEHRINGER INGELHEIM PHARMA HMBH AND CO KG

Assignee(s): BOEHRINGER INGELHEIM PHARMA GMBH and CO. KG ; BOEHRINGER INGELHEIM PHARMA GMBH AND AMP ; BOEHRINGER INGELHEIM PHARMA GMBH AND COKG ; BOEHRINGER INGELHEIM PHARMA GMBH AND CO ; BOEHRINGER INGELHEIM PHARMA BMGH AND CO KG ; BOEHRINGER INGELHEIM PHARMA GBBH AND CO KG ; BOEHRINGER INGELHEIM PHARMA GMBH ; BOEHRINGER INGELHEIM PHARMA GMBH AND ; BOEHRINGER INGELHEIM INT GMBH ; BOEHRINGER INGELHEIM INT GMBH AND CO KG ; BOEHRINGER INGELHEIM INTERNATIONAL GMBH AND CO KG

Inventor(s):^(std): BERND ZIERENBERG ; GILBERT WUTTKE ; HORST WERGEN ; JOERG SCHIEWE ; STEPHEN DUNNE ; ZIERENBERG BERND DR ; ZIERENBERG BERND ; WUTTKE GILBERT ; WERGEN HORST ; STEPHEN T DUNNE ; SCHIEWE JORG DR ; SCHIEWE JORG ; SCHIEWE JOERG ; DUNNE STEPHEN ; BRUNNBERG LENNART ; BENKTZON MARIA ; ANDERSSON MALIN ; WWERGEN HORST ; JUHLIN SVEN ERIC ; SHIEWE JORG ; DR ZIERENBERG BERND ; DR SCHIEWE JORG ; DUNNE STEPHEN T

Inventor(s): JORG SHIEWE ; HORST WWERGEN ; JORG SCHIEWE ; T STEPHEN T DUNNE ; DUNNE STEPHE ; DR JORG SCHIEWE ; DR BERND ZIERENBERG ; MARIA BENKTZON ; MALIN ANDERSSON ; LENNART BRUNNBERG ; SVEN ERIC JUHLIN

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; FETHERSTONHAUGH AND CO; HARNECKER; MICHAEL P MORRIS BOEHRINGER INGELHEIM USA CORP; MICHAEL P; MARY ELLEN M; ALAN R

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A61F9/007 A61M11/00 A61M11/02 A61M11/06 A61M15/00 A61M5/20 A61M5/30 A61M5/315 B05B1/00 B05B11/00 B05B11/02 B05B7/02 B05B7/24 B05B9/04 B65D83/14 B67D1/00 B67D5/16 B67D7/16 (Advanced/Invention);
B05B11/00 B05B11/02 (Advanced/Non-invention);
A61F9/007 A61M11/00 A61M15/00 A61M5/20 A61M5/30 A61M5/315 B05B11/00 B05B11/02 B05B9/04 B67D1/00 (Core/Invention);
B05B (Subclass/Invention);
B05B (Subclass/Non-invention)

International class
(IPC 1-7): A61F9/007 A61M11/00 A61M11/02 A61M11/06 A61M15/00 A61M16/00 A61M5/30 B01F3/08 B05B11/00 B05B11/02 B65D83/14 B67D5/16

CPC: A61M15/0026 B05B11/025 A61M15/0083 B05B11/0054 A61M15/0028 A61M15/0081 B05B11/3091 B05B11/02

European class: A61M15/00C B05B11/00B5E B05B11/00B7 B05B11/00Q2 B05B11/02 B05B11/02B B05B11/30P2

US class: 128/200.11 128/200.110P 128/200.14 128/200.140S 128/200.22 222/83 222/83P 239/321 239/322 604/135 604/218 604/68

[Classification Explorer](#)

Cited documents: WO9916530 A1, WO9806502 A1, WO9720590 A1, WO9712687 A1, WO9712683 A1, WO9407607 A1, WO9114468 A1, WO0164268 A1, WO0047332 A1, WO0007572 A2, US6708846 BA, US6664309 BB, US6644309 BB, US6595205 BB, US6550477 BA, US6543443 BA, US6453795 BA, US6401987 BA, US6109479 A, US5964416 A, US5497944 A, US5472143 A, US5121464 A, US4623337 A, US4561856 A, US2007119969 AA, US2007119968 AA, US2006285987 AA, US2003070679 AA, EP1100474 A2, EP0918570 A1, EP0860210 A2, DE10216101,

Forward Citations: WO15035511, WO13064677, WO13033706, WO13033706, WO12154859, WO12103303, WO12054611, WO08138936, WO08138936, WO06088630, WO05120615, US9827384, US9814838, US9789256, US9757750, US9744313, US9737669, US9724482, US9682202, US9545487, US9517307, US9517030, US9474869, US9352091, US9333060, US9314808, US9308326, US9179691, US9149579, US9125990, US9084849, US9056170, US9050433, US8992466, US8950395, US8939943, US8920377, US8689786, US8657793, US8608698, US8590750, US8425462, US8361029, US8313466, US8291902, US8109414, US8015969, US7836885, US7814902, US7784459, US7694676, US2012234861, US2011290249, US2011166549, US2011030681, US2010043792, US2009211576, US2009156992, US2009151716, US2009133692, US2009071473, US2009071470, US2009071469, US2008161755, US2007125371, US2006237016, US2006089594, US2006089593, US2006021616, US2005273048, US2005209554, US2005209553, TWI400184, RU2618084, JP2014518707, JP2013542729, JP2013163105, JP2008543466, GB2501214, GB2501214, GB2405350, EP3043848, EP2707146, EP2707146, EP2447694, EP2044967, DE102008064559, DE102008064559, CN103917265, CN103917265, CN103619485, CN103492019, CN103379966, CN102463745, CN102463745, AU2012357976,

Abstract:

Source: US2004094146A The present invention relates to a propellant–gas–free apparatus for the dispensing of liquids, a container cartridge suitable for this for storing the liquid and the ensemble comprising both. The invention comprises a device for the exertion of pressure and for accommodating a container cartridge and a container cartridge in which the dispensing facility is integrated.

0) US2003106911A – CLOSURE HAVING ROTATABLE SPOUT AND AXIALLY MOVA...

28) Family number: 28613979 (US2003106911A)

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Title: CLOSURE HAVING ROTATABLE SPOUT AND AXIALLY MOVABLE STEM

Priority: EP20020795838 20021211 US20010017187 20011212 WO2002US39753 20021211
US20040775829 20040209 US20020313575 20021206

Family:	Publication number	Publication date	Application number	Application date
	<u>AT527207 E</u>	20111015	AT20020795838T	20021211
	<u>AU2002360572 AA</u>	20030623	AU20020360572	20021211
	<u>AU2002360572 BB</u>	20070830	AU20020360572	20021211
	<u>CA2469654 AA</u>	20040609	CA20022469654	20021211
	<u>CN1330556 C</u>	20070808	CN20028024996	20021211
	<u>CN1604872 A</u>	20050406	CN20028024996	20021211
	<u>DE60241268 D1</u>	20111201	DE20026041268	20021211
	<u>EP1465830 A1</u>	20041013	EP20020795838	20021211
	<u>EP1465830 A4</u>	20091223	EP20020795838	20021211
	<u>EP1465830 B1</u>	20111005	EP20020795838	20021211
	<u>MXPA04005383 A1</u>	20040927	MX2004PA05383	20021211
	<u>NZ533602 A</u>	20060526	NZ20020533602	20021211
	<u>US2003106911 AA</u>	20030612	US20010017187	20011212
	<u>US2003127467 AA</u>	20030710	US20020313575	20021206
	<u>US2004251276 AA</u>	20041216	US20040775829	20040209
	<u>US6571994 BA</u>	20030603	US20010017187	20011212
	<u>US6702161 BB</u>	20040309	US20020313575	20021206
	<u>US7261226 BB</u>	20070828	US20040775829	20040209
	<u>WO03050033 A1</u>	20030619	WO2002US39753	20021211
	<u>ZA200404732 A</u>	20050615	ZA20040004732	20040615

Probable Assignee: 8050678 CANADA INC

Assignee(s):^(std): MA MIKE XIAOLI ; PORTOLA PACKAGING INC ; ADAMS BRIAN M

Assignee(s): GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL CORP ; HELLER FINANCIAL INC ; INSOLVENCY SERVICES GROUP INC ; 8050678 CANADA INC ; WAYZATA INVESTMENT PARTNERS LLC ; RISING BEVERAGE CO ; WELLS FARGO FOOTHILL LLC AS AGENT ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AGENT AS ; RISING BEVERAGE CO LLC ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; UNIQUE BEVERAGES USA INC ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS ; PORTOLA PACKAGING INC BATAVIA

Inventor(s):^(std): ADAMS BRIAN ; ADAMS BRIAN M ; MA MIKE ; MA MIKE XIAOLI ; MIKE XIAOLI MA ; XIAOLI MA MIKE ; XIAOLI ADAMS BRIAN M MA MIKE ; BRIAN M ADAMS

Inventor(s): MA MIKE XIAOLI SAN JOSE ; ADAMS BRIAN M SAN JOSE

Agent(s): FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FREEHILLS PATENT ATTORNEY S; FPA PATENT ATTORNEYS PTY LTD; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL; ADAM K; JAMES P

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class B65D47/24 B65D47/36 B65D51/22 B65D51/28 B67D3/00 (Advanced/Invention);
(IPC 8-9): B65D47/00 B65D47/04 B65D51/18 B65D51/24 B67D3/00 (Core/Invention)

International class B67B5/00 B67D3/00 B67D5/33
(IPC 1-7):

CPC: B65D2251/0087 B65D51/227 B65D47/244 B65D51/2835 B65D2251/0025
B65D2251/0056 B65D2251/0093

European class: B65D47/24A3 B65D51/22 B65D51/22A3F B65D51/28B1B1 L65D251/00Y2J
L65D251/00Y4J L65D251/00Y6J L65D251/00Y6M

US class: 206/221 206/532 222/153.14 222/52 222/520 222/521 222/525 222/541.2 222/548 222/81
222/83 222/83.5

[Classification Explorer](#)

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Forward Citations: WO15159008, WO15070910, WO14173933, WO14080357, WO14080357, WO12160117, WO12138637, WO12099669, WO12048935, WO12033405, WO10123382, WO09100274, WO09045355, WO07115978, WO07115976, WO07091209, WO07051046, WO07050970, WO06119636, WO06093419, WO05044670, WO05044670, WO04022437, WO04022437, USD761648, USD723918, USD672237, USD640553, USD640552, USD636668, USD604160, USD587581, USD578000, USD548075, US9789502, US9771174, US9739272, US9611079, US9604765, US9579685, US9567142, US9550612, US9540153, US9517869, US9487324, US9452870, US9238531, US9181005, US9085397, US8985369, US8939670, US8893912, US8820554, US8801688, US8701906, US8690012, US8678234, US8646659, US8627967, US8562274, US8561857, US8556123, US8544685, US8459502, US8448827, US8443969, US8439880, US8424723, US8376192, US8328037, US8292103, US8276748, US8251263, US8206034, US8152017, US8141700, US8104610, US8083102, US8083055, US8070014, US8020729, US8016159, US7997447, US7988004, US7971739, US7886922, US7874420, US7845525, US7845517, US7775398, US7748550, US7661560, US7641065, US7611102, US7584593, US7559441, US7490742, US7484641, US7458486, US7337921, US7175049, US7172095, US7128227, US7128227, US6851576, US2017073123, US2016200491, US2014097199, US2013221032, US2013189018, US2012138634, US2012018431, US2011163119, US2011155687, US2011138741, US2011125103, US2011073614, US2011056982, US2010301067, US2010281822, US2010200618, US2010200437, US2010155358, US2010150478, US2010140207, US2010108724, US2010089860, US2010044254, US2010000996, US2009302037, US2009301988, US2009250488, US2009242561, US2009236305, US2009236303, US2009223921, US2009218309, US2009200303, US2009084814, US2009065378, US2009046958, US2009026165, US2009020494, US2008290060, US2008277371, US2008277311, US2008245683, US2008230506, US2008223741, US2008223485, US2008210745, US2008185405, US2008156802, US2008131244, US2008124432, US2008099487, US2008098697, US2008087692, US2008073378, US2008029557, US2007241151, US2007215627, US2007187428, US2007181603, US2007114202, US2007108153, US2007095857, US2007029345, US2006255032, US2006108314, US2006071000, US2006057257, US2006037967, US2006006077, US2005236425, US2005218015, US2005167297, US2005150903, US2005061765, US2004208960, US2004149786, US2004118873, NL2005329, NL2001533, JP5337361, JP4837435, JP2008162691, JP2007290758, JP2005187022, ITRM20120586, ITMO20100157, GB2470916, FR3020051, EP1904379, EP1868903, EP1863717, EP1816084, EP1780142, EP1780142, EA023634, EA013781, EA013271, DE102010048415, DE102010029069, CN103562089, CN103298707, CN103153801, CN103079427, CN103079427, CN102069949, AU2011315778, AU2004286926,

Abstract:

Source: US2003106911A A closure for a container having a foil or membrane sealed opening. The closure includes a cap, a spout and a stem. The stem includes a downwardly extending piercing structure adapted for piercing the foil or membrane of the container upon rotation of the spout relative to the cap. The cap includes a cap top, a cap skirt depending from the cap top, an open sleeve and a stem guide. The open sleeve has an inwardly extending thread adapted to detachably engage the container. The open sleeve extends upwardly from the cap top. The stem guide extends along an internal surface of the sleeve. The spout rotatably engages the sleeve and includes a spout top having a central aperture, an outer spout skirt and an inner skirt. The outer skirt depends from the spout top radially outward of the sleeve and rotatably engages the sleeve. The inner spout skirt depends from the spout top radially within the sleeve. The stem includes a substantially cylindrical body

positioned radially within the inner spout skirt, a plug for selectively sealing the central aperture, an outwardly extending spout-engaging thread, and an outwardly extending cap-engaging member. The spout engaging member engages the inner spout skirt and is adapted for helical motion with respect to the inner spout skirt. The cap-engaging member engages the stem guide and is adapted for axial motion with respect to the sleeve. Preferably, the stem guide includes a substantially vertically extending groove and the cap-engaging member includes a tab received in the groove.

0) US2007131641A – CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

29) Family number: 31517864 (US2007131641A)

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Title: CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

Priority:

AU20030900141	20030114	AU20030900678	20030217	AU20030904044	20030804
AU20040261315	20040804	AU20040900141	20040114	AU20030904359	20030815
AU20030904196	20030808	AU20030904527	20030822	AU20040200617	20040217
AU20040902799	20040526	AU20040902799	20040526	AU20040902722	20040521
AU20040900744	20040216	AU20040900450	20040203	AU20040902794	20040526
AU20040900814	20040218	AU20040900245	20040121	AU20040902721	20040521
AU20040900657	20040212	AU20040902799	20040527	AU20040900879	20040223
AU20060203297	20060801	GB20070009820	20040804	GB20060004470	20040804
WO2004AU01035	20040804	AU20040903406	20040622	AU20040903775	20040709
AU20040903477	20040624	AU20040903434	20040624	AU20040903507	20040629
AU20040902928	20040601	AU20040903041	20040607	AU20040902931	20040602
AU20040903153	20040610				

Family:

Publication number	Publication date	Application number	Application date
<u>AU2003900141 A0</u>	20030130	AU20030900141	20030114
<u>AU2003900678 A0</u>	20030227	AU20030900678	20030217
<u>AU2003904044 A0</u>	20030814	AU20030904044	20030804
<u>AU2003904196 A0</u>	20030821	AU20030904196	20030808
<u>AU2003904359 A0</u>	20030828	AU20030904359	20030815
<u>AU2004200617 AA</u>	20040902	AU20040200617	20040217
<u>AU2004261315 AA</u>	20050210	AU20040261315	20040804
<u>AU2004261315 BB</u>	20060504	AU20040261315	20040804
<u>AU2004261315 CA</u>	20070802	AU20040261315	20040804
<u>AU2006203297 AA</u>	20060824	AU20060203297	20060801
<u>BRPI0412963 A</u>	20060926	BR2004PI12963	20040804
<u>CA2534758 AA</u>	20060203	CA20042534758	20040804
<u>CN1863710 A</u>	20061115	CN200480028971	20040804
<u>DE112004001435 T5</u>	20060727	DE200411001435	20040804
<u>EP1660379 A1</u>	20060531	EP20040737650	20040804
<u>EP1660379 A4</u>	20091230	EP20040737650	20040804
<u>GB200604470 A0</u>	20060412	GB20060004470	20040804
<u>GB200709820 A0</u>	20070704	GB20070009820	20040804
<u>GB2420114 A1</u>	20060517	GB20060004470	20040804
<u>GB2420114 B2</u>	20070718	GB20060004470	20040804
<u>GB2435038 A1</u>	20070815	GB20070009820	20040804
<u>GB2435038 B2</u>	20080521	GB20070009820	20040804
<u>JP2007501169 T2</u>	20070125	JP20060522180T	20040804
<u>KR20060042422 A</u>	20060512	KR20067002437	20040804
<u>KR20070033052 A</u>	20070323	KR20077005410	20040804
<u>NZ544867 A</u>	20080926	NZ20040544867	20040804
<u>US2007131641 AA</u>	20070614	US20040567195	20040804
<u>WO05012125 A1</u>	20050210	WO2004AU01035	20040804
<u>WO05077777 A1</u>	20050825	WO2005AU00222	20050218
<u>ZA200601839 A</u>	20070627	ZA20060001839	20060101

Probable Assignee: RBC TRUSTEES CI LTD

Assignee(s):^(std): ABACUS ; ABACUS C I LTD ; ABACUS C I LTD TRUSTEE OF T AS ; ABACUS C I LTD COMO FIDEI COMI ; ABACUS C I LTD TRUSTEE FOR AS ; ABACUS C I LTD AS TRUSTEE FOR ; ABACUS C I LTD AS TRUSTEE OF T ; CTECH EQUIPMENT PTY LTD ; WOOLFORD L ; RBC TRUSTEES CI LTD AS TRUSTEE ; HIGGINS CHRISTOPHER

LYNDON ; CTECH CLOSURES PTY LTD ; ABACUS C I COMO FIDEI COMISSARIO DO FIDE LTD

Assignee(s): ABACUS C I LIMITED ; ABACUS TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVI ; ABACUS TRUSTEE FOR BAYVIEW TRUST AS LTD ; ABACUS C I TRUSTEE OF BAYVIEW TR AS LTD ; RBC TRUSTEES LTD ; RBC TRUSTEES CI LTD ; RBC TRUSTEES CI LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS CI TRUSTEE OF BAYVIEW TRUST LTD AS ; ABACUS CI LTD ; RBC TRUSTEES (CI) LTD ; ABACUS CI LIMITED TRUSTEE FOR BAYVIEW TRUST AS ; ABACUS C I TRUSTEE FOR BAYVIEW T AS LTD ; ABACUS C I LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS C I LIMITED COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVIEW TRUST ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST JERSEY ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST ; ABACUS LTD ; ABACUS C I TRUSTEE FOR BAYVIEW TR AS LTD ; ABACUS (C I) LIMITED AS TRUSTEE FOR THE... ; ABACUS (C I) LIMITED COMO FIDEI COMISSARIO DO... ; ABACUS (CI) LTD

Inventor(s):^(std): PETER WILLIAM BROWN ; LYNDON HIGGINS CHRISTOPHER ; HIGGINS CHRISTOPHER LYNDON ; CHRISTOPHER LYNDON HIGGINS ; BROWN PETER WILLIAM ; HIGGINS CHRISTOPHER L

Inventor(s): HIGGINS CHRISTOPHER

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; BROOKS KUSHMAN PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D41/04 B65D41/32 B65D41/34 B65D47/06 B65D47/08 B65D47/20 B65D51/00 B65D51/28 B65D81/32 B65D83/00 (Advanced/Invention);
B65D41/32 B65D41/34 (Advanced/Non-invention);
B65D41/04 B65D41/32 B65D41/34 B65D47/04 B65D47/06 B65D47/08 B65D51/00 B65D51/24 (Core/Invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D101/00 B65D41/34 B65D47/20 B65D51/28

CPC: B65D51/2835 B65D47/06 B65D47/08 B65D41/3409 B65D51/2828 B65D41/0421 B65D41/0428 B65D41/3428 B65D47/0857 B65D51/2807 B65D2101/00

European class: B65D41/04B1A B65D41/04B2 B65D41/34 B65D41/34A1 B65D41/34C1 B65D47/06 B65D47/08 B65D47/08D B65D51/28B1B B65D51/28B1B1 L65D101/00

US class: 215/252

[Classification Explorer](#)

Cited documents: WO9840289 A1, WO9838104 A1, WO9743190 A1, WO05012125 A1, WO03010061 A2, WO03004369 A1, WO02062675 A1, WO0168469 A1, US6230884 BA, US6148996 A, US5950850 A, US5660288 A, US5346082 A, US5038951 A, US5020682 A, US4903865 A, US4813561 A, US4738370 A, US4458821 A, US4457438 A, US2003102280 AA, US2003015490 AA, JP8091402 A2, JP2003519602 T2, JP2003165555 A2, JP11100093 A2, JP11059791 A2, GB2222812 A1, EP1332977 A1, EP1316507 A2,

Forward Citations: WO16009192, WO15004352, WO12130916, WO09154666, WO09154666, WO08061766, WO07082322, WO06013443, WO06013443, WO05077777, US9828146, US9731869, US9382044, US9061801, US8851310, US8807360, US8684225, US8684204, US8356711, US7775386, US2013313287, US2012292321, US2011024423, RU2507137, KR100951526, FR3008393, EP1778555,

Abstract:

Source: US2007131641A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102), a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamper-evident band (110) frangibly connected to said skirt; the neck (10) of the container including a plurality of discretely spaced projections (18) extending outwardly from said neck and adapted to engage with tabs (122) on said tamper-evident band to facilitate breaking of the band (110) from the skirt of the closure.

30) Family number: 33359642 (US2006225809A)

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Title: STERILE DE-MOLDING APPARATUS AND METHOD**Priority:** US20050660935 20050311 US20050660935P 20050311 US20060374522 20060313
US20090371601 20090214 WO2006US09372 20060313 US20110012074 20110124**Family:**

Publication number	Publication date	Application number	Application date
<u>AU2006222941 AA</u>	20060921	AU20060222941	20060313
<u>AU2006222941 BB</u>	20101014	AU20060222941	20060313
<u>AU2006222941 CA</u>	20110616	AU20060222941	20060313
<u>BRPI0608419 A2</u>	20091229	BR2006PI08419	20060313
<u>CA2600828 AA</u>	20070907	CA20062600828	20060313
<u>CN101448703 A</u>	20090603	CN200680014688	20060313
<u>CN101448703 B</u>	20120502	CN200680014688	20060313
<u>EP1861313 A2</u>	20071205	EP20060738435	20060313
<u>HK1129217 A3</u>	20091120	HK20090106808	20090724
<u>IN07077DN2007 A</u>	20071214	IN2007DN07077	20070913
<u>IN273988 B</u>	20160708	IN2007DN07077	20070913
<u>MX2007011144 A1</u>	20080311	MX20070011144	20060313
<u>RU2007133600 A</u>	20090727	RU20070133600	20060313
<u>RU2401780 C2</u>	20101020	RU20070133600	20060313
<u>US2006225809 AA</u>	20061012	US20060374522	20060313
<u>US2009145089 AA</u>	20090611	US20090371601	20090214
<u>US2011113729 AA</u>	20110519	US20110012074	20110124
<u>US7490453 BB</u>	20090217	US20060374522	20060313
<u>US7874129 BB</u>	20110125	US20090371601	20090214
<u>US8181431 BB</u>	20120522	US20110012074	20110124
<u>WO06099507 A2</u>	20060921	WO2006US09372	20060313
<u>WO06099507 A3</u>	20071213	WO2006US09372	20060313
<u>ZA200707764 A</u>	20090128	ZA20070007764	20060313

Probable Assignee: MEDICAL INSTILL TECH INC**Assignee(s):^(std):** ADAMO BENOIT ; GUTHY JOHN ; HOULE NATHANIEL ; MEDICAL INSTILL TECHNOLOGIES I ; PY DANIEL ; PY DANIEL C ; WILLEY M JEFFREY ; MEDIKAL INSTILL TEKNOLODZHIS INK ; INSTIVE MEDICAL TECHNOLOGY CO LTD ; MEDICAL INSTILL TECH INC**Assignee(s):** MEDICAL INSTILL TECHNOLOGIES INC ; MEDINSTILL DEVELOPMENT LLC ; INSTIVE MEDICAL TECHNOLOGY CO**Inventor(s):^(std):** ADAMO BENOIT ; BENOIT ADAMO ; DANIEL PY ; GUTHY JOHN ; HOULE NATHANIEL ; NATHANIEL HOULE ; PAJ DEHNIEL ; PY DANIEL ; WILLEY M JEFFREY ; WILLEY JEFFREY ; JEFFREY WILLEY M ; JOHN GUTHY**Inventor(s):** M JEFFREY WILLEY ; JEFFREY WILLEY**Agent(s):** PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; PIZZEYS PATENT AND TRADE MARK ATTORNEYS; RIDOUT AND MAYBEE LLP; MCCARTER AND ENGLISH LLP, CITYPLACE I; MCCARTER AND ENGLISH LLP CITYPLACE I; MCCARTER AND ENGLISH LLP HARTFORD CITYPLACE I; MCCARTER AND ENGLISH LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class B65B1/04 B65B3/02 B65B47/00 B65B5/02 B65B55/02 B65B55/04 B65B55/10 B65B55/18
(IPC 8-9): B65D30/00 (Advanced/Invention);
B65B1/00 B65B1/04 B65B3/00 B65B5/00 B65B55/02 B65B55/04 B65D30/00 (Core/Invention);
B65B (Subclass/Invention)

International class B65B1/04
(IPC 1-7):

CPC: B65B3/022

European class: B65B3/02B

US class: 141/93 53/267 53/267S 53/425 53/425P 53/425S 53/452 53/452P 53/452S 53/471
53/471S 53/477 53/477S 53/561 53/561S

[Classification Explorer](#)

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Forward Citations: WO16144417, US9638707, US9527074, US8905086, US8800608, US8550799, US8297320, US8071009, US2014119986, US2012076883, US2010006602, US2007114690, RU2616817, CN104507815, CN104507815,

Abstract:

Source: US2006225809A Apparatus is provided for molding and filling a container having a container body defining an opening in communication with an interior chamber for receiving a substance therein, and a stopper receivable within the opening for sealing the opening and substance received in the container. A barrier enclosure defines an aseptic chamber. A mold includes within the aseptic chamber plural mold cavities shaped to form the stopper and container body, and substantially sterile surfaces extending about and contiguous to the peripheries of the mold cavities. An assembly device including end-of-arm tooling having an engaging portion engageable with each of the container body and stopper is movable relative to the mold to engage and de-mold the substantially sterile stoppers and container bodies from the mold cavities. A source of sterile air is in fluid communication with the aseptic chamber and directs a flow of sterile air into the aseptic chamber and over the sterile surfaces of the mold for maintaining the sterility of the mold surfaces and stopper and container bodies during de-molding thereof. First flexible barriers are coupled to the mold between the sterile surfaces and the molding machine to substantially prevent the passage of contaminants from the molding machine therethrough. A second flexible barrier is coupled to the tool between the engaging portion and a base portion of the tool to substantially prevent the passage of contaminants from the base portion of the tool therethrough. A needle filling and thermal resealing station is configured to receive the sealed, empty sterile containers, needle fill the interior chambers of the containers, and thermally reseal resulting needle holes in the stoppers.

0) US2006269355A – DISPENSING APPLICATOR FOR FLUIDS

31) Family number: 33895397 (US2006269355A)

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Title: DISPENSING APPLICATOR FOR FLUIDS

Priority: EP20080769216 20080428 US20050138142 20050526 US20090579728 20091015
 US20080596103 20080428 US20070740910 20070426 US20070740920 20070427
 US20110102973 20110506 US20120455620 20120425 US20120485013 20120531
 US20120601755 20120831 US20110306681 20111129 US20110596103 20110104
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 WO2013US57017 20130828 US20150732983 20150608 US20140556401 20141201
 US20160991406 20160108 WO2014US50528 20140811 US20160087371 20160331
 US20160560262F 20160405 US20170483624 20170410 US20170658459 20170725

Family:

Publication number	Publication date	Application number	Application date
<u>AU2013308838 AA</u>	20140306	AU20130308838	20130828
<u>AU2013308838 BB</u>	20171130	AU20130308838	20130828
<u>CA2928935 AA</u>	20160427	CA20142928935	20140811
<u>DE212013000193 U1</u>	20150521	DE201321000193U	20130828
<u>EP2139550 A2</u>	20100106	EP20080769216	20080428
<u>EP2139550 A4</u>	20120321	EP20080769216	20080428
<u>EP3002031 A2</u>	20160406	EP20150184828	20080428
<u>EP3002031 A3</u>	20160720	EP20150184828	20080428
<u>US2006269355 AA</u>	20061130	US20050138142	20050526
<u>US2007212156 AA</u>	20070913	US20070740920	20070427
<u>US2007286668 AA</u>	20071213	US20070740910	20070426
<u>US2010040402 AA</u>	20100218	US20090579728	20091015
<u>US2011142527 AA</u>	20110616	US20080596103	20080428
<u>US2011262207 AA</u>	20111027	US20110102973	20110506
<u>US2012163898 AA</u>	20120628	US20110306681	20111129
<u>US2012230753 AA</u>	20120913	US20120455620	20120425
<u>US2012251219 AA</u>	20121004	US20120485013	20120531
<u>US2013028651 AA</u>	20130131	US20120601755	20120831
<u>US2013336705 AA</u>	20131219	US20130971425	20130820
<u>US2014126949 AA</u>	20140508	US20130068905	20131031
<u>US2014308059 AA</u>	20141016	US20130946009	20130719
<u>US2015273196 AA</u>	20151001	US20150732983	20150608
<u>US2015290443 AA</u>	20151015	US20140556401	20141201
<u>US2016121090 AA</u>	20160505	US20160991406	20160108
<u>US2016213907 AA</u>	20160728	US20160087371	20160331
<u>US2017319837 AA</u>	20171109	US20170483624	20170410
<u>US2017319838 AA</u>	20171109	US20170658459	20170725
<u>US7614811 BB</u>	20091110	US20050138142	20050526
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WO08134638 A2	20081106	WO2008US61776	20080428	
WO08134638 A3	20081218	WO2008US61776	20080428	
WO14036100 A1	20140306	WO2013US57017	20130828	
WO15065562 A1	20150507	WO2014US50528	20140811	

Probable Assignee: BIOMED PACKAGING SYSTEMS INC

Assignee(s):^(std): BIOMED PACKAGING SYSTEMS INC ; BIOMEDPACKAGING SYSTEMS INC ; KAUFMAN JACK W ; BROWN JAMES ; KAUFMAN JANET P ; BLOMED PACKAGING SYSTEMS INC

Assignee(s): BIOMED PACKAGING SYSTEMS

Inventor(s):^(std): BROWN JAMES ; KAUFMAN JACK W ; KAUFMAN JANET P

Inventor(s): KAUFMAN JACK

Agent(s): CHRYSILIOU IP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; NEUNERT PETER ANDREAS; WESTPHAL MUSSGNUG AND PARTNER PATENTANWALTE MBB; LACKENBACH SIEGEL LLP; ANDREW F; YOUNG ANDREW F; HILL DAVID M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [A45D34/04](#) [A61F13/40](#) [A61J1/05](#) [A61L2/00](#) [A61L2/18](#) [A61M35/00](#) [A61M37/00](#) [B05C17/00](#) [B43K5/14](#) [B43K8/10](#) [B43K8/14](#) [B43M11/06](#) [B65D83/00](#) (Advanced/Invention); [A61M35/00](#) [B05C17/00](#) [B43K5/00](#) [B43K8/00](#) (Core/Invention)

CPC: [A61M35/00](#) [A61M37/00](#) [A61L2/00](#) [A61L2/18](#) [A61M35/003](#) [A61M35/006](#) [A61M2210/04](#) [A45D34/042](#) [B43M11/06](#) [A45D34/04](#) [A45D2200/1018](#) [A61M2205/273](#)

European class: [A45D34/04C](#) [A61M35/00B](#) [A61M35/00B2](#) [B43M11/06](#)

US class: [1/1](#) [222/1](#) [222/1S](#) [401/132](#) [401/132P](#) [401/133](#) [401/133P](#) [401/196](#) [401/196S](#) [401/198](#) [401/202](#) [401/205](#) [401/206](#) [401/207](#) [604/3](#) [D28/7](#)

Locarno class: [28/02](#)

[Classification Explorer](#)

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US2013028651 AA, US2011142527 AA, US2007205233 AA, US2006269355 AA, US2006027794 AA, US2004253039 AA, US2004240927 AA, US2004179888 AA, US2004162533 AA, US2004114988 AA, US2003086747 AA, US2003049069 AA, US2001055511 AA, US1284635 A, GB2185880 A1, GB1376749 A, GB1278939 A, FR1018172 A,

Forward Citations: WO17035668, WO16179679, WO16064594, WO15065562, WO14036100, WO12024788, WO12024788, WO08134638, WO08134638, USD799115, USD789521, USD777909, USD776267, USD776266, USD771955, USD762392, USD737143, USD721581, USD719422, USD718131, US9789296, US9782573, US9757551, US9723913, US9706832, US9636489, US9616209, US9597062, US9427076, US9398803, US9283364, US9254375, US9220881, US9179765, US9138046, US9073382, US9072371, US9022679, US8926211, US8899858, US8882380, US8757912, US8628265, US8523475, US8511923, US8511323, US8491210, US8215859, US8186897, US8083425, US3320107, US2016332201, US2014366485, US2014064821, US2011166550, US2011142527, US2011000266, US2010318041, US2009047228, US2007286668, US2007212156, EP2986333, EP2588183, EP2588183, DE212013000193, AU2011293058,

Abstract:

Source: US2006269355A The present invention relates to a hand-held dispensing applicator comprising a source of fluid, a frangible applicator tip attached to the fluid source, and an absorbent member attached to the frangible applicator tip. When the frangible applicator tip is broken, fluid flows from the source to the absorbent member, whereby the fluid is applied and spread on a surface. Preferably, the frangible applicator tip comprises a support element permanently connected to the fluid source, a relatively rigid tongue element extending outwardly of the support element, and a frangible region therebetween. Preferably, the tongue element comprises ribs for reinforcing the tongue element to resist unintentional breaking of the frangible region. More preferably, the applicator tip comprises a semi-permeable or non-permeable cover disposed around the frangible region to control the speed and direction of the dispersion of the fluid in the absorbent member. Adaptive embodiments allow the generation of designs applicable to a particular medical purpose.

0) US2011284492A – CLOSURE FOR A CONTAINER

32) Family number: 43121161 (US2011284492A)

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Title: CLOSURE FOR A CONTAINER

Priority: AU20100206294 20100126 AU20130204522 20130412 EP20100702423 20100126
 EP20130156256 20100126 EP20130156256 20130221 AU20170202973 20170504
 GB20090001185 20090126 WO2010EP00436 20100126 US20110146343 20110726
 US20130763235 20130208 NZ20100594790 20100126 JP20110546700 20100126
 JP20110546700T 20100126 JP20150086612 20150421

Family:

Publication number	Publication date	Application number	Application date
AU2010206294 AA	20100729	AU20100206294	20100126
AU2010206294 BB	20131003	AU20100206294	20100126
AU2013204522 AA	20130509	AU20130204522	20130412
AU2017202973 AA	20170525	AU20170202973	20170504
BRPI1007359 A2	20160809	BR2010PI07359	20100126
CN102307790 A	20120104	CN201080006623	20100126
CN102307790 B	20140416	CN201080006623	20100126
CN103922020 A	20140716	CN201410097866	20100126
DE602010006913 D1	20130704	DE201060006913T	20100126
DE602010033554 D1	20160630	DE201060033554T	20100126
DK2389323 T3	20130819	DK20100702423T	20100126
DK2597049 T3	20160829	DK20100156256T	20100126
EA021294 B1	20150529	EA20110090136	20100126
EA201190136 A1	20120228	EA20110090136	20100126
EA201490930 A1	20141230	EA20140090930	20100126
EP2389323 A1	20111130	EP20100702423	20100126
EP2389323 B1	20130508	EP20100702423	20100126
EP2597049 A1	20130529	EP20130156256	20100126
EP2597049 B1	20160518	EP20130156256	20100126
EP3085634 A1	20161026	EP20160170008	20100126
ES2430397 T3	20131120	ES20100702423T	20100126
ES2586826 T3	20161019	ES20130156256T	20100126
GB200901185 A0	20090311	GB20090001185	20090126
GB201109355 A0	20110720	GB20110009355	20100126
GB2477691 A1	20110810	GB20110009355	20100126
GB2477691 B2	20111228	GB20110009355	20100126
HK1164243 A1	20140502	HK20120105035	20120523
HR20160957 T1	20161007	HR20160000957	20160727
HU029865 T2	20170428	HU20130156256T	20100126
JP2012515690 T2	20120712	JP20110546700T	20100126
JP2015166266 A2	20150924	JP20150086612	20150421
LT2597049 T	20161010	LT20130156256T	20100126
NZ594790 A	20140725	NZ20100594790	20100126
NZ617811 A	20150626	NZ20100617811	20100126
PL2597049 T3	20170131	PL20130156256T	20100126
PT2389323 T	20130826	PT20100702423T	20100126
PT2597049 T	20160823	PT20130156256T	20100126
SI2597049 T1	20161130	SI20100031244	20100126
SMT201600294 B	20161110	SM20160000294T	20160831

<u>TR201611224 T4</u>	20160822	TR20160011224T	20100126	
<u>US2011284492 AA</u>	20111124	US20100146343	20100126	
<u>US2013146560 AA</u>	20130613	US20130763235	20130208	
<u>US8584878 BB</u>	20131119	US20100146343	20100126	
<u>WO10084022 A1</u>	20100729	WO2010EP00436	20100126	
<u>ZA201106222 A</u>	20130130	ZA20110006222	20110824	
<u>ZA201208872 A</u>	20140528	ZA20120008872	20121126	

Probable Assignee: CREW MOULDINGS LTD

Assignee(s):^(std): CREW MOULDINGS LTD ; EQUIPE MOULDINGS LTD ; MCDOWELL CRAIG

Assignee(s): CREW MOULDINGS LIMITED ; EQUIPE MOULDINGS LTD LARNE

Inventor(s):^(std): CRAIG MCDOWELL ; MCDOWELL CRAIG ; MCDOWELL JAMES CRAIG

Inventor(s): MCDOWELL CRAIG LARNE ; JAMES CRAIG MCDOWELL

Agent(s): MADDERNS PATENT AND TRADE MARK ATTORNEYS; OFFICE FREYLINGER SA; STOLMAR AND PARTNER PATENTANWALTE PARTG MBB; O CONNELL MAURA; KELLY DONAL MORGAN; DE ELZABURU ALBERTO; PONS ANGEL; FULYA SUEMERALP; HARNESS DICKEY AND PIERCE PLC; O CONNELL MAURA ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): B65B7/28 B65D B65D39/04 B65D41/00 B65D41/10 B65D41/12 B65D47/06 B67B3/02 B67B5/03 (Advanced/Invention);
B65D39/00 B65D41/00 B65D41/02 B65D47/00 B65D47/06 (Core/Invention);
B65D (Subclass/Invention)

CPC: B65D39/04 B65D41/10 B65D41/12 B65D47/06 B65D47/065

European class: B65D41/10 B65D41/12 B65D47/06 B65D47/06B

US class: 215/280 215/324 215/327 215/328 413/2 413/26 413/26S 413/2S 53/329 53/485

[Classification Explorer](#)

Cited documents: USRE36334 E, USD618099 S1, US7845505 BB, US703527 A, US6158604 A, US6006933 A, US5957314 A, US5820326 A, US5806700 A, US5379908 A, US5263600 A, US4782969 A, US4595110 A, US4279353 A, US3346134 A, US3231123 A, US2812093 A, US2776065 A, US2161993 A, US2013119010 AA, US2008277372 AA, US1472889 A, JP6506428 T2, JP60123352 U1, JP60123352 U, JP59150756 U1, JP51153048 U1, JP5071150 U1, JP50065845 U1, JP50065845 U, JP2005096774 A2, GB446612 A, FR532791 A, FR2469356 A1, FR2387853 A1, DE8805665 U, DE614753 A, DE4135470 A1,

Forward Citations: USD774828, USD774827, USD773250, USD755251, USD732337, US9521918, GB2513730,

Abstract:

Source: US2011284492A this invention relates to a closure for sealing an opening of a container. In particular, the present invention relates to a closure (10) for sealing a mouth of a container, such as a bottle. According to a first aspect of the present invention there is provided a closure for sealing an opening defined by a mouth of a container, the closure comprising a body (12) adapted to overlie the mouth; and a discontinuous skirt (14) extending from the body, wherein the skirt is deformable between an open position and a closed position. The present invention also provides methods for applying the closure to a container.

33) Family number: 39345200 (US2010193547A)

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Title: MANUAL PUMP TYPE FLUID DISPENSER AND A METHOD OF MANUFACTURING SUCH A DISPENSER

Priority: GB20070015224 20070802 GB20080007364 20080423 GB20090001907 20090205
 GB20090008239 20090514 GB20090011194 20090629 GB20090016954 20090928
 WO2008GB03487 20081015 WO2008GB02558 20080728 WO2009GB01028 20090422
 WO2009GB01029 20090422 GB20090022580 20091223 GB20100006152 20100414
 GB20100017662 20101020 GB20090020692 20091126 WO2010GB50780 20100513
 WO2010GB50179 20100204 WO2010GB52141 20101217

Family:

Publication number	Publication date	Application number	Application date
<u>BRPI0814863 A2</u>	20150203	BR2008PI14863	20080728
<u>BRPI1008144 A2</u>	20160308	BR2010PI08144	20100204
<u>CN101815583 A</u>	20100825	CN200880110064	20080728
<u>CN102791385 A</u>	20121121	CN201080064290	20101217
<u>EP2188058 A2</u>	20100526	EP20080776065	20080728
<u>EP2393607 A2</u>	20111214	EP20100705409	20100204
<u>EP2516066 A1</u>	20121031	EP20100805625	20101217
GB200715224 A0	20070912	GB20070015224	20070802
GB200807364 A0	20080528	GB20080007364	20080423
GB200901907 A0	20090311	GB20090001907	20090205
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GB200911194 A0	20090812	GB20090011194	20090629
GB200916954 A0	20091111	GB20090016954	20090928
GB200920692 A0	20100113	GB20090020692	20091126
GB200922580 A0	20100210	GB20090022580	20091223
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GB201017662 A0	20101201	GB20100017662	20101020
GB201019252 A0	20101229	GB20100019252	20101115
<u>JP2010535138 T2</u>	20101118	JP20100518729T	20080728
<u>MX2011008299 A1</u>	20111104	MX20110008299	20100204
<u>US2010193547 AA</u>	20100805	US20080671470	20080728
<u>US2012091229 AA</u>	20120419	US20100147580	20100204
<u>US2013068797 AA</u>	20130321	US20100518334	20101217
<u>US8439232 BB</u>	20130514	US20080671470	20080728
<u>WO09016352 A2</u>	20090205	WO2008GB02558	20080728
<u>WO09016352 A3</u>	20090611	WO2008GB02558	20080728
<u>WO09130461 A1</u>	20091029	WO2009GB01028	20090422
<u>WO09130462 A1</u>	20091029	WO2009GB01029	20090422
<u>WO09130462 A9</u>	20091223	WO2009GB01029	20090422
<u>WO10089599 A2</u>	20100812	WO2010GB50179	20100204
<u>WO10089599 A3</u>	20110210	WO2010GB50179	20100204
<u>WO10131042 A1</u>	20101118	WO2010GB50780	20100513
<u>WO11064584 A1</u>	20110603	WO2010GB51964	20101125
<u>WO11077123 A1</u>	20110630	WO2010GB52141	20101217

Probable Assignee: W M PLASTICS INC D B A NOVATION IND**Assignee(s):^(std):** ABDULJALIL HASSAN ; KEITH LAIDLER ; LAIDLER KEITH ; LEAFGREEN LTD ; RODD TIMOTHY**Assignee(s):**

W M PLASTICS INC D B A NOVATION IND ; LEAFGREEN LIMITED ; ENGINEERED MOLDING SOLUTIONS INC

Inventor(s):^(std): TIMOTHY RODD ; RODD TIMOTHY ; LAIDLER KEITH ; KEITH LAIDLER ; ABDULJALIL HASSAN

Agent(s): WILSON GUNN; CHURCH SIMON JOHN; CHERNOFF VILHAUER MCCLUNG AND STENZEL LLP; HILL RICHARD ET AL; CHURCH SIMON JOHN ET AL; WILSON GUNN BIRMINGHAM; CHURCH SIMON

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A62C11/00 B05B1/34 B05B11/00 B05B15/00 B05B7/00 B65D37/00 B65D83/76 B65D88/54 B67D7/58 B67D7/76 G01F11/00 (Advanced/Invention);
B05B1/34 B05B15/00 B05B7/00 B29C49/06 (Advanced/Non-invention);
B05B11/00 B65D37/00 B67D7/76 (Core/Invention)

CPC: B05B11/3028 B05B7/0037 B05B11/0013 B05B11/0016 B05B11/0043 B05B11/007 B05B11/3029 B05B11/303 B05B11/3033 B05B11/3059 B05B11/3064 B05B11/3066 B05B11/3081 B05B11/3087 B05B11/3095 B05B15/005 B05B11/0018 B05B11/0059 B05B11/3057 B05B11/3084 B29B2911/1402 B29B2911/1406 B29B2911/14033 B29B2911/1404 B29B2911/14053 B29B2911/14066 B29B2911/1408 B29B2911/14093 B29B2911/14106 B29B2911/14113 B29B2911/1412 B29B2911/14133 B29B2911/1414 B29B2911/14146 B29C49/06 B05B7/0043 B05B11/3035 B05B1/3442 B05B7/0031 B05B7/0458 B05B7/0475 B05B11/3025

European class: B05B11/00B1F B05B11/00B5A2 B05B11/00B9R B05B11/30C9B B05B11/30E B05B11/30E5 B05B11/30E7 B05B11/30H4 B05B11/30K B05B11/30L B05B11/30S B05B15/00E B05B7/00C1A B05B7/00C1A1 B05B7/00C1A2 B29C49/06 L05B1/34A3B4D L05B11/00B2 L05B11/00B2B L05B11/00B6 L05B11/30E5B L05B11/30E8 L05B11/30H3F2 L05B11/30H4 L05B11/30H6 L05B11/30H7 L05B11/30K4 L05B7/04C3B L05B7/04C3D L29B911/14B2B L29B911/14B2D L29B911/14B2F L29B911/14B2H L29B911/14B4B L29B911/14B4D L29B911/14B4F L29B911/14B4H L29B911/14B4L L29B911/14B4L2 L29B911/14B4L2B L29B911/14B4N L29B911/14B4N2 L29B911/14B4N2B

US class: 222/190 222/207 222/207S 222/321.1 222/321.6 222/321.8 222/321.800S 222/383.1 222/383.100S 239/330 239/330P

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Cited documents: WO9830332 A2, WO9500252 A1, WO9316809 A2, WO09130462 A1, WO09130461 A1, WO09016352 A2, WO07010286 A2, WO03041870 A1, WO0191913 A1, USRE35744 E, US8528792 BB, US7770874 BB, US7401714 BB, US7275661 BB, US7246723 BB, US7201293 BB, US6978913 BB, US6840408 BA, US6793100 BB, US6729501 BB, US6712243 BB, US6612468 BB, US6557736 BA, US6186369 BA, US6168050 BA, US6168050 B1, US6082588 A, US5664703 A, US5570819 A, US5561901 A, US5518147 A, US5476195 A, US5462208 A, US5238156 A, US5205441 A, US5114052 A, US4993214 A, US4155487 A, US4088248 A, US4082223 A, US3749290 A, US2007194054 AA, US2007119864 AA, US2006273112 AA, US2005173460 AA, US2005115988 AA, US2005115984 AA, US2005029302 AA, US2004060945 AA, JP9118352 A2, JP2007137497 A2, JP2007000738 A2, JP2006518020 T2, JP2001501157 T2, JP11239744 A2, JP10101112 A2, GB2010050780, GB2008002558, GB2006002751, GB0303852, FR2919589 A1, EP1754542 A2, EP1199105 A1, EP0906873 A1, EP0602019 A2,

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Forward Citations: WO17140976, WO17072506, WO17060466, WO16164605, WO15155318, WO15136343, WO15007458, WO14023748, WO14022732, WO14003568, WO13160071, WO12134793, WO11077123, WO11075659, WO11075657, WO11075652, WO11075640, WO11064584, USD794450, USD780584, USD750962, USD750961, USD743806, US9718070, US9579675, US9475074, US9302284, US9220377, US9192949, US9073066, US8863990, US8857668, US8814005, US8758452, US8622252, US8597372, US8529637, US8507530, US8430107, US8292973, US8292972, US8187339, US8187338, US2017043364, US2016296958, US2015335528, US2015151315,

US2015034678, US2015008243, US2014061247, US2014034679, US2013056497, US2012228332, US2011088692, NL2009085, JP6077644, JP2015520081, FR3047911, FR3042180, FR3019763, FR2994109, EP2914512, EP2695677, EP2655893, EP2645920, DE202010009751, CN105531034, CN105521885, CN105208901, CN104321148, CN104321148, CN102665924, CN102665820, CN102655942, CN102655912, AU2015210392, AU2013203276,

Abstract:

Source: US2010193547A A manual pump action dispenser for dispensing at least one liquid from a container, the dispenser comprising a base and a cap (114) having an outlet (144) for the liquid, the base being mountable to or forming part of a container and the cap (114) being mountable to the base for movement relative to the base between a rest position and an actuated position, the dispenser further comprising a flexible insert (116) locatable between the base and the cap (114) to define a first pump chamber (122) for dispensing said at least one liquid, the insert being adapted to engage with the base to define an inlet through which said at least one liquid to be dispensed can enter the first pump chamber, the dispenser further comprising an inlet valve operable to enable liquid to enter the first pump chamber (122) through the inlet and an outlet valve arrangement operable to control the release of liquid from the first pump chamber through the outlet, in which the insert also defines a second pump chamber (123) for dispensing a second fluid.

34) Family number: 57414130 (US2014263324A)

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Title: DRINK CONTAINERS WITH CLOSURE RETENTION MECHANISMS
Priority: US20130779084P 20130313 US20130859662P 20130729 US20140199817 20140306
 WO2014US22428 20140310

Family:	Publication number	Publication date	Application number	Application date
	AU2014249322 AA	20141009	AU20140249322	20140310
	AU2014249322 BB	20160211	AU20140249322	20140310
	CA2906058 AA	20150909	CA20142906058	20140310
	CA2906058 C	20170530	CA20142906058	20140310
	CN105209349 A	20151230	CN201480026745	20140310
	CN105209349 B	20170825	CN201480026745	20140310
	EP2969829 A1	20160120	EP20140779698	20140310
	EP2969829 A4	20160330	EP20140779698	20140310
	US2014263324 AA	20140918	US20140199817	20140306
	US8905252 BB	20141209	US20140199817	20140306
	WO14164440 A1	20141009	WO2014US22428	20140310

Probable Assignee: CAMELBAK PRODUCTS LLC

Assignee(s):^(std) CAMELBAK PRODUCTS LLC

Assignee(s): SULLIVAN DEREK GAVIN ; LATHAM MATTHEW W ; BANK OF AMERICA NA

Inventor(s):^(std) LATHAM MATTHEW W ; SULLIVAN DEREK GAVIN

Agent(s): SPRUSON AND FERGUSON; GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; HGF LTD; DASCENZO INTELLECTUAL PROPERTY LAW PC; DASCENZO DAVID S

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D51/18](#) [B65D55/16](#) (Advanced/Invention)
 (IPC 8-9).

CPC: [B65D51/18](#) [B65D55/16](#) [A45F3/18](#)

US class: [215/228](#) [215/306](#) [220/212.5](#) [220/259.1](#) [220/259.3](#) [220/375](#)

[Classification Explorer](#)

Cited documents: WO13023253 A1, WO12095491 A1, USD683581 S1, USD682034 S1, USD679541 S1, USD678717 S1, USD669310 S1, USD657994 S1, USD657618 S1, USD654793 S1, USD652256 S1, USD649879 S1, USD643718 S1, USD641623 S1, USD640093 S1, USD636671 S1, USD634161 S1, USD626838 S1, USD626837 S1, USD614440 S1, USD612731 S1, USD605942 S1, USD592913 S1, USD586184 S1, USD565353 S1, USD547607 S1, USD489613 S1, USD471808 S1, USD457779 S1, USD399744 S1, USD368032 S1, USD319981 S1, USD133978 S1, US8469226 BB, US8443994 BA, US8443993 BA, US8371244 BB, US8328037 BB, US8245870 BB, US8191727 BB, US8051997 BB, US7980403 BB, US7870968 BB, US7866183 BB, US7753240 BB, US7533783 BB, US7448509 BB, US7014077 BB, US6675998 BB, US6648158 BA, US6230944 BA, US6131755 A, US6112926 A, US6079589 A, US6032829 A, US5947310 A, US5597082 A, US5244106 A, US5207341 A, US5044512 A, US4711365 A, US4265363 A, US3944104 A, US3307752 A, US3181725 A, US2962185 A, US2588275 A, US2549225 A, US2117407 A, US2012298614 AA, US2012145713 AA, US2011284541 AA, US2011174993 AA, US2011127232 AA, US2010181329 AA, US2010085367 AA, US2009250426 AA, US2009236341 AA, US2009152231 AA, US20090236341, US2008142466 AA, US2008087624 AA, US2008017642 AA, US20080087624,

US2007039959 AA, US2005274741 AA, US2005011897 AA, CN202193301 U, CN1165451 C, CN102652098 A,

Forward Citations: USD802994, USD802419, USD792216, USD786072, USD783369, USD768491, USD763688, USD760080, USD741637, USD729569, US9670699, US9272822, US9162194, US2014321234, US2014311195, US2014217128,

Abstract:

Source: US2014263324A Drink containers include a liquid container and a cap assembly removably coupled to the liquid container. Cap assemblies include a base, a drink spout extending from the base, a closure configured to be removably coupled relative to the drink spout in a closed position to selectively restrict dispensing of drink liquid through the drink spout and to selective permit dispensing of drink liquid through the drink spout when removed from the drink spout. Cap assemblies further may include a handle extending from the base and configured to selectively retain the closure in a stowed position when the closure is selectively removed from the drink spout. In some embodiments, the handle defines a closed perimeter and the closure is received within the closed perimeter when positioned in the stowed position. Some embodiments further include a tether that couples the closure to the cap assembly or to the liquid container.

0) US4448317A – TAMPER EVIDENT CLOSURES AND PACKAGES

35) Family number: 28673962 (US4448317A)

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Title: TAMPER EVIDENT CLOSURES AND PACKAGES

Priority: CA19840447712 19840217 EP19840101269 19840208 US19880292661 19881230
WO1984US00206 19840213 US19830467791 19830218

Family:

Publication number	Publication date	Application number	Application date
<u>AT39459 E</u>	19890115	AT19840101269T	19840208
<u>AU198426538 A1</u>	19840910	AU19840026538	19840213
<u>AU561982 B2</u>	19870521	AU19840026538	19840213
<u>CA1253116 A1</u>	19890425	CA19840447712	19840217
<u>DE3475769 D1</u>	19890202	DE19843475769	19840208
<u>EP0116892 A2</u>	19840829	EP19840101269	19840208
<u>EP0116892 A3</u>	19850911	EP19840101269	19840208
<u>EP0116892 B1</u>	19881228	EP19840101269	19840208
<u>ES290070 U</u>	19861116	ES19840290070U	19840217
<u>ES290070 Y</u>	19870716	ES19840290070U	19840217
<u>ES290070 Y1</u>	19870814	ES19840290070U	19840217
<u>IE55522 B</u>	19901010	IE19840000379	19840217
<u>IE840379 L</u>	19840818	IE19840000379	19840217
<u>IL70843 A0</u>	19840531	IL19840070843	19840201
<u>IL70843 A1</u>	19870831	IL19840070843	19840201
<u>IN163531 A</u>	19881008	IN1984CA00091	19840206
<u>JP1772225 C3</u>	19930714	JP19840501094	19840213
<u>JP4064941 B4</u>	19921016	JP19840501094	19840213
<u>JP60500524 T2</u>	19850418	JP19840501094T	19840213
<u>KR840007701 A</u>	19841210	KR19840000742	19840216
<u>MX158578 A</u>	19890215	MX19840200380	19840217
<u>NZ207189 A</u>	19870630	NZ19840207189	19840217
<u>US4448317 A</u>	19840515	US19830467791	19830218
<u>US4489841 A</u>	19841225	US19830467794	19830218
<u>US4905851 A</u>	19900306	US19880292661	19881230
<u>WO8403270 A1</u>	19840830	WO1984US00206	19840213
<u>ZA8400458 A</u>	19850227	ZA19840000458	19840120

Probable Assignee: ZAPATA INNOVATIVE CLOSURES INC

Assignee(s):^(std): TRI TECH SYST ; TRI TECH SYSTEMS INT INC ; TRI TECH SYSTEMS INTERNATIONAL INC ; TRI TECH SYSTEMS INTERNAT INC

Assignee(s): TRI TECH SYSTEMS INT ; YODER J SCOTT ; ZAPATA INNOVATIVE CLOSURES INC ; TORAI TEKU SHISUTEMUZU INTERN INC ; TRI TECH SYSTEMS INTERNATIONAL INC ; FIRST FEDERAL SAVING AND LOAN ASSOCIATION OF TOLED ; FIRST FEDERAL SAVING AND LOAN ASSOCIATION OF TOLEDO 701 FIRST FEDERAL PLAZA TOLEDO OH 43624 ; INNOVATIVE CLOSURES INC ; MID AMERICAN BANK AND TRUST CO ; MID AMERICAN NATIONAL BANK AND TRUST CO ; SCHEICH RICHARD A ; MID AMERICAN NATIONAL BANK AND TRUST COMAPNY ; S D TECHNOLOGIES INC ; MID AMERICAN NATIONAL BANK AND TRUST CO 222 SOUTH ; S D TECHNOLOGIES INC FL CORP ; THOMPSON MORTIMER S ; MID AMERICAN NATIONAL BANK AND TRUST CO 222 SOUTH MAIN STREET BOWLING GREEN OHIO 43402

Inventor(s):^(std): ASHER ELI ; ELI ASHER ; MORTIMER S THOMPSON ; STAFFORD THOMPSON MORTIMER ; THOMPSON M S ; THOMPSON MORTIMER S ; THOMPSON MORTIMER STAFFORD ; THOMPSON MS

Inventor(s): TONPUSON MOOTEIMAA SUTATSUFUOODO

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SIM AND MCBURNEY; REINHOLD COHN AND PARTNERS

Designated states: AT AU BE BR CF CG CH CM DE DK FI FR GA GB HU IT JP LI LU MC MR NL NO RO SE SN SU TD TG

International class
(IPC 8-9): B65D41/18 B65D41/34 B65D55/02 (Advanced/Invention);
B65D41/34 (Advanced/Non-invention);
B65D41/02 B65D41/34 B65D55/02 (Core/Invention)

International class
(IPC 1-7): B65D41/04 B65D41/18 B65D41/28 B65D41/34 B65D55/02 B67B1/00 B67B3/00

CPC: Y10S206/807 B65D55/026

European class: B65D55/02G

US class: 206/459.1 206/807 215/203 215/230 215/365

[Classification Explorer](#)

Cited documents: US4678083 A, US4666052 A, US4603785 A, US4591063 A, US4579240 A, US4489841 A, US4461389 A, US4456139 A, US4436213 A, US4432462 A, US4424911 A, US4423822 A, US3984005 A, US3935960 A, US3923198 A, US3923198, US3899295 A, US3896965 A, US3887734 A, US3887734, US3468744 A, US3433152 A, US2939597 A, US2414420 A, US2201205 A, JP59209542,

Forward Citations: WO9205083, WO9106486, WO9106486, WO09128640, WO09128640, WO09047702, WO05021400, US9815593, US9708105, US9637271, US9409686, US9409682, US9334084, US8800471, US8322555, US8286812, US7913870, US7704589, US7682696, US6968968, US6929136, US6478175, US6108475, US6102224, US6029807, US5566846, US5477972, US5284694, US5257705, US5240131, US5236101, US5156720, US5152412, US5145079, US5104704, US5103979, US5064664, US5062928, US5055150, US5022545, US5015318, US4994314, US4927036, US4905851, US4837061, US4801028, US4793500, US4771923, US4736857, US4718553, US2016137381, US2016068311, US2015176818, US2011232560, US2010089922, US2009255897, US2007289935, US2006246802, US2006068168, US2006054526, US2005056645, KR100982879, GB2345067, GB2283735, EP1660383, EP0303400, EP0269317, EP0269317, EP0243545, EP0243545, EP0233077, EA007707, DE4002967, CN105189301, AU597572,

Abstract:

Source: US4448317A A tamper evident closure and package having a container (10), a resealable, substantially rigid closure (12) for closing, opening and reclosing the container (10), color changing means (32a in Figures 1-6) which effect a color change upon stretching, and coacting mechanical means (24, 36, 44 and 46 in Figures 1-6) for uncapping and recapping the closure 10 and for stretching the color changing means (32a) which clearly and unequivocally indicate the condition of the package, e.g., open or closed. Where legends, or other well defined indicia, indicating opening is desired, the color changes can be localized in the skirt by providing thin sections (32a) which stretch preferentially and adjacent thicker sections (38) which remain substantially unstretched. The thin sections (32a) for example can be a legend, or alternatively the thick sections (38) can be the legend while the thin sections (32a) provide a suitable background. The colour changes employed by the invention can be accomplished by such phenomena as stress whitening inherent in various plastic materials. Alternatively, the color changes can be accomplished by mechanisms such as the use of encapsulated staining or coloring agents incorporated in a suitable matrix.

0) US4781880A – METHOD OF FORMING PLASTIC RIBBED ENCLOSURE

36) Family number: 28578455 (US4781880A)

© PatBase

Title: Method of forming plastic ribbed enclosure

Priority:

CA19880556739	19880118	CA19880558724	19880211	CA19912043960	19910605
US19870008658	19870130	US19870013627	19870211	CA19892005229	19891212
US19870102612	19870930	US19890354862	19890516	US19880288237	19881222
US19870123325	19871120	US19890332994	19890404	US19870039950	19870420
US19870078675	19870728	US19880246621	19880920	WO1991US03758	19910529
US19890372761	19890629	US19890432672	19891107	US19890431760	19891106
US19890379783	19890714	US19900592506	19901003	US19890372760	19890629
US19890400140	19890429	US19900530417	19900530	US19900530418	19900530
US19910680532	19910404	US19900598973	19901017		

Family:

Publication number	Publication date	Application number	Application date
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<u>CA1308673 A1</u>	19921013	CA19880556739	19880118
<u>CA1309956 A1</u>	19921110	CA19880558724	19880211
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<u>CA2043960 AA</u>	19921206	CA19912043960	19910605
<u>CA2043960 C</u>	19960716	CA19912043960	19910605
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<u>US5176280 A</u>	19930105	US19910680532	19910404
<u>WO9118810 A1</u>	19911212	WO1991US03758	19910529

Probable Assignee: EDWARD S ROBBINS III

Assignee(s):^(std): EDWARD S ROBBINS III ; ROBBINS EDWARD S ; ROBBINS EDWARD S III

Assignee(s): ROBBINS III EDWARD S ; SOUTHTRUST BANK OF ALABAMA NATIONAL ASSOCIATION ; UNION PLANTER BANK NATIONAL ASSOCIATION ; UNION PLANTERS BANK NATIONAL ASSOCIATION

Inventor(s):^(std): ROBBINS EDWARD S ; ROBBINS EDWARD S III ; ROBBINS III EDWARD S

Inventor(s): EDWARD S ROBBINS

Agent(s): RIDOUT AND MAYBEE LLP; MALCOLM JOHNSTON AND ASSOCIATES; MARCUS AND ASSOCIATES

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM DE DK ES FI FR GA GB GN GR HU IT JP KP KR LI LK LU MC MG ML MR MW NL NO RO SD SE SN SU TD TG

International class
(IPC 8-9): A47J45/07 B29C47/00 B29C49/00 B29C49/04 B29C49/22 B29C49/54 B65D1/02 B65D1/10 B65D1/12 B65D1/26 B65D1/40 B65D1/42 B65D1/44 B65D21/06 B65D23/10 B65D25/32 B65D6/16 B65D77/18 B65D8/08 B65D8/14 B65F1/14 (Advanced/Invention); B29C49/04 (Advanced/Non-invention); A47J45/00 B29C47/00 B29C49/00 B29C49/48 B65D1/02 B65D1/22 B65D1/40 B65D23/10 B65D25/28 B65D6/16 B65D77/10 B65D8/04 B65F1/14 (Core/Invention); B29C49/04 (Core/Non-invention)

International class
(IPC 1-7): A47J47/00 B29C47/06 B29C49/04 B29C49/22 B29C49/52 B29C49/74 B32B3/28 B65B3/00 B65D1/02 B65D1/10 B65D1/12 B65D1/26 B65D1/40 B65D1/42 B65D1/44 B65D21/06 B65D23/00 B65D23/10 B65D23/12 B65D25/14 B65D25/16 B65D25/28 B65D25/32 B65D30/16 B65D67/12 B65D77/18 B65D8/08 B65D8/14 B65D90/04

CPC: B65F1/02 B65F2220/12 B65F2250/1143 B65F2250/1146 B65F1/0006 B65F1/002 B65F1/06 B29C47/0019 B29C47/0023 B29B2911/146 B29B2911/14606 B29B2911/14633 Y10S220/908 Y10S215/90 Y10S264/33 B29C49/0073 B29C49/04 B65D77/18 B65D23/104 B65D25/32 B65F1/1415 B29C47/003 B65D1/44 B29C49/54 B65D1/26 A47J45/075 B65D1/02 B65D1/40 B65D1/42 B29C47/0021 B29C47/0026 B29C47/0033 B29C47/0054 B29C47/0057 B29C47/0059 B29K2105/06 B29K2995/0072 Y10T428/24521 Y10T428/24537 Y10T428/2457 Y10T428/24612

European class: A47J45/07D B29C49/00G B29C49/54 B65D1/02 B65D1/26 B65D1/40 B65D1/42 B65D1/44 B65D23/10D B65D25/32 B65D77/18 B65F1/00A B65F1/00A4 B65F1/02 B65F1/06 B65F1/14C1 L29B911/14F2B L29B911/14F2D L29B911/14F2L L29C47/00J10 L29C47/00J7 L29C47/00J9 L29C47/00L7 L29C47/00L8 L29C47/00L9 L29C49/04 L29K105/06 L29K995/00F19 L65F220/120 L65F250/114E L65F250/114P

US class: 206/508 215/100A 215/12.1 215/12.2 215/1C 215/382 215/395 215/396 215/900 220/403 220/404 220/411 220/470 220/495.05 220/495.06 220/606 220/640 220/666 220/675 220/72 220/737 220/741 220/742 220/762 220/773 220/8 220/85H 220/908 220/98 222/107 222/526 222/530 229/117.35 264/154 264/167 264/177.1 264/505 264/515 264/523 264/536 264/541 264/DIG.33 294/31.2 383/104 383/119 383/121 383/121.1 383/2 383/33 383/71 383/80 383/96 425/381 425/466 425/525 425/532 428/161 428/163 428/167 428/172 D34/1

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Forward Citations:

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Abstract:

Source: US4781880A An enclosure having a self-supporting side wall formed of a plurality of laterally spaced ribs with non-self-supporting thin webs therebetween whereby the ribs and webs cooperate one with the other to provide an enclosure having shape-retaining characteristics. A bottom wall is provided constituting an integral extension of the side wall with the ribs being scored at the juncture of the side and bottom walls to permit the material to be folded such that the side wall and bottom wall lie generally normal one to the other. The enclosure has a closure portion including either a substantially rigid portion having a neck with an opening or a self-supporting rib and web closure terminating in the neck and opening. A cap is provided for sealing the enclosure. Blow molding and blown film techniques are used to form the enclosure.

0) US2003031386A – RECLOSABLE BAGS

37) Family number: 30377332 (US2003031386A)

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Title: RECLOSABLE BAGS

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Family:

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Probable Assignee: VELCRO BVBA

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Inventor(s): SHEPARD WILLIAM ; G A PROVOST ; PROVOST GEORGE ; W H SHEPARD

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MUELLER-BORE AND PARTNER PATENTANWALTE; FISH AND RICHARDSON PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW

HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG
MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI
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International class
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B65B7/14 B65B9/08 B65B9/20 B65D27/06 B65D33/00 B65D33/08 B65D33/14 B65D33/16
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B65D77/36 B65D77/38 B65D85/50 (Advanced/Invention);
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Forward Citations: WO16096378, WO15191504, WO15179365, WO15049220, WO13178584, WO13122972, WO13122970, WO13122940, WO13057725, WO12103418, WO12103395, WO12073999, WO11137097, WO11130022, WO11130020, WO11081703, WO11081703, WO11019511, WO11019503, WO09108640, WO09072068, WO09004135, WO09004135, WO08022308, WO07046965, WO06112448, WO06061062, WO06056635, WO06005849, WO06005849, WO05082736, WO04058584, WO04058584, WO04058062, WO04014751, WO04014751, WO03004379, WO0230772, WO0230771, WO0220363, WO02074645, WO02074645, US9781980, US9776353, US9770178, US9656784, US9649792, US9586724, US9550617, US9532584, US9504295, US9487333, US9475616, US9382461, US9365326, US9346249, US9322746, US9315299, US9260214, US9254620, US9221591, US9211976, US9156224, US9126735, US9096780, US9096351, US8979370, US8900109, US8893457, US8875478, US8875356, US8858077, US8807834, US8800250, US8763890, US8727621, US8685194, US8646975, US8641278, US8622618, US8597721, US8596867, US8568031, US8550716, US8545740, US8540428, US8506165, US8470404, US8469593, US8448305, US8413306, US8398306, US8389596, US8314283, US8301458, US8231816, US8231273, US8225467, US8182407, US8167487, US8123219, US8117804, US8105638, US8069537, US8051540, US7967509, US7963007, US7946766, US7887653, US7887238, US7874731, US7857515, US7819244, US7806677, US7748200, US7681732, US7641469, US7601284, US7462313, US7458575, US7451532, US7441389, US7424796, US7406810, US7395583, US7340807, US7308783, US7305805, US7303711, US7262335, US7241255, US7217119, US7192266, US7186025, US7163706, US7032751, US6991375, US6939282, US6928657, US6756097, US6692149, US6660202, US6656403, US6544245, US6332250, US2016318666, US2016128381, US2016073717, US2016031608, US2016016692, US2015375902, US2015104614, US2014069061, US2013209004, US2013182977, US2013180345, US2013071047, US2013053710, US2012314979, US2012270712, US2012269469, US2012224795, US2012207410, US2012067374, US2012035036, US2011253289, US2011038571, US2011038570, US2011036741, US2011026855, US2010290723, US2010288394, US2010183247, US2010150477, US2010144507, US2010139217, US2010135600, US2010119180, US2010101135, US2010074562, US2010069211, US2009297071, US2009282654, US2009279813, US2009263051, US2009226119, US2009217492, US2009216371, US2009212098, US2009178945, US2009165922, US2009152139, US2009148081, US2009108519, US2009025868, US2009010735, US2008159666, US2008131035, US2008118609, US2008093241, US2008056622, US2008050247, US2008050055, US2008050052, US2008044114, US2008002919, US2008000200, US2007264469, US2007242905, US2007190194, US2007140600, US2007127850, US2007104395, US2007102106, US2007101557, US2007062161, US2007029695, US2007021284, US2006263463, US2006249870, US2006226571, US2006200107, US2006177158, US2006168776, US2006162289, US2006162288, US2006117537, US2006071417, US2006066002, US2006062496, US2006023974, US2006003879, US2005286817, US2005186387, US2005181352, US2005166372, US2005151293, US2005117819, US2005078891, US2005051567, US2004181156, US2004167456, US2004131731, US2004121694, US2004121107, US2004078869, US2004078860, US2004008909, US2004008908, US2003228078, US2003084553, US2003081864, US2003031386, US2002168120, US2002035747, US2002000488, RU2578567, RU2516477, KR20120057628, KR101654050, KR101568885, KR101494587, KR101447529, JP5952742, JP4787833, JP4787833, JP2013542147, JP2006213366, GB2393433, GB2393433, FR2939775, FR2917275, EP2829391, EP2567907, EP2535288, EP2371527, EP2351691, EP2340790, EP2202173, EP2172385, EP2067710, EP1832524, EP1829789, EP1785052, EP1783063, EP1720775, EP1689259, EP1686061, EP1677639, EP1640133, EP1594752, EP1464585, DE102011053275, DE102004056043, DE10121525, CN105764664, CN104995011, CN103231846, CN102958396, CN102958396, CN102947192, CN102947092, CN102947092, CN102548869, CN102548860, CN102548859, CN102548859, AU2013221766, AU2012211147, AU2010282895, AU2010282811, AU2008270170, AU2008270170, AU2002317292,

Abstract:

Source: US2003031386A A reclosable bag has a closure including first and second fastener strips. The first fastener strip includes a strip form base having an array of discrete hook fastener elements integrally molded with and extending from the base. The second fastener strip includes loop elements engageable by the hook fastener elements. The polyethylene bases of the fastener strips are welded directly to the body of the mailer, which is formed of a coextrusion of polyethylene materials. One of the fastener strips is unattached to the bag body along most of its length, so as to avoid undesired opening by shifting of bag contents. The bag is useful as an interoffice mailing envelope, for example.

38) Family number: 31477201 (US2005013742A)

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Title: CONTAINER CLOSURE AND DEVICE TO INSTALL AND REMOVE CLOSURE
Priority: CA20042474409 20040715 EP20040254265 20040716 US20030621430 20030716
Family:

Publication number	Publication date	Application number	Application date
AT420724 E	20090115	AT20040254265T	20040716
AT478734 E	20100915	AT20040075762T	20040716
AU2004203342 AA	20050203	AU20040203342	20040716
AU2004203342 BB	20110421	AU20040203342	20040716
CA2474409 AA	20050116	CA20042474409	20040715
CA2474409 C	20120911	CA20042474409	20040715
DE602004019018 D1	20090305	DE200460019018T	20040716
DE602004028882 D1	20101007	DE200460028882T	20040716
EP1498183 A1	20050119	EP20040254265	20040716
EP1498183 B1	20090114	EP20040254265	20040716
EP1997559 A2	20081203	EP20080075762	20040716
EP1997559 A3	20081210	EP20080075762	20040716
EP1997559 B1	20100825	EP20080075762	20040716
KR101174055 B1	20120814	KR20040055674	20040716
KR20050009242 A	20050124	KR20040055674	20040716
US2005013742 AA	20050120	US20030621430	20030716
US7846395 BB	20101207	US20030621430	20030716

Probable Assignee: ORTHO CLINICAL DIAGNOSTICS INC
Assignee(s):^(std): ORTHO CLINICAL DIAGNOSTICS INC
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Inventor(s):^(std): SHAW JAMES D
Inventor(s): JAMES D SHAW ; SHAW JAMES
Agent(s): FISHER ADAMS KELLY CALLINANS; CALLINANS; OGILVY RENAULT LLP SENCRL SRL; NORTON ROSE CANADA SENCRL SRL LLP; MERCER CHRISTOPHER PAUL ET AL; MERCER CHRISTOPHER PAUL; PHILIP S JOHNSON JOHNSON AND JOHNSON; TODD J
Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR
International class
 (IPC 8-9): [B01L1/00 B01L3/00 B01L3/14 B01L7/04 B01L99/00 B65D39/08 B65D41/04 B67B3/20 B67B7/18 G01N35/00](#) (Advanced/Invention);
[B01L1/00 B01L7/04 B01L99/00](#) (Advanced/Non-invention);
[B01L1/00 B01L11/00 B01L3/14 B65D41/04 B67B7/00](#) (Core/Invention)
International class
 (IPC 1-7): [B01L1/00 B01L11/00 B01L11/02 B01L3/00 B01L3/14 B65D39/08 B65D41/04 B65D47/06 B67B3/20 G01N35/02](#)
CPC: [Y10T436/11 Y10T436/25 B01L3/50825 B01L2300/042 B01L2300/046 B65D41/0485 B67B7/182](#)
European class: [B01L3/14C B01L3/50825 B65D41/04F B67B7/18B L01L300/04A2 L01L300/04B](#)
US class: [215/295 215/329 215/356 220/260 422/102 422/102S 422/104 422/400 422/400P 422/509 422/568 422/63 422/64 422/99 422/99P 436/174 436/183 436/43 81/3.07 81/3.08 81/3.2 81/3.33 81/3.45](#)

[Classification Explorer](#)

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US5533407 A, US5230865 A, US5145646 A, US4145646 A, US3950917 A, US3556332 A, US3556332, US2004241864 AA, US2003022380 AA, US2001013169 AA, US2001000793 AA, US2001000793, GB2118155 A1, EP1066882 A2, EP0907083 A1, EP0536460 A1, EP0383564 A2,

Forward Citations: WO17161058, WO16168813, WO16105508, USD779046, US9381524, US9201085, US9108832, US9075039, US8544244, US8474225, US8187558, US7569189, US2012251389, US2010276445, US2010236198, JP5562348, JP2011055712, GB2451128, EP3144241, EP1707966,

Abstract:

Source: US2005013742A A closure for a container includes: (a) an inner cylindrical wall having first and second ends and defining a space; (b) an outer cylindrical wall opposite the inner cylindrical wall and having said first and second ends to form an outer surface of the closure; (c) a first end wall extending across said first end, wherein said first end wall comprises a recess extending at least partially into said space, and a first set of threads disposed on said recess. In a preferred embodiment, a second set of threads is disposed on said inner or outer cylindrical wall having a direction which is opposite that of the first set of threads. A combination container and a closure includes the closure as described above and a container having an opening at one end adapted to receive the closure. An apparatus removes and installs a closure on the container and includes: a threaded rotatable spindle adapted for threading into a closure having a threaded depression and for applying a rotational force to remove the closure; and a clutch having an element adapted to engage the closure and apply a rotational to the closure. The apparatus can be used on an analyzer, such as a diagnostic analyzer.

39) Family number: 28688909 (US2003116522A)

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Title: SELF-DRAINING CONTAINER NECK AND CLOSURE**Priority:** US20010026161 20011221 US20020277072 20021021 WO2002US40993 20021220
US20030628599 20030728 US20070668211 20070129

Family:	Publication number	Publication date	Application number	Application date
	AU2002364200 AA	20030715	AU20020364200	20021220
	US2003116522 AA	20030626	US20020277072	20021021
	US2003116524 AA	20030626	US20010026161	20011221
	US2004055992 AA	20040325	US20030628599	20030728
	US2007125785 AA	20070607	US20070668211	20070129
	US6948630 BB	20050927	US20020277072	20021021
	US7168581 BB	20070130	US20030628599	20030728
	US7431168 BB	20081007	US20010026161	20011221
	US7766178 BB	20100803	US20070668211	20070129
	WO03055763 A1	20030710	WO2002US40993	20021220

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(IPC 8-9): [B65D1/02](#) [B65D41/04](#) [B65D41/34](#) [B65D43/20](#) [B65D51/00](#) [B65D51/20](#) [B65D53/00](#)
[B65D53/04](#) (Advanced/Invention);
[B65D39/00](#) [B65D41/34](#) [B65D51/16](#) [B65D77/20](#) (Advanced/Non-invention);
[B65D1/02](#) [B65D41/34](#) [B65D51/18](#) (Core/Invention);
[B65D77/10](#) (Core/Non-invention)**International class**
(IPC 1-7): [B65D1/02](#) [B65D23/00](#) [B65D39/00](#) [B65D41/00](#) [B65D41/02](#) [B65D41/34](#) [B65D47/00](#)
[B65D51/00](#) [B65D53/00](#)**CPC:** [B65D1/023](#) [B65D1/0246](#) [B65D41/3428](#) [B65D51/20](#) [B65D2251/0015](#) [B65D2251/0093](#)
[B65D2577/205](#) [B65D41/045](#)**European class:** [B65D1/02D1](#) [B65D1/02D1B](#) [B65D41/04D2](#) [B65D41/34C1](#) [B65D51/20](#) [L65D251/00Y2D](#)
[L65D251/00Y6M](#) [L65D577/20M1](#)**US class:** [215/232](#) [215/252](#) [215/329](#) [215/347](#) [215/349](#) [215/35](#) [215/350](#) [215/43](#) [215/44](#) [215/44S](#)
[220/351](#)[Classification Explorer](#)**Cited documents:** WO9099335, WO9009935 A1, WO07042205, WO06002922, US7217454 BB, US7175039 BB, US7168581 BB, US7021478 BA, US7004340 BB, US6948630 BB, US6913157 BB, US6902075 BB, US6893672 BB, US6874647 BB, US6854614 BB, US6848590 BB, US6659297 BB, US6502710 BA, US6488165 BA, US6477823 BA, US6419101 BA, US6382445 BA, US6382443 BA, US6315140 BA, US6302321 BA, US6277478 BA,

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Forward Citations: WO16176672, WO14022229, WO12095191, WO10088940, WO10011624, WO10011624, WO05032964, WO05032964, USD795064, USD769713, USD758789, USD752234, USD750490, USD747649, USD747199, USD724233, USD691046, USD688129, USD688128, US9738409, US9693577, US9604769, US9522759, US9521859, US9505527, US9403310, US9386679, US9338872, US9315306, US9313871, US9242782, US9241508, US9233052, US9145251, US9139326, US9051098, US9033168, US8931243, US8916217, US8910811, US8857644, US8857637, US8851310, US8807360, US8796333, US8785496, US8785495, US8778994, US8778993, US8778992, US8770428, US8756902, US8746489, US8739991, US8708182, US8673242, US8671655, US8652423, US8650839, US8631977, US8609725, US8596477, US8584876, US8460771, US8413830, US8393484, US8308005, US8292102, US8251236, US8217077, US8113367, US8100277, US7960007, US7798359, US7780024, US7766178, US7694835, US7644902, US7637082, US7562510, US7163117, US7159374, US6948630, US2016376076, US2016123496, US2015353247, US2015034611, US2014203048, US2013058845, US2013058844, US2012292321, US2011253666, US2011225934, US2011214897, US2011204016, US2011132926, US2011127268, US2011120998, US2011089134, US2011024423, US2011017739, US2010176134, US2010140271, US2010140208, US2010102021, US2010009042, US2010006532, US2009291174, US2009255929,

US2009188888, US2009156998, US2009090721, US2009008392, US2008314856, US2008302756, US2008296198, US2008257850, US2008203051, US2008197099, US2007210026, US2007187352, US2007142469, US2007125785, US2007093553, US2007045312, US2006201967, US2005284837, US2005263476, US2005155325, US2003116522, JP5966260, JP2013001399, JP2012516817, FR2911584, EP3122645, EP3098175, EP2547597, EP2167385, EP2167385, EP1663355, CN106103295, CN104736248, CN104736248, CN102264604,

Abstract:

Source: US2003116522A A self-draining container neck and closure comprising a container neck having an upper sidewall portion and a lower sidewall portion, the upper sidewall portion being inset from the lower sidewall portion. The container neck also includes a tamper indicating bead having at least one draining notch therein. The instant invention also includes a closure having a plurality of drainage slots disposed in a spaced configuration. The closure is threadably connected to the container neck, the closure and container threads rotatably engage and provide a drainage path there between.

40) Family number: 47903978 (US2012097634A)

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Title: COLLAPSIBLE BOTTLE, METHOD OF MANUFACTURING A BLANK FOR SUCH BOTTLE AND BEVERAGE-FILLED BOTTLE DISPENSING SYSTEM

Priority: AU20090902936 20090621 AU20100265837 20100621 WO2010AU00774 20100621 EP20100791052 20100621

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2010265837 AA</u>	20101229	AU20100265837	20100621
	<u>BRPI1013267 A2</u>	20160705	BR2010PI13267	20100621
	<u>CA2765754 AA</u>	20101229	CA20102765754	20100621
	<u>CN102574606 A</u>	20120711	CN201080027766	20100621
	<u>DE602010024348 D1</u>	20150611	DE201060024348T	20100621
	<u>EP2445798 A2</u>	20120502	EP20100791052	20100621
	<u>EP2445798 A4</u>	20140212	EP20100791052	20100621
	<u>EP2445798 B1</u>	20150429	EP20100791052	20100621
	<u>IN00648CN2012 A</u>	20130419	IN2012CN00648	20120118
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	<u>KR20120100882 A</u>	20120912	KR20127001965	20100621
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	<u>US8540094 BB</u>	20130924	US20100379655	20100621
	<u>WO10148433 A2</u>	20101229	WO2010AU00774	20100621
	<u>WO10148433 A3</u>	20110224	WO2010AU00774	20100621
	<u>WO10148461 A2</u>	20101229	WO2010AU01071	20100820
	<u>WO10148461 A3</u>	20110224	WO2010AU01071	20100820
	<u>ZA201200447 A</u>	20130626	ZA20120000447	20120119

Probable Assignee: RIEDL JOHN

Assignee(s):^(std): JOHN THOMAS RIEDL ; RIDL DZHON TOMAS ; RIEDL JOHN ; RIEDL JOHN THOMAS ; THOMAS RIEDL JOHN

Assignee(s): RIEDL JOHN THOMAS NORTHBRIDGE ; RIEDL JOHN THOMAS MR

Inventor(s):^(std): RIDL DZHON TOMAS ; RIEDL JOHN THOMAS ; THOMAS RIEDL JOHN

Inventor(s): JOHN THOMAS RIEDL ; RIEDL JOHN THOMAS NORTHBRIDGE

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; BERESKIN AND PARR LLP SENCRL SRL; SCHIEBER FARAGO; FARAGO PETER ANDREAS; SHEWCHUK IP SERVICES LLC; JEFFREY D; WATERMARK PATENT AND TRADEMARK ATTORNEYS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class A47J41/00 B31B39/26 B65B B65B43/00 B65D B65D1/00 B65D1/02 B65D1/42
^{(IPC 8-9):} B65D21/08 B65D37/00 B65D6/10 B65D8/06 B65D90/02 (Advanced/Invention);
B65B B65D (Subclass/Invention)

CPC: B29C65/087 B65D11/04 B29B11/06 B29B11/14 B29C53/04 B29C53/40 B29C65/18
B29C66/0042 B29C66/8122 B29C66/81457 B29C66/83413 B29C66/843 B29C2793/009
B29L2022/02 B29L2031/7158 Y10T428/1393 B29C65/7894 B29C66/43 B29C66/4326
B29C66/73921 B29C66/71 B29C66/72321 B29C66/72341 B29C66/72343 B29C66/1122

European class: B29B11/06 B29B11/14 B31B3/00 B65D11/04 L29C53/04 L29C53/40 L29C65/08
L29C65/08D6 L29C65/18 L29C66/0042 L29C66/8122 L29C66/81457 L29C66/83413
L29C66/843 L29C793/00J L29L22/02 L29L31/7158

US class: 215/13.1 215/379 428/36.91 493/210 493/210S 493/264

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Forward Citations: WO17004106, WO16164681, WO16100759, WO16100757, WO15069859, WO15069858, WO15069857, WO15069856, WO15069855, WO15069822, WO15069821, WO15069820, WO15069819, US9815258, US9802719, US9731889, US9725204, US9694965, US9688459, US9682537, US9469088, US9327867, US9296508, US2017259984, US2015122842, US2015122840, US2015033671, US2014033654, US2013292415, US2013292413, US2013292395, US2013292353, CN104271462,

Abstract:

Source: US2012097634A The present invention concerns a double-skinned inflatable bottle blank and its method of manufacturing which comprises: (i) stacking two sheets of liquid impermeable, flexible foil material, preferably in coplanar arrangement; (ii) blanking the sheets to create respective, preferably shape-congruent blanks having each a contoured perimeter edge; (iii) bonding the two blanks along joining seams that follow the contoured perimeter edges, but for at one or more inflation locations, thereby to define a double skinned blank into which an inflating fluid can be introduced through the inflation location; (iv) additionally bonding the two blanks at a plurality of discrete stiffening seams which are arranged in a predetermined grid or pattern thereby defining a grid-work of intersecting, inflatable stiffener structures in at least such part of the double skinned blank which will provide an upstanding peripheral wall of the bottle when erected through inflation; (v) folding the double skinned blank; and (vi) selectively bonding together portions of the joined perimeter edge of the double skinned blank, but for at a predetermined filling/dispensing location, to define a double-skinned, inflatable bottle blank with an internal cavity surrounded by a bottom wall for standing the bottle upright, said peripheral wall and a top wall, the filling/dispensing location located preferentially in the top wall such as to define a dispensing orifice for filling and dispensing liquid into and from the internal cavity, the inflatable stiffener structures providing an exoskeleton about the internal cavity when inflated.

41) Family number: 49569626 (US2011220652A)

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Title: CONTAINERS FOR HOLDING MATERIALS**Priority:** US20100312658P 20100310 US20110044366 20110309 US20140458189 20140812
WO2011US27744 20110309**Family:**

Publication number	Publication date	Application number	Application date
AU2011224353 AA	20110915	AU20110224353	20110309
AU2011224353 BB	20160630	AU20110224353	20110309
CA2792092 AA	20110915	CA20112792092	20110309
CA2792092 C	20150623	CA20112792092	20110309
EP2544960 A1	20130116	EP20110754007	20110309
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JP2013522128 T2	20130613	JP20120557215T	20110309
KR20130004500 A	20130110	KR20127026393	20110309
TW201144165 A	20111216	TW20110108000	20110309
TW201425150 A	20140701	TW20140111549	20110309
US2011220652 AA	20110915	US20110044366	20110309
US2015034588 AA	20150205	US20140458189	20140812
US8807377 BB	20140819	US20110044366	20110309
US9452857 BB	20160927	US20140458189	20140812
WO11112712 A1	20110915	WO2011US27744	20110309

Probable Assignee: ECOLOGIC BRANDS INC**Assignee(s):^(std):** ECOLOGIC BRANDS INC ; GRAHAM ROMEO ; WATTERS ROBERT ; SIROIS MICHAEL ; CORBETT JULIE ; ECO LOGIC BRANDS INC**Inventor(s):^(std):** CORBETT JULIE ; GRAHAM ROMEO ; SIROIS MICHAEL ; WATTERS ROBERT**Agent(s):** PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; GOWLING LAFLEUR HENDERSON LLP; Price Paul Anthony King; WILSON SONSINI GOODRICH AND ROSATI; KIM ELAINE A ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B65D1/02](#) [B65D23/02](#) [B65D23/10](#) [B65D25/02](#) [B65D25/14](#) [B65D25/18](#) [B65D25/54](#) [B65D35/56](#) [B65D77/06](#) [B65D83/00](#) (Advanced/Invention)**CPC:** [B65D1/0223](#) [B65D83/0055](#) [B65D77/06](#)**European class:** [B65D77/06](#) [B65D83/00B](#)**US class:** [1/1](#) [215/12.1](#) [215/379](#) [220/495.01](#) [220/495.03](#) [220/495.030P](#) [220/495.06](#) [220/495.08](#) [222/105](#) [222/105S](#) [222/183](#)[Classification Explorer](#)**Cited documents:** WO9902415, WO9746465, WO9419255 A1, WO9419242 A1, WO9315967 A1, WO9114630, WO11158000 A1, WO11157999 A3, WO11157999 A2, WO11141696 A1, WO09153558 A1, WO09133359 A1, WO09133355 A1, WO08103649 A3, WO08103649 A2, WO07126044 A1, WO07066090 A1, WO07060450 A2, WO05054068 A1, WO03033376 A1, WO0064595 A1, USRE32354 E, USD99757 S1, USD694635 S1, USD692769 S1, USD692768 S1, USD645755 S1, USD645754 S1, USD633808 S1, USD608211 S1, USD607743 S1, USD543852 S1, USD543466 S1, USD508206 S1, USD471111 S1, USD451401 S1, USD429465 S1, USD426469 S1, USD408742 S1, USD401506 S1, USD376761 S1, USD374179 S1, USD373535 S1, USD373533 S1, USD372429 S1, USD368660 S1, USD354914 S1, USD305980 S1, USD258117 S1, USD233829 S1, USD229485 S1, USD217439 S1, USD201213 S1, USD198407 S1,

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DE202004010291 U1

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Forward Citations: WO13071221, WO13062942, USD761647, USD720227, US9629432, US9574307, US9573151, US9504308, US9463969, US9463482, US9452857, US9284106, US9126719, US9126717, US9090372, US8991635, US8857664, US8820579, US8701905, US8663419, US8430262, US2016229674, US2016037886, US2015308050, US2015298148, US2015284143, US2015158042, US2014331476, US2014291273, US2013341354, US2013075410, US2012168461, US2011036846, US2010155396, TWI560119, EP3074320,

Abstract:

Source: US2011220652A The invention provides for a container that may include a liquid-holding vessel and a skeleton shell supporting the liquid holding vessel. The liquid-holding vessel may comprise a flexible polymer or plastic material for preventing contact between a liquid stored in or dispensed from the container and the skeleton. The liquid-holding vessel and the closure may be formed from a minimal amount of polymer or plastic.

0) US2004040618A – FOOD STORAGE CONTAINERS

42) Family number: 29935126 (US2004040618A)

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Title: FOOD STORAGE CONTAINERS

Priority: DE20001060995 20001208 DE20001060996 20001208 DE20001060998 20001208
 DE20001060999 20001208 EP20030757710 20031016 DE20015003676 20011114
 DE20015009182 20011114 DE20015009185 20011115 RU20060111278 20031016
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Family:

Publication number	Publication date	Application number	Application date
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<u>HK1059420 A3</u>	20040702	HK20040100645	20040130
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<u>HK1059422 A3</u>	20040702	HK20040100648	20040130
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<u>HK1060551 A3</u>	20040813	HK20040103540	20040519
<u>IN00446MN2003 A</u>	20060113	IN2003MN00446	20030425
<u>JP2004515679 T2</u>	20040527	JP20020547797T	20011114
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<u>KR20030051759 A</u>	20030625	KR20037005989	20011114
<u>MXPA03003096 A1</u>	20040504	MX2003PA03096	20011114
<u>PL207624 B1</u>	20110131	PL20010364383	20011114
<u>PL364383 A1</u>	20041213	PL20010364383	20011114
<u>RU2003114306 A</u>	20041010	RU20030114306	20011114
<u>RU2006111278 A</u>	20071127	RU20060111278	20031016
<u>RU2283801 C2</u>	20060920	RU20030114306	20011114
<u>RU2326026 C2</u>	20080610	RU20060111278	20031016
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<u>US2005061812 AA</u>	20050324	US20040882520	20040701
<u>US2005061813 AA</u>	20050324	US20040882551	20040701
<u>US7096893 BB</u>	20060829	US20030457319	20030609
<u>US7131550 BB</u>	20061107	US20040882520	20040701
<u>US7328730 BB</u>	20080212	US20040882551	20040701
<u>WO0246044 A1</u>	20020613	WO2001EP13147	20011114
<u>WO0246057 A1</u>	20020613	WO2001EP13234	20011115
<u>WO0246061 A1</u>	20020613	WO2001EP13148	20011114
<u>WO0246062 A1</u>	20020613	WO2001EP13233	20011115
<u>WO04005159 A1</u>	20040115	WO2002EP14693	20021221
<u>WO05044667 A1</u>	20050519	WO2003DE03430	20031016

Probable Assignee: BRAUN GMBH

Assignee(s):^(std): BRAUN GMBH ; BRAUN GMBKH ; CORONADO JUAN CARLOS ; FRANKE HELMUT ; GILI SERGI ; VILALTA MONTSERRAT ; MILLAN JOSE ; PENARANDA MARIANO ; REBORDOSA ANTONIO ; RAFOLS ROBERT ; VORBECK WOLFGANG ; HERNANDEZ ALEJANDRO

Inventor(s):^(std): CORONADO JUAN CARLOS ; CORONADO JUAN CARLOS ; CORONADO M VILALTA J MILLAN J ; FRANKE HELMUT ; FRANKE KHEL MUT ; ANTONIO REBORDOSA ; CORONADO J C ; GILI SERGI ; HERNANDEZ ALEJANDRO ; J MILLAN ; JC CORONADO ; JOSE MILLAN ; JUAN CARLOS CORONADO ; JUAN CARLOS CORONADO ; KHERNANDEZ ALEANDRO ; KORONADO KHUAN KARLOS ; M VILALTA ; MARIANO PENARANDA ; MILLAN J ; MILLAN JOSE ; MILLAN KHOSE ; MONTSERRAT VILALTA ; PENARANDA MARIANO ; RAFOLS ROBERT ; REBORDOSA

ANTONIO ; SERGI GILI ; VIALTA MONTSERRAT ; VILALTA M ; VILALTA MONTSERRAT ; VORBECK WOLFGANG ; VORBEK VOL FGANG

Inventor(s): VORBEK VOL'FGANG ; WOLFGANG VORBECK ; ROBERT RAFOLS ; HELMUT FRANKE ; ALEJANDRO HERNANDEZ ; PEARANDA MARIANO ; M VILALTA J MILLAN J C CORONADO ; M VILALTA J MILLAN JC CORONADO ; J C CORONADO ; CORONADO JUAN ; FRANKE KHEL'MUT

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; MACRAE AND CO; FISH AND RICHARDSON PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): A23L3/3418 A47J43/00 A47J43/04 B65B1/04 B65B31/04 B65B39/00 B65D1/00 B65D51/16 B65D79/00 B65D79/02 B65D81/20 F04C18/344 F04C23/00 F04C23/02 F04C25/02 F04C29/00 G01L7/08 (Advanced/Invention); B65B31/04 B65D31/04 (Advanced/Non-invention); A23L3/34 A47J43/00 A47J43/04 B65B1/04 B65B31/04 B65D51/16 B65D79/00 B65D81/20 F04C18/34 F04C23/00 F04C25/00 F04C29/00 (Core/Invention)

International class
(IPC 1-7): A23L3/3418 A47J A47J43/07 B65B B65B B65B031/04 B65B31/00 B65B31/04 B65D B65D41/56 B65D51/16 B65D51/24 B65D51/26 B65D51/28 B65D51/30 B65D51/32 B65D79/00 B65D79/02 B65D81/20 F04C18/344 F04C23/00 F04C23/02 F04C25/02

CPC: B65D79/02 B65B31/047 F04C18/3442 F04C29/0071 F04C2220/10 B65D51/1683 B65D79/005 B65D81/2015 B65D81/2038 B65D2203/12

European class: B65B31/04E1 B65D51/16E2 B65D79/00B B65D79/02 B65D81/20B1 B65D81/20B3 F04C18/344B2 F04C29/00D2F L65D203/12 R04C220/10

US class: 116/270 141/325 141/326 141/65 141/8 206/524.8 215/230 215/260 215/262 220/203.05 220/203.11 220/203.16 220/203.23 220/212 220/231 220/254.3 220/367.1 99/472

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Abstract:

Source: US2004040618A A food storage container includes a lid with a vent hole, and a removable cover removably secured to the lid to cover the vent hole. The cover has an evacuation hole. The food storage container further includes a one-way air valve disposed between the vent hole and evacuation hole. With the cover secured to the lid, the one-way air valve inhibits air flow into the container through the vent hole while allowing air flow out of the container via the vent hole and evacuation hole. With the cover removed, the one-way air valve allows bi-directional air flow through the vent hole. An outer surface of the cover defines a smooth sealing area extending about the evacuation hole for sealing against a vacuum pump held against the cover over the evacuation hole to evacuate the container.

43) Family number: 32099125 (US2003225344A)

© PatBase

Title: APPARATUS AND METHOD TO ACCESS THE BONE MARROW FOR ONCOLOGY AND STEM CELL APPLICATIONS

Priority:

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Probable Assignee: TELEFLEX MEDICAL DEVICES RL SA

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Assignee(s): COMERICA BANK ; VIDACARE CORP SHAVANO PARK ; VIDACARE LLC SHAVANO PARK ; TELEFLEX MEDICAL DEVICES RL SA ; TELEFLEX MEDICAL DEVICES SARL

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY

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International class
(IPC 8-9):

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A61B (Subclass/Invention)

International class
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US class:

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Abstract:

Source: US2003225344A An apparatus for removing portions of bone marrow from a bone is provided. The apparatus includes a housing and a hollow drive shaft operable to engage a gear assembly. The hollow drive shaft includes a first end operable to penetrate the bone and a second end operable to allow retrieval of portions of bone and bone marrow. The apparatus also includes a removable trocar. The removable trocar includes an inner channel operable to convey portions of bone and bone marrow. The gear assembly is able to engage and rotate the hollow drive shaft. A motor operable to drive the hollow drive shaft into the bone marrow by rotation of the hollow drive shaft and a power supply and associated circuitry operable to power the motor are also included.

44) Family number: 28144587 (US2001052531A)

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Title: Fitment and resealable dispensing closure assembly for high–pressure sealing and bi–modal dispensing

Priority: US20000579323 20000525 US20010811098 20010316 WO2001US15977 20010517

Family:	Publication number	Publication date	Application number	Application date
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International class [B65D41/34 B65D47/04 B65D47/08 B65D47/24 B67D5/32 B67D7/32 B67D7/34](#)
(IPC 8–9): [F17C13/06](#) (Advanced/Invention)

International class [B65D47/00 B65D47/04 B67D3/00 B67D5/32](#)
(IPC 1–7):

CPC: [B65D47/0809 B65D47/242](#)

European class: [B65D47/08B1 B65D47/24A1](#)

US class: [222/521 222/545 222/545S 222/546 222/546S](#)

Cited documents: US6095382 A, US6065648 A, US6062441 A, US6059132 A, US6039218 A, US6024256 A, US5938086 A, US5810185 A, US5772076 A, US5743444 A, US5692651 A, US5680969 A, US5562220 A, US5456374 A, US5431305 A, US5421487 A, US5377873 A, US5325999 A, US5295597 A, US5267673 A, US5145094 A, US5145083 A, US5125539 A, US5111977 A, US5111949 A, US5104008 A, US4941598 A, US4867354 A, US4805807 A, US4785978 A, US4690304 A, US4569456 A, US4561570 A, US4506809 A, US4358031 A, US3901410 A, US3887116 A, US3297212 A, US3273754 A, US3194453 A, US3123259 A, US3010619 A, US2808169 A, US2759643 A, FR2716170 A3, EP0759876 A1, EP0467554 A1, EP0439109 A2, DE4328582 A1,

Forward Citations: WO15073256, WO13003474, WO13003474, WO07091209, WO06083994, WO04101384, USD499793, USD484061, US9828146, US8613378, US8544685, US8459502, US8403159, US8205762, US7967160, US7900789, US7510095, US7331491, US7182230, US6786363, US6672487, US2016016706, US2012160882, US2011155688, US2011056982, US2011006031, US2009308832, US2009095700, US2008296251, US2008210712, US2008029557, US2007215627, US2007199914, US2007108153, US2006273095, US2006102654, US2004232167, US2004178231, JP2008162597, ITMI20102372, ES2244281, EP2468657, EP1816084, EP1619135, EP1619135, EP1582475, EP1582475, CN102616453,

Abstract:

Source: US2001052531A A fitment is provided for incorporation into a closure assembly to provide at least one high-pressure seal suitable for maintaining high-positive pressures in a container having pressurized contents, such as carbonated beverages. The fitment and closure assembly also provide for bi-modal dispensing operations, because the fitment it can be removed from the closure assembly to provide alternative flow characteristics from the container through the closure assembly. The fitment may also be provided with one or more projections adapted to engage a thread on the closure body such that rotation of the closure body relative to the container results in removal of the fitment from the container. The fitment may also be provided with one or more projections for engaging the closure body to limit its movement relative to the container, thereby defining a fully open dispensing position of the closure body. The projection(s) preferably take the form of a plurality of radially extending ratchet shaped projections or the form of a single, helical flange extending around a peripheral surface of the fitment. A closure assembly incorporating the fitment also may include a plurality of seals formed between various features on the fitment and the closure body, which may include a hinged lid, to enhance the sealing characteristics of the closure assembly.

45) Family number: 58629192 (US2015060389A)

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Title: CONTAINER CLOSURE DEVICE**Priority:** US20130871680P 20130829 US20140471934 20140828 US20140975240P 20140404

Family:	Publication number	Publication date	Application number	Application date
	<u>US2015060389 AA</u>	20150305	US20140471934	20140828
	<u>WO15031640 A2</u>	20150305	WO2014US53202	20140828
	<u>WO15031640 A3</u>	20150702	WO2014US53202	20140828

Probable Assignee: BOLGER DAVID V**Assignee(s):^(std):** BOLGER DAVID V**Inventor(s):^(std):** BOLGER DAVID V**Agent(s):** HEPPERMANN ROGER A

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D39/00 B65D41/04 B65D55/00 (Advanced/Invention)
(IPC 8-9):**CPC:** B65D55/00 B65D41/045 B65D2205/00 B65D39/0052**US class:** 215/355[Classification Explorer](#)

Cited documents: WO0236450 A1, US8807363 BA, US8092878 BB, US7993743 BB, US7276202 BB, US694013 A, US6415936 BA, US6216897 BA, US5732837 A, US5527580 A, US5370252 A, US4932543 A, US4142657 A, US3245569 A, US2013118924 AA, US2013112649 AA, US2012279940 AA, US2011278256 AA, US2011147336 AA, US2010213160 AA, US2010200606 AA, US2010059472 AA, US2009039052 AA, US2007020429 AA, US2006261029 AA, US2006006132 AA, US2004238480 AA, US2004238479 AA, US2003141273 AA, US2003102283 AA, US2003062331 AA, US2002153342 AA, US2002014468 AA, US1652156 A, US1463570 A, FR2259761 A1, FR1294798 A, DE1181577 B, DE10320269 B3, DE102007028158 B3

Forward Citations: US2016265022, US2016114943, US2015266629, US2015166223,**Abstract:**

Source: US2015060389A The closure device may be used to seal bottles or other liquid containers, while avoiding contamination by 2,4,6-Trichloroanisole (TCA). The closure device may include a sleeve that is inserted into the neck of a bottle. A stopper may be inserted into the sleeve to seal the bottle. To prevent TCA contamination, the stopper may include a stopper cap made of a TCA scavenger material, providing a barrier between the stopper and the contents of the bottle. A filter may be added to remove particulates and impurities from the contents when poured from the unstoppered bottle. Various types and shapes of filters may be used, and the filter may include a spring or other movement assistance or a ventilation mechanism. In some embodiments, the sleeve may be removably attached to the bottle, such as by interfacing threading, or to the filter, such as by frangible connectors.

46) Family number: 31342777 (US2008061023A)

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Title: COLLAPSIBLE FLUID CONTAINERS**Priority:** EP20050742741 20050510 GB20040010460 20040511 GB20040020490 20040915
WO2005EP05136 20050510**Family:**

Publication number	Publication date	Application number	Application date
<u>AP200603809 A0</u>	20061231	AP20060003809	20050510
<u>AU2005239829 AA</u>	20051117	AU20050239829	20050510
<u>AU2005239829 BB</u>	20090820	AU20050239829	20050510
<u>BRPI0510959 A</u>	20071120	BR2005PI10959	20050510
<u>CA2566696 AA</u>	20061110	CA20052566696	20050510
<u>CA2566696 C</u>	20150714	CA20052566696	20050510
<u>CN1972659 A</u>	20070530	CN200580021214	20050510
<u>DE602005044202 D1</u>	20140904	DE200560044202T	20050510
<u>EP1765255 A1</u>	20070328	EP20050742741	20050510
<u>EP1765255 B1</u>	20140716	EP20050742741	20050510
GB200410460 A0	20040616	GB20040010460	20040511
GB200420490 A0	20041020	GB20040020490	20040915
GB200509490 A0	20050615	GB20050009490	20050510
<u>GB2414006 A1</u>	20051116	GB20050009490	20050510
<u>GB2414006 B2</u>	20070905	GB20050009490	20050510
<u>GB2418196 A1</u>	20060322	GB20040020490	20040915
<u>IL179159 A0</u>	20070308	IL20050179159	20050510
<u>IN06710DN2006 A</u>	20070831	IN2006DN06710	20061113
<u>IN278530 B</u>	20161230	IN2006DN06710	20061113
<u>JP2007536961 T2</u>	20071220	JP20070512096T	20050510
<u>MXPA06013089 A1</u>	20070516	MX2006PA13089	20050510
<u>US2008061023 AA</u>	20080313	US20050596415	20050510
<u>US8100276 BB</u>	20120124	US20050596415	20050510
<u>WO05107680 A1</u>	20051117	WO2005EP05136	20050510
<u>WO05107680 B1</u>	20060316	WO2005EP05136	20050510
<u>ZA200609936 A</u>	20080827	ZA20060009936	20061128

Probable Assignee: EV BABY LIMITED**Assignee(s):^(std):** ELAN VITAL LTD ; ELAN VITAL UK LTD ; MITED ; EV BABY LTD ; MOOR TIMOTHY NICHOLAS ; MOOR TIMOTHY N ; ELAN VITAL**Assignee(s):** ELAN VITAL (UK) LTD ; ELAN VITAL LIMITED ; ELAN VITAL UK LIMITED ; EV (BABY LIMITED) ; EV BABY LIMITED**Inventor(s):^(std):** MOOR TIMOTHY NICHOLAS ; MOORE TIMOTHY NICHOLAS ; NICHOLAS MOOR TIMOTHY ; MOOR TIMOTHY N ; MOOR THIMOTHY NICHOLAS**Inventor(s):** TIMOTHY NICHOLAS MOOR ; MOOR TIMOTHY ; THIMOTHY NICHOLAS MOOR**Agent(s):** WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; BERESKIN AND PARR LLP; BERESKIN AND PARR LLP SENCRL SRL; SCHUMACHER AND WILLSAU PATENTANWALTSGESELLSCHAFT MBH; BAWDEN PETER CHARLES; OHLANDT GREELEY RUGGIERO AND PERLE LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO

RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC
VN YU ZA ZM ZW

International class
(IPC 8-9): A61J11/00 A61J11/04 A61J9/00 A61J9/06 A61J9/08 B65D25/56 B65D30/20 B65D30/24
B65D35/48 B65D35/50 B65D41/32 B65D41/34 B65D47/20 B65D47/36 B65D51/18
B65D75/58 B65D83/00 (Advanced/Invention);
A61J11/00 A61J9/00 B65D25/00 B65D30/10 B65D30/24 B65D35/00 B65D41/32
B65D41/34 B65D47/00 B65D47/04 B65D51/18 B65D75/52 B65D83/00 (Core/Invention);
A61J B65D (Subclass/Invention)

International class
(IPC 1-7): A61J9/00 B65D30/24 B65D47/20 B65D75/58

CPC: A61J9/008 A61J9/005 A61J11/002 A61J11/008 A61J11/045 B65D47/2031 B65D83/0055
A61J9/00 B65D31/14

European class: A61J11/00F4 A61J11/04A A61J9/00 A61J9/00C A61J9/00E B65D31/14 B65D47/20E2
B65D83/00B K61J11/00Z2

US class: 215/11.1 215/11.3 215/11.300P 215/11.6 220/737 220/740 220/9.1 426/117

[Classification Explorer](#)

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A, US2550034 A, US2520335 A, US2508481 A, US2446451 A, JP64054548 U1,
JP64000943 U1, JP58046331 U1, JP56115338 U1, GB961855 A, GB2181062 A1,
GB1391904 A, GB1337550 A, GB1239600 A, FR2664812 A1, FR2655315 A1,
EP0389191 A1, EP0162727 A2, DE20202205 U1, DE20202205,

Forward Citations: WO17060443, WO16192198, WO16049426, WO15079434, WO11059609, WO11014932,
WO10121800, WO08155419, US9810591, US9757619, US9756895, US9743861,
US9708098, US9622537, US9549585, US9462844, US9456960, US9429411,
US9410857, US9389057, US9192816, US9089182, US8800815, US2016256358,
US2014305943, US2012150140, GB2469659, CN105836273, CN102717964,
CN102256585,

Abstract:

Source: US2008061023A A collapsible container for fluids consists of a flexible bag or pouch hermetically attached to a cover. The container may be provided flat packed, pre-sterilised and hermetically packaged and may be a single use, disposable, container useful for drinking bottles for young children and babies.

0) US3986627A – CLOSURE

47) Family number: 1565807 (US3986627A)

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Title: CLOSURE

Priority: AT19750009533 19751216 AT19770003791 19770527 DE19742459628 19741217
US19740533490 19741217 CH19750014086 19751031 CH19740016820 19741217
US19750641076 19751215

Family:

Publication number	Publication date	Application number	Application date
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AT351385 B	19790725	AT19750009533	19751216
AT367370 B	19820625	AT19770003791	19770527
AT379177 A	19811115	AT19770003791	19770527
AT953375 A	19781215	AT19750009533	19751216
AU197587459 A1	19770616	AU19750087459	19751211
AU503979 B2	19790927	AU19750087459	19751211
BE836668 A	19760416	BE19750162763	19751216
BE836668 A1	19760416	BE19750162763	19751216
BR7508380 A	19760824	BR19750008380	19751217
CA1034539 A1	19780711	CA19750241657	19751212
CH605306 A	19780929	CH19750014086	19751031
CS215093 B2	19820730	CS19750008640	19751217
DD121081 C	19760712	DD19750190161	19751215
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DE2554887 C2	19861002	DE19752554887	19751205
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ES443576 A1	19771001	ES19750443576	19751217
ES459548 A1	19780716	ES19770459548	19770607
FI753526 A	19760618	FI19750003526	19751215
FR2294932 A1	19760716	FR19750038075	19751212
FR2294932 B1	19780512	FR19750038075	19751212
GB1530165 A	19781025	GB19750051653	19751217
GR58606 B	19771110	GR19750149611	19751215
IE43680 B	19810506	IE19750002658	19751205
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IL48615 A0	19760229	IL19750048615	19751208
IL48615 A1	19780615	IL19750048615	19751208
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JP1230466 C3	19840919	JP19750149648	19751217
JP51092277 A2	19760812	JP19750149648	19751217
JP59006784 B4	19840214	JP19750149648	19751217
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MC1088 A	19761122	MC19750001174	19751212
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NO754279 A	19760618	NO19750004279	19751216
OA5181 A	19810131	OA19750055689	19751212
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SE428674 B	19830718	SE19750014010	19751211
SE428674 C	19831027	SE19750014010	19751211

<u>SE7514010 A</u>	19760618	SE19750014010D	19751211
<u>US3986627 A</u>	19761019	US19750641076	19751215
<u>US3990598 A</u>	19761109	US19750641078	19751215
<u>YU319475 A</u>	19820531	YU19750003194	19751217
<u>ZA7507690 A</u>	19761124	ZA19750007690	19751209

Probable Assignee: REFIL AG

Assignee(s):^(std): REFIL A G ; REFIL AG ; ZAPP WALTER ; REFUIRU AG

Assignee(s): REFIL AKTIENGESELLSCHAFT ; REFIL AG TRIESENBERG LI ; REFIL AG LI ; REFIL AKTIENGESELLSCHAFT TE TRIESENBERG LIECHTENSTEIN ; DUBACH WERNER ; REFIL AG

Inventor(s):^(std): ZAPP WALTER ; ZAPP W ; ZAPP ; WERNER DUBACH ; WARUTA TSUATSUPU ; WALTER ZAPP ; DUBACH WERNER ; DUBACH W ; BERUNA DOBATSUHA

Inventor(s): W ZAPP ; W DUBACH ; DUBACH WERNER EFFRETIKON CH ; DUBACH WERNER CH ; ZAPP W DUBSON W ; ZAPP WALTER CH ; ZAPP WALTER OBEREGG CH

Agent(s): SF; REINHOLD COHN AND PARTNERS

International class
(IPC 8-9): B65D41/18 B65D41/58 B65D45/00 B65D45/32 B65D55/16 (Advanced/Invention);
B65D45/00 (Advanced/Non-invention);
B65D41/02 B65D41/32 B65D45/00 B65D55/00 (Core/Invention)

International class
(IPC 1-7): B65D41/02 B65D41/16 B65D41/18 B65D41/28 B65D41/30 B65D41/32 B65D41/48 B65D43/04 B65D45/00 B65D45/32 B65D45/34 B65D47/40 B65D55/08 B65D55/16 B67B1/08

CPC: B65D41/185 B65D45/322 B65D55/16

European class: B65D41/18B B65D45/32A B65D55/16

US class: 215/237 215/272 215/305 215/306 215/320 215/344

[Classification Explorer](#)

Cited documents: US3851783 A, US3825144 A, US2990077 A, US2894654 A, US2814404 A, DE507477 A, DE2212297 A1, DE1782059 A1, DE1285904 B,

Forward Citations: WO9413545, WO17126555, WO16063641, WO07001740, WO04007312, US9150340, US8807371, US8783485, US8695842, US8646633, US8561834, US8322547, US8273017, US8235236, US8177084, US8075516, US7954659, US7922021, US7854352, US7837052, US7686183, US7537134, US7516870, US7510095, US7431877, US7156253, US6991123, US6805252, US6631820, US6527132, US6481589, US6405885, US6401990, US6325228, US6123373, US6082569, US6079579, US6039224, US6029866, US5836464, US5762217, US5638972, US5423444, US5354539, US5161707, US5106047, US4911324, US4534481, US4516684, US4429799, US4420089, US4320843, US4220249, US4196818, US4089463, US2014246433, US2013043259, US2011220673, US2011163118, US2011017740, US2011000930, US2011000848, US2010187247, US2010145264, US2009188885, US2009032534, US2008073346, US2007187353, US2007161947, US2007017923, US2006289540, US2006201904, US2006191959, US2005247708, US2005230342, US2005184433, US2005092028, US2004056040, US2003205549, JP9328155, JP9221155, JP61158748, JP5593135, JP3762470, JP3754753, JP2012001253, FR2777542, FR2494227, FR2401071, EP2213586, EP0729895, EP0365596, EP0244036, EP0052990, EP0052990, EP0017108, DK153133, CN104309913, AU2004218872, AT405816,

Abstract:

Source: US3986627A This invention relates to a closure which serves hermetically to close – though being easily reopened – a bottle or similar container, which possesses a neck having a dispensing orifice, a neck frontal face surrounding said orifice and an orifice bead located below the latter and having a constriction on its underside, and which closure comprises a cap serving as the head of the closure, with an upper cap wall (or roof wall of the cap) and a cap side wall circumferential about the latter and possessing slot means, extending from its lower rim and transversely to the latter, to permit it to splay (or spread) on being mounted on the mouth of the bottle, and with an inner annular head, projecting inwards from the inner face of the cap side wall and intended, in the closing position, to engage with the underside of the orifice head of the bottle, a sealing element, provided on the inner face of the upper cap wall and serving, in the closing position, to seal the dispensing orifice of the bottle, a lifting element which may be actuated by the finger and is located on the actuating side of the cap, and a fixing device which, in the closing position, annularly bridges each slot present in the cap side wall, by sealingly pressing the inner annular bead of the cap side wall against the constricted underside of the orifice bead of the bottle, and which is linked to the cap side wall in at least one region, remote from the actuating side of the cap side wall; the

fixing device comprises at least one tensioning member which, in the closing position, is tensioned by being stretched radially to the cap side wall and as a result effects a compression of each slot present in the side wall and provides a uniform pressure, from all sides, of the inner annular bead of the cap against the underside of the bottle neck.

48) Family number: 51065154 (US2012110810A)

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Title: MEDICAL DEVICE WITH FEATURE FOR STERILE ACCEPTANCE OF NON-STERILE REUSABLE COMPONENT

Priority: EP20110782346 20111103 US20100410603P 20101105 US20110151488 20110602
 US20110151471 20110602 US20110151498 20110602 US20110151481 20110602
 US20110151509 20110602 US20110151512 20110602 US20110269870 20111010
 US20110270701 20111011 US20110151503 20110602 US20110271352 20111012
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 US20110271364 20111012 US20110274480 20111017 US20110274805 20111017
 US20110274830 20111017 US20110275495 20110602 US20110275563 20111018
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 US20110487846P 20110519 US20110276745 20111019 US20110276707 20111019
 US20110276725 20111019 US20110277328 20111020 WO2011US59212 20111103
 WO2011US59215 20111103 WO2011US59217 20111103 WO2011US59220 20111103
 WO2011US59222 20111103 WO2011US59223 20111103 WO2011US59226 20111103
 WO2011US59338 20111104 WO2011US59354 20111104 WO2011US59351 20111104
 WO2011US59358 20111104 WO2011US59362 20111104 WO2011US59218 20111103
 WO2011US59365 20111104 WO2011US59371 20111104 WO2011US59378 20111104
 WO2011US59381 20111104 US20150788915 20150701 US20160992104 20160111
 US20160008530 20160128 US20160212423 20160718 US20160229418 20160805
 US20160342218 20161103 US20170460822 20170316

Family:

Publication number	Publication date	Application number	Application date
AU2011323174 AA	20120510	AU20110323174	20111104
AU2011323176 AA	20120510	AU20110323176	20111104
AU2011323176 BB	20151029	AU20110323176	20111104
AU2011323178 AA	20120510	AU20110323178	20111104
AU2011323181 AA	20120510	AU20110323181	20111104
AU2011323183 AA	20120510	AU20110323183	20111104
AU2011323186 AA	20120510	AU20110323186	20111104
AU2011323193 AA	20120510	AU20110323193	20111104
AU2011323195 AA	20120510	AU20110323195	20111104
AU2011323276 AA	20120510	AU20110323276	20111103
AU2011323279 AA	20120510	AU20110323279	20111103
AU2011323279 BB	20151105	AU20110323279	20111103
AU2011323281 AA	20120510	AU20110323281	20111103
AU2011323281 BB	20151217	AU20110323281	20111103
AU2011323282 AA	20120510	AU20110323282	20111103
AU2011323284 AA	20120510	AU20110323284	20111103
AU2011323286 AA	20120510	AU20110323286	20111103
AU2011323286 BB	20160414	AU20110323286	20111103
AU2011323287 AA	20120510	AU20110323287	20111103
AU2011323290 AA	20120510	AU20110323290	20111103
AU2011338893 AA	20120614	AU20110338893	20111104
CA2816853 AA	20130502	CA20112816853	20111104
CA2816875 AA	20130502	CA20112816875	20111103
CA2816877 AA	20130502	CA20112816877	20111103
CA2816878 AA	20130502	CA20112816878	20111103
CA2816885 AA	20130502	CA20112816885	20111103
CA2816888 AA	20130502	CA20112816888	20111103
CA2816890 AA	20130502	CA20112816890	20111104

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A61B17/00 A61B17/064 A61B17/068 A61B17/12 A61B17/28 A61B17/285 A61B17/29 A61B17/295 A61B17/32 A61B17/94 A61B18/00 A61B18/04 A61B18/12 A61B18/14 A61B18/18 A61B19/00 A61B19/02 A61B34/00 A61B34/30 A61B46/10 A61B50/30 A61B8/00 A61B8/14 A61B90/00 A61B90/40 A61F9/02 A61N7/00 B23B37/00 B23Q3/00 B23Q5/00 B25B27/14 B65D83/10 B65D85/00 B65D85/86 G01R31/00 G02B27/00 G02B27/01 G06Q30/04 G06Q30/06 G06Q50/22 G07C1/00 G08B21/00 H01M10/46 H01M10/48 H01M10/50 H01M2/10 H01M2/26 H02J17/00 H02J7/00 H02J7/02 H04R31/00 (Advanced/Invention);
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Abstract:

Source: US2012110810A An apparatus maintains the sterility of a medical device while providing for the insertion of an insertable component into the medical device. The apparatus includes a medical device having a housing sized to contain the insertable component, an active feature, a cap, and a hinge member. A container encases the medical device within a device recess, a cap recess, and a container cover. The insertable component may be inserted into the housing while limiting potential contact with the exterior of the medical device. An alternative assembly comprises an insertion assembly having a handle and the insertable component detachably attached thereto. The medical device comprises a housing, an active feature, and a flexible member. An insertion tube is insertable within the flexible member to limit contact when the insertable component is inserted into the housing. Yet another configuration includes a resiliently hinged door assembly releasable by a release button.

49) Family number: 42122395 (US2005098527A)

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Title: MULTIPLE CAVITY BOTTLE AND METHOD OF MANUFACTURING SAME

Priority: US20030502892P 20030915 US20040551165P 20040308 US20040551166P 20040308
US20050164186 20051114 US20070774482 20070706 US20040627877P 20041115
US20050163464 20051020 US20040942332 20040915 US20060818883P 20060706

Family:	Publication number	Publication date	Application number	Application date
	US2005098527 AA	20050512	US20040942332	20040915
	US2006102581 AA	20060518	US20050163464	20051020
	US2006108363 AA	20060525	US20050164186	20051114
	US2008000866 AA	20080103	US20070774482	20070706
	WO06055507 A2	20060526	WO2005US41240	20051114
	WO06055507 A3	20070823	WO2005US41240	20051114
	WO06055508 A2	20060526	WO2005US41242	20051114
	WO06055508 A3	20070315	WO2005US41242	20051114

Probable Assignee: YATES WILLIAM M

Assignee(s):^(std): YATES WILLIAM M ; YATES WILLIAM M III

Assignee(s): YATES WILLIAM MIII

Inventor(s):^(std): YATES WILLIAM M III

Inventor(s): YATES WILLIAM ; YATES WILLIAM MIII

Agent(s): FELIX L FISCHER ATTORNEY AT LAW

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ
GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY
MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT
RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ
VC VN YU ZA ZM ZW

International class
(IPC 8-9): [A47G19/00 B29C49/00 B29C49/12 B65D1/04 B65D21/02 B65D51/18 B65D51/24](#)
[B65D81/32](#) (Advanced/Invention);
[B29C49/06 B65D1/02](#) (Advanced/Non-invention);
[A47G19/00 B29C49/00 B29C49/08 B65D1/04 B65D21/02 B65D51/18 B65D51/24](#)
[B65D81/32](#) (Core/Invention);
[B29C49/06 B65D1/02](#) (Core/Non-invention)

International class
(IPC 1-7): [B29C49/12 B65D1/04](#)

CPC: [B65D21/0202 B65D21/0204 B65D47/243 B65D47/242 B65D47/42 B65D47/263](#)
[B65D47/265 B65D81/3216 B65D51/249 B29B2911/1402 B29B2911/14026](#)
[B29B2911/14033 B29B2911/1404 B29B2911/14106 B29B2911/14133 B29B2911/14326](#)
[B29B2911/14328 B29B2911/1433 B29B2911/14333 B29B2911/14335 B29B2911/14336](#)
[B29B2911/14337 B29B2911/14346 B29B2911/14348 B29B2911/1435 B29B2911/14351](#)
[B29B2911/14352 B29B2911/1442 B29B2911/1444 B29C49/0073 B29C49/06 B29C49/12](#)
[B29C2049/1209 B65D1/04 B65D21/0201 B65D81/3205 B65D81/3288](#)

European class: [B29C49/00G B29C49/12 B65D1/04 B65D21/02B B65D21/02B1 B65D21/02B2](#)
[B65D47/24A1 B65D47/24A2 B65D47/26D2 B65D47/26D4 B65D47/42 B65D51/24L](#)
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US class: [215/6 215/6P 215/6S 220/23.4 220/23.400P 220/23.86 220/23.860S 220/253 220/253S](#)
[264/532 264/532S](#)

[Classification Explorer](#)

Cited documents: USD480648 S1, USD477493 S1, USD472150 S1, USD441293 S1, USD436292 S1,
USD429633 S1, USD404302 S1, USD393202 S1, USD324995 S1, USD324331 S1,
USD313347 S1, USD313346 S1, US830001 A, US7082784 BB, US6971551 BB,

US6769573 BA, US6415624 BA, US6364199 BA, US6223942 BA, US6186349 BA, US6179146 BA, US6176395 BA, US5938053 A, US5897007 A, US5862949 A, US5833121 A, US5758789 A, US5758786 A, US5740947 A, US5740647 A, US5645822 A, US5609039 A, US5456090 A, US5437381 A, US5353964 A, US5316159 A, US5248533 A, US5158191 A, US5060811 A, US5009083 A, US4991728 A, US4893729 A, US4856995 A, US4838457 A, US4585149 A, US4410085 A, US3482724 A, US3439841 A, US3416707 A, US3275180 A, US3255926 A, US3217931 A, US3200995 A, US3197071 A, US3157315 A, US3076573 A, US2661870 A, US2327078 A, US2003160019 AA, US1981446 A, US1964609 A, US1418814 A,

Forward Citations: WO16189470, WO16176090, WO16170350, WO16110765, WO16027052, WO15155474, WO15048809, WO13063453, WO12017259, WO12015370, WO11116442, WO09135566, WO08061817, WO08023981, WO07040311, USD803071, USD799126, USD760543, USD747928, USD736565, USD722828, USD696125, USD694625, USD668953, USD664856, USD653546, USD642468, USD630094, USD598749, USD590255, USD539167, US9802375, US9669578, US9545607, US9499315, US9457927, US9415897, US9254617, US9221223, US9120599, US9090395, US8870027, US8858214, US8833240, US8827688, US8807357, US8746475, US8714963, US8695836, US8651271, US8616390, US8584899, US8573964, US8523469, US8469221, US8371461, US8240497, US8235239, US7614513, US2016200474, US2016052674, US2015321797, US2014263448, US2013264357, US2013240563, US2013125399, US2012067756, US2012031869, US2011135778, US2011089189, US2011079777, US2011042337, US2011006071, US2010237034, US2010225031, US2010116826, US2010116769, US2010116768, US2010084362, US2009283494, US2009189156, US2009045157, US2009020542, US2009020541, US2008277310, US2008245801, US2008156196, US2008149126, US2008121655, US2008023475, US2008011748, US2007051689, US2007045342, US2006151352, NL1032359, GB2546902, GB2540574, GB2509911, GB2501389, GB2460933, GB2460933, GB2459519, GB2459519, FR3019536, FR2910446, ES2325388, EP2708477, EP2708477, EP2653405, EP2216256, EP2116349, EP1935806, CN104023941, CN104023941, CN103449001, CN103434724, CN102971132, CN102490956, CN102058486,

Abstract:

Source: US2005098527A A multiple cavity bottle is provided with a joining inner wall providing two sealed cavities for containing differing commodities. Shaping of the inner wall allows viewing of both commodities. Forming the bottle from two substantially symmetrical elements contacting at the inner wall allows use of a common mold for both bottle elements.

Title: CONTAINER WITH A MEDAL**Priority:** US20130832605 20130315 US20160201870 20160705 WO2014US20992 20140306**Family:**

Publication number	Publication date	Application number	Application date
AR095591 AA	20151028	AR2014P101216	20140317
AU2014237775 AA	20140925	AU20140237775	20140306
CL2015002625 A1	20160916	CL20150002625	20150911
EP2969801 A1	20160120	EP20140714853	20140306
MX2015010544 A1	20151116	MX20150010544	20140306
PE14522015 A1	20150928	PE20150001842	20140306
SG10201708449Y A1	20171129	SG20171008449	20140306
SG11201505395Q A1	20150929	SG20151105395	20140306
TH158825 A	20161226	TH20151005060	20140306
TW201446605 A	20141216	TW20140109010	20140313
US2014262897 AA	20140918	US20130832605	20130315
US2016311576 AA	20161027	US20160201870	20160705
US9637271 BB	20170502	US20130832605	20130315
WO14149803 A1	20140925	WO2014US20992	20140306

Probable Assignee: OWENS BROCKWAY GLASS CONTAINER INC**Assignee(s):**^(std) OWENS BROCKWAY GLASS CONTAINER ; OWENS BROCKWAY GLASS CONTAINER INC**Inventor(s):**^(std) BRYANT JESSICA R ; LAIB DOUGLAS ; SMITH ROGER P ; SMITH SUSAN L**Inventor(s):** SUSAN L SMITH ; ROGER P SMITH ; DOUGLAS LAIB ; JESSICA R BRYANT**Agent(s):** SHELSTON IP; SHELSTON IP PTY LTD; JOHANSSON AND LANGLOIS LTDA; BLUMBACH ZINNGREBE; DREW AND NAPIER LLC; REISING ETHINGTON PC; SMITH SUSAN L**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [A44C3/00](#) [B23P11/00](#) [B65D1/02](#) [B65D23/14](#) [B65D41/32](#) [B65D43/02](#) [B65D51/24](#) [B65D55/02](#) [B65D55/06](#) [B65D79/02](#) [G06K7/00](#) [G09F3/02](#) ^(Advanced/Invention);
[B65D23/14](#) [B65D51/24](#) [B65D55/02](#) ^(Core/Invention)**CPC:** [B65D23/14](#) [B65D79/02](#) [B23P11/00](#) [G06K7/0008](#) [B65D51/248](#) [B65D55/024](#) [B65D55/026](#) [B65D55/06](#) [B65D2101/00](#) [B65D2101/0023](#) [B65D2101/0084](#) [B65D43/02](#) [B65D1/02](#) [Y10T29/49876](#) [Y10T29/49913](#) [Y10T29/49925](#)**US class:** [206/459.1](#) [206/459.5](#) [29/453](#) [29/508](#) [29/515](#)[Classification Explorer](#)**Cited documents:** US6378906 BA, US6226619 BA, US5971179 A, US5806697 A, US5617812 A, US5443987 A, US4740401 A, US4669641 A, US4592780 A, US4511052 A, US4505399 A, US4502605 A, US4489841 A, US4449637 A, US4411369 A, US4182461 A, US3899295 A, US3603472 A, US3502022 A, US3399811 A, US3374807 A, US2528259 A, US2091460 A, US2040381 A, US2014138274 AA, US2014116009 AA, US2013341228 AA, US2013232830 AA, US201313832589, US2012291894 AA, US201213683475, US201213679506, US2011215160 AA, US2011169642 AA, US2010326952 AA, US2010245036 AA, US2010156614 AA, US2010078010 AA, US2010012542 AA, US2009212954 AA, US2008111696 AA, US2008110774 AA, US2006139928 AA,

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US2002139292 AA, US1554191 A, US1042669 A, RUEP1151931, FR2653923 A1,
FR2306840 A1, EP1151931 A1, EP0757012 A1,

Forward Citations: WO16186892, WO16186855, USD786687, US2016340083, US2016340082,
US2016221719,

Abstract:

Source: US2014262897A A container may include a wall and a medal retained to the wall by container material of integral one-piece construction with the wall and extending over at least a portion of the medal. The medal and one or more portions of the container adjacent the medal have a shared unique appearance. A package may include a flaccid loop coupled between a closure and a container to which the closure is coupled, and a medal coupled to the flaccid loop.

51) Family number: 49386706 (US2011226343A)

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Title: METHOD AND APPARATUS FOR CARTRIDGE–BASED CARBONATION OF BEVERAGES

Priority: AU20110210627 20110131 AU20120290003 20120802 AU20130203669 20130411
 AU20140202419 20140502 AU20140274512 20141208 AU20170204100 20170616
 EP20110702766 20110131 CN201180017796 20110131 EP20140172953 20110131
 CN201280048594 20120802 JP20120552021 20110131 EP20140163831 20110131
 EP20140172953 20140618 EP20140198111 20110131 US20100337184P 20100201
 US20110017459 20110131 WO2011US23157 20110131 US20110514676P 20110803
 US20120565214 20120802 US20140332856 20140716 US20140332816 20140716
 US20140445571 20140729 US20140445484 20140729 US20140445521 20140729
 NZ20110602118 20110131 NZ20110620266 20110131 JP20120552021T 20110131
 JP20150120756 20150616 JP20150120755 20150616 JP20150120757 20150616
 WO2012US49356 20120802

Family:

Publication number	Publication date	Application number	Application date
AU2011210627 AA	20110804	AU20110210627	20110131
AU2011210627 BB	20140220	AU20110210627	20110131
AU2012290003 AA	20130207	AU20120290003	20120802
AU2013203669 AA	20130502	AU20130203669	20130411
AU2013203669 BB	20141127	AU20130203669	20130411
AU2014202419 AA	20140529	AU20140202419	20140502
AU2014202419 BB	20141127	AU20140202419	20140502
AU2014274512 AA	20150115	AU20140274512	20141208
AU2014274512 BB	20160421	AU20140274512	20141208
AU2017204100 AA	20170706	AU20170204100	20170616
BR112014002592 A2	20170301	BR20141102592	20120802
CA2788496 AA	20120731	CA20112788496	20110131
CA2843889 AA	20140131	CA20122843889	20120802
CL2014000263 A1	20150612	CL20140000263	20140131
CL54367 B	20170629	CL20140000263	20140131
CL54367 B	20170705	CL20140000263	20140131
CN102843938 A	20121226	CN201180017796	20110131
CN102843938 B	20160120	CN201180017796	20110131
CN103857617 A	20140611	CN201280048594	20120802
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CN104887078 A	20150909	CN201510282639	20110131
CN104887078 B	20171110	CN201510282639	20110131
CN104938758 A	20150930	CN201510388802	20120802
CN105011764 A	20151104	CN201510282411	20110131
CN105011765 A	20151104	CN201510282671	20110131
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DE602011015148 D1	20150430	DE201160015148T	20110131
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DE602011031590 D1	20161201	DE201160031590T	20110131
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DK2786682 T3	20160222	DK20110172953T	20110131
DK2786682 T3	20160222	DK20140172953T	20110131

<u>DK2921087 T3</u>	20170130	DK20110198111T	20110131
<u>DK2921087 T3</u>	20170130	DK20140198111T	20110131
<u>EP2531080 A2</u>	20121212	EP20110702766	20110131
<u>EP2531080 B1</u>	20141112	EP20110702766	20110131
<u>EP2739559 A2</u>	20140611	EP20120748092	20120802
<u>EP2739559 B1</u>	20170329	EP20120748092	20120802
<u>EP2754376 A1</u>	20140716	EP20140163831	20110131
<u>EP2754376 B1</u>	20150325	EP20140163831	20110131
<u>EP2786682 A1</u>	20141008	EP20140172953	20110131
<u>EP2786682 B1</u>	20151209	EP20140172953	20110131
<u>EP2921087 A1</u>	20150923	EP20140198111	20110131
<u>EP2921087 B1</u>	20161019	EP20140198111	20110131
<u>ES2532901 T3</u>	20150401	ES20110702766T	20110131
<u>ES2540244 T3</u>	20150709	ES20140163831T	20110131
<u>ES2563195 T3</u>	20160311	ES20140172953T	20110131
<u>ES2612103 T3</u>	20170512	ES20140198111T	20110131
<u>HK1179490 A1</u>	20170210	HK20130106704	20130606
<u>HK1198155 A1</u>	20150313	HK20140111695	20141119
<u>HK1198155 A1</u>	20170303	HK20140111695	20141119
<u>HK1198155 A1</u>	20150313	HK20140111695	20141119
<u>HK1213747 A1</u>	20160715	HK20160101671	20130606
<u>HK1215519 A1</u>	20160902	HK20160103526	20141119
<u>HK1216288 A1</u>	20161104	HK20160104307	20130606
<u>HK1216289 A1</u>	20161104	HK20160104308	20130606
<u>IL230739 A0</u>	20140331	IL20120230739	20120802
<u>IN01599DN2014 A</u>	20160513	IN2014DN01599	20140303
<u>IN07583DN2012 A</u>	20140307	IN2012DN07583	20120830
<u>JP2013518778 T2</u>	20130523	JP20120552021T	20110131
<u>JP2014531367 T2</u>	20141127	JP20140524080T	20120802
<u>JP2015166271 A2</u>	20150924	JP20150120756	20150616
<u>JP2015214374 A2</u>	20151203	JP20150120755	20150616
<u>JP2015214375 A2</u>	20151203	JP20150120757	20150616
<u>JP5766212 B2</u>	20150819	JP20120552021T	20110131
<u>JP6058079 B2</u>	20170111	JP20150120755	20150616
<u>JP6058080 B2</u>	20170111	JP20150120756	20150616
<u>JP6058744 B2</u>	20170111	JP20150120757	20150616
<u>JP6129834 B2</u>	20170517	JP20140524080T	20120802
<u>KR101750003 B1</u>	20170622	KR20147005509	20120802
<u>KR20120134118 A</u>	20121211	KR20127022839	20110131
<u>KR20140060512 A</u>	20140520	KR20147005509	20120802
<u>KR20170053729 A</u>	20170516	KR20177011425	20120802
<u>MX2012008857 A1</u>	20121205	MX20120008857	20110131
<u>MX2014001332 A1</u>	20140530	MX20140001332	20120802
<u>MY163441 A</u>	20170915	MY20120700514	20110131
<u>NZ602118 A</u>	20140131	NZ20110602118	20110131
<u>NZ620266 A</u>	20141224	NZ201106020266	20110131
<u>NZ620962 A</u>	20160331	NZ20120620962	20120802
<u>NZ701776 A</u>	20150130	NZ20110701776	20110131
<u>RU2014107780 A</u>	20150910	RU20140107780	20120802
<u>RU2600721 C2</u>	20161027	RU20140107780	20120802

<u>TH121667 A</u>	20130228	TH20121003929	20110131
<u>TH158829 A</u>	20161226	TH20141000624	20120802
<u>TW201141397 A</u>	20111201	TW20110103974	20110201
<u>TW201320910 A</u>	20130601	TW20120128005	20120803
<u>TW1583311 B</u>	20170521	TW20110103974	20110201
<u>US2011226343 AA</u>	20110922	US20110017459	20110131
<u>US2013129870 AA</u>	20130523	US20120565214	20120802
<u>US2014326144 AA</u>	20141106	US20140332856	20140716
<u>US2014328980 AA</u>	20141106	US20140332816	20140716
<u>US2014331867 AA</u>	20141113	US20140445484	20140729
<u>US2014331868 AA</u>	20141113	US20140445571	20140729
<u>US2014335239 AA</u>	20141113	US20140445521	20140729
<u>US8808775 BB</u>	20140819	US20110017459	20110131
<u>US9790076 BB</u>	20171017	US20140332856	20140716
<u>WO11094677 A2</u>	20110804	WO2011US23157	20110131
<u>WO11094677 A3</u>	20111103	WO2011US23157	20110131
<u>WO13019963 A2</u>	20130207	WO2012US49356	20120802
<u>WO13019963 A3</u>	20130510	WO2012US49356	20120802

Probable Assignee: BEDFORD SYSTEMS LLC

Assignee(s):^(std): ANGOTTI MARC ; BEDFORD SYSTEMS LLC ; CAMPBELL NEIL LESTER ; CARROLL RAY ; COHEN MARK ; CHAN WAI ; CONSOLI FRANK ; DOBSON BARRY ; COHEN MARK JOSEPH ; COVEY CHRIS ; CAUWOOD PETER ; CHAN WAI TING ; GULLA SHAWN ; GREEN MOUNTAIN COFFEE ROASTERS INC ; HEMBER MILES WILLIAM NOEL ; JONES ROSS ; HARTLEY KEVIN ; ESTABROOK RICHARD ; HEWITT JIM ; JONES ROSS PETER ; HEMBER MILLES WILLIAM NOEL ; GRUBB SCOTT ; JACKSON THOMAS BATES ; HUOT CARLSON JENNIFER CAITLIN ; KEURIG GREEN MOUNTAIN INC ; MOTTRAM NIAL ALLAN ; MARTINEZ NICOLAS ALEJANDRO ; THOMPSON KEITH ; ROACH CHRIS ; MOTTRAM NIAL ALLAN ; O PREY CORMAC ; SCHMITT FABIEN YANNICK ; KILBY CHARLES FRAZER ; STACEY GARY ; SCHMITT CAMILLA ; ROLLINGS NICHOLAS DAVID ; WILKINS PAUL ; RICHARDSON CHRISTOPHER PAUL ; KEURIG GREEN MOUNTAIN INC ; PETERSON PETER ; PACKARD ROSS ; NOVAK THOMAS J ; KYURIG GRIN MAUNTIN INK

Assignee(s): O'PREY CORMAC ; KEURIG GREEN MOUNTAIN INC ; KEURIG GREEN MOUNTAIN INC WATERBURY ; GREEN MOUNTAIN COFFEE ROASTERS ; JPMORGAN CHASE BANK NA COLLATERAL AGENT AS

Inventor(s):^(std): ANGOTTI MARC ; BARRY DOBSON ; CAMILLA SCHMITT ; CAMPBELL NEIL LESTER ; CARLSON JENNIFER CAITLIN HUOT ; CARROLL RAY ; CAUWOOD PETER ; CHAN WAI ; CHAN WAI TING ; CHARLES FRAZER KILBY ; CHRIS COVEY ; CHRIS ROACH ; CHRISTOPHER PAUL RICHARDSON ; COHEN MARK ; COHEN MARK JOSEPH ; CONSOLI FRANK ; CORMAC O PREY ; COVEY CHRIS ; DOBSON BARRY ; ESTABROOK RICHARD ; FABIEN YANNICK SCHMITT ; FRANK CONSOLI ; GARY STACEY ; GRUBB SCOTT ; GRUBB SCOTT ; GULLA SHAWN ; HARTLEY KEVIN ; HEMBER MILES WILLIAM NOEL ; HEMBER MILLES WILLIAM NOEL ; HEWITT JIM ; HUOT CARLSON JENNIFER CAITLIN ; JACKSON THOMAS BATES ; JENNIFER CAITLIN HUOT CARLSON ; JIM HEWITT ; JONES ROSS ; JONES ROSS PETER ; KEVIN HARTLEY ; KILBY CHARLES ; KILBY CHARLES FRAZER ; MARC ANGOTTI ; MARK COHEN ; MARTINEZ NICHOLAS ALEJANDRO ; MARTINEZ NICOLAS ALEJANDRO ; MILES WILLIAM NOEL HEMBER ; MOTTRAM NIAL ALLAN ; MOTTRAM NIAL ALLAN ; NEIL LESTER CAMPBELL ; NIAL ALLAN MOTTRAM ; NICHOLAS DAVID ROLLINGS ; NICOLAS ALEJANDRO MARTINEZ ; NOVAK THOMAS J ; O PREY CORMAC ; PACKARD ROSS ; PAUL WILKINS ; PETER CAUWOOD ; PETERSON PETER ; RAY CARROLL ; RICHARD ESTABROOK ; RICHARDSON CHRISTOPHER PAUL ; ROACH CHRIS ; ROLLINGS NICHOLAS DAVID ; ROSS JONES ; SCHMITT CAMILLA ; SCHMITT FABIEN YANNICK ; SCOTT GRUBB ; STACEY GARY ; THOMAS BATES JACKSON ; THOMPSON KEITH ; WAI CHAN ; WILKINS PAUL ; WILKINS PAUL P ; WILKINS PAUL ; THOMPSON KEITH ; THOMPSON KEITH PAUL ; THOMPSON KEITH K ; THOMAS J NOVAK ; STEJSI GERI ; STACEY GARY G ; SCHMITT FABIEN YANNICK ; SHAWN GULLA ; SCHMITT FABIEN YANNICK FY ; SCHMITT CAMILLA C ; ROUGH KRIS ; ROSS PACKARD ; ROLLINGS NICHOLAS DAVID ND ; ROACH CHRIS C ; RICHARDSON KRISTOFER POL ; RICHARDSON CHRISTOPHER PAUL CP ; PETERSON PETER ; PETERSON PETER P ; PETER PETERSON ; PAKARD ROSS ; PACKARD ROSS R ; O'PREY CORMAC C ; NOVAK THOMAS DZH ; NOVAK THOMAS J

TJ ; MOTTRAM NIAL ALLAN NA ; MARTINEZ NIKOLAS ALEKHANDRO ; MARTINEZ NICOLAS ALEJANDRO NA ; KONSOLI FRANK ; KOEN MARK ; KILBY CHARLES FRAZER CF ; KILBI CHARLZ FRAZER ; KHARTLI KEVIN ; KEMPBELL NEJL LESTER ; KAVEJ KRIS ; KAUVUD PITER ; JONES ROSS R ; JACKSON THOMAS BATES TB ; HUOT CARLSON JENNIFER CAITLIN JC ; HEWITT JIM J ; HEWITT JAMES ; HEMBER MILES WILLIAM NOEL MWN ; HARTLEY KEVIN K ; GULLA SHON ; GULLA SHAWN S ; GRUBB SCOTT S ; GRABB SKOTT ; ESTABRUK RICHARD ; ESTABROOK RICHARD R ; DZHONS ROSS ; DZHEKSON TOMAS BEJTS ; DOBSON BARRY B ; DOBSON BARRI ; COVEY CHRIS C ; CONSOLI FRANK F ; COHEN MARK M ; CHAN WAI W ; CHAN UAJ ; CAUWOOD PETER P ; CAUWOOD PETER DAVID ; CARROLL RAY R ; CAMPBELL NEIL LESTER NL ; ANGOTTI MARK ; ANGOTTI MARC M ; KEITH THOMPSON ; SHMITT KAMILLA ; ROLLINGS NIKOLAS DEVID ; O PREJ KORMAK ; NOVAK THOMAS ; KHYUITT DZHIM ; KHUOT KARLSON DZHENNIFER KEJTLIN ; KHEMBER MAJLS UILYAM NOEL ; KEROLL REJ

Inventor(s): OPREY CORMAC ; PETERSON PETER WATERBURY ; PACKARD ROSS SOUTH BURLINGTON ; NOVAK THOMAS J STOWE ; GULLA SHAWN GRAND ISLE ; O'PREY CORMAC

Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; SMART AND BIGGAR; ROBIC; SARGENT AND KRAHN; HARRISON GODDARD FOOTE; BARKER ROSEMARY ANNE; HGF LTD; LEHMANN MARIA ISABEL; YKI PATENT ATTORNEYS; WOLF GREENFIELD AND SACKS PC; HOLLAND AND HART LLP; HUNT ROBERT E; HUNT ROBERT

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A23G9/20 A23L2/00 A23L2/40 A23L2/54 A47J31/40 A47J31/41 A47J31/44 B01F1/00 B01F15/02 B01F3/04 B65D85/73 B65D85/804 B65D85/816 B67D B67D1/00 B67D1/04 B67D1/07 B67D1/08 B67D3/00 F17C11/00 (Advanced/Invention);
A47J31/40 A47J31/41 B67D1/00 B67D3/00 (Core/Invention);
A23L2/54 B65D85/73 B67D1/04 (Core/Non-invention);
A23G A23L A47J B01F B67D (Subclass/Invention)

CPC: B67D1/0078 B67D1/0043 B67D1/0057 B67D1/008 B67D1/0443 B67D3/0019 Y10S261/07 B65D85/8043 B01F3/04787 B01F3/04815 B01F2215/0022 F17C11/00 B01F3/0446 A23L2/54 A47J31/407 B65D85/73 B67D1/0406 A23L2/40 A47J31/00 A47J31/44 B01F3/04 B01F3/04099 B67D2001/0812 A47J31/41 B01F3/04248 B01F3/04758 B01F3/04808 B01F5/0606 B01F5/10 B01F15/0205 B01F15/0206 Y10T137/0385

European class: A23L2/54 A47J31/40H A47J31/41 B01F15/02B6 B01F15/02B6B B01F3/04C8G

US class: 137/12.5 137/12.500P 206/0.7 261/DIG.7 426/115 426/394 426/425 426/431 426/477 426/519 426/590 99/323.2 99/323.200S

Locarno class: 20/67

[Classification Explorer](#)

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US2010251901 AA, US2010237163 AA, US2010159077 AA, US2010154906 AA, US2010139496 AA, US2010133708 AA, US2009311384 AA, US2009282987 AA, US2009212060 AA, US2008257855 AA, US2008148948 AA, US2006236871 AA, US2006049215 AA, US2006000851 AA, US2005252381 AA, US2005029287 AA, US2004238475 AA, US2004228955 AA, US2004134932 AA, US2003188540 AA, US2003080443 AA, US2002078831 AA, US1945489 A, US1889111 A, US1592395 A, US02912018, RU2306839 C2, KR20070097420 A, KR20070097420, KR200173575 Y1, KR200173575 Y, JP671149, JP6182000, JP61082000 A2, JP6071149 A2, JP6071149, JP57211691 A2, JP57211691, JP54026387 A2, JP54026387, JP53101588 A2, JP53101588, JP53101587 A2, JP53101587, JP53091181 A2, JP53091181, JP53091180 A2, JP53091180, JP5050845 U, JP50151795 A2, JP50151795, JP50050845 U1, JP4861664, JP48061664 A2, JP4201882 A2, JP3503983 T2, JP3503983, JP2008114926 A2, JP2008114926, JP2003231592 A2, JP1139128 A2, JP1133917 A2, GB2234187 A1, GB2076628 A1, GB2038953 A1, GB1143742 A, GB1051012 A, EP2531080 B1, EP1704803 A1,

DE102007001609 A1

DE102007001609, CN2647193 Y, CN1044412 A,

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Abstract:

Source: US2011226343A Systems, methods and cartridges for carbonating a precursor liquid, such as water, to form a beverage. A carbon dioxide source can be provided in a cartridge which is used to generate carbon dioxide gas that is dissolved into the precursor liquid. A beverage medium, such as a powdered drink mix or liquid syrup, may be provided in the same, or a separate cartridge as the carbon dioxide source and mixed with the precursor liquid to form a beverage. The use of one or more cartridges for the carbon dioxide source and/or beverage medium may make for an easy to use and mess-free system for making carbonated beverages, e.g., in the consumer's home.

52) Family number: 40762903 (US2007251911A)

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Title: TAMPER-EVIDENT CLOSURE WITH DIRECTIONAL MOLDED RETENTION TABS
Priority: US20060556974 20061106 US20060745924P 20060428 US20120571449 20120810
Family:

Publication number	Publication date	Application number	Application date
US2007251911 AA	20071101	US20060556974	20061106
US2012305517 AA	20121206	US20120571449	20120810
US8302794 BB	20121106	US20060556974	20061106
US8584874 BB	20131119	US20120571449	20120810
WO07127634 A2	20071108	WO2007US66692	20070416
WO07127634 A3	20081120	WO2007US66692	20070416

Probable Assignee: BERRY PLASTICS CORP

Assignee(s):^(std): RUSSELL MARK N ; BERRY PLASTICS CORP

Assignee(s): BERRY STERLING CORP ; BANK OF AMERICA NA ; BANK OF AMERICA NA ABL COLLATERAL AGENT AS ; BANK OF AMERICA NA COLLATERAL AGENT AS ; CAPTIVE PLASTICS INC ; GRAFCO IND ; LANDIS PLASTICS LLC ; SETCO LLC ; TUBED PRODUCTS LLC ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERA ; GRAFCO IND PARTNERSHIP LTD ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERAL AGENT AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AG ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AS TERM COLLAT ; WELLS FARGO BANK NA ; US BANK NATIONAL ASSOCIATION

Inventor(s):^(std): RUSSELL MARK N

Agent(s): BARNES AND THORNBURG LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class ^(IPC 8-9): [A47G19/22](#) [B65D41/34](#) [B65D51/00](#) [B65D53/00](#) ^(Advanced/Invention);
[A47G19/22](#) [B65D51/00](#) [B65D53/00](#) ^(Core/Invention)

CPC: [B65D41/0414](#) [B65D41/3423](#)

European class: [B65D41/04B1](#) [B65D41/34C](#)

US class: [215/252](#) [215/258](#) [215/344](#) [215/344S](#)

[Classification Explorer](#)

Cited documents: US8302794 BB, US7802690 BB, US7344039 BB, US6729488 BB, US6726042 BB, US6673298 BB, US6371317 BA, US6116442 A, US5618857 A, US5616418 A, US5098939 A, US5086938 A, US4984718 A, US4916184 A, US4863300 A, US4722969 A, US4710539 A, US4546892 A, US4532270 A, US4497916 A, US4314924 A, US3547851 A, US2006070973 AA, US2005189312 AA,

Forward Citations: WO17070452, WO13017810, USD747201, US9782326, US8925755, US8584874, US8231018, US2015129534, US2011100947, US2010308050, CN106494740, CN103717498,

Abstract:

Source: US2007251911A A closure is provided for connection to a container. The closure includes a cap and a tamper band. The tamper hand includes retention tabs that retain the tamper band to the container.

53) Family number: 34206361 (US2007033959A)

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Title: CRYOGENIC APPARATUS FOR CHILLING BEVERAGES AND FOOD PRODUCTS AND PROCESS OF MANUFACTURING THE SAME

Priority: US20050202866 20050812 US20070895919 20070828

Family:	Publication number	Publication date	Application number	Application date
	<u>US2007033959 AA</u>	20070215	US20050202866	20050812
	<u>US2008053117 AA</u>	20080306	US20070895919	20070828
	<u>US7260944 BB</u>	20070828	US20050202866	20050812
	<u>US7891199 BB</u>	20110222	US20070895919	20070828

Probable Assignee: ANTHONY MICHAEL

Assignee(s):^(std): ANTHONY MICHAEL ; ANTHONY MICHAEL M

Inventor(s):^(std): ANTHONY MICHAEL ; ANTHONY MICHAEL M

Agent(s): MARK D BOWEN ESQ STERNS WEAVER MILLER WEISSLER ALHADEFF AND SITTE;
MARK D BOWEN STEARNS WEAVER MILLER; MARK D; MALIN HALEY DIMAGGIO
BOWEN AND LHOTA PA

International class (IPC 8-9): B65B63/08 B65D1/04 F17C13/02 F25B45/00 F25D3/08 F25D3/10 (Advanced/Invention);
B65B63/00 B65D1/04 F17C13/00 F25D3/00 F25D3/10 (Core/Invention)

CPC: F25D3/107 B65D1/04 F17C13/02 F25D3/14 F25D31/007 F25D2331/803 F25D2331/805

European class: F25D3/10C F25D3/14 F25D31/00H2 R25D331/803 R25D331/805

US class: 220/500 220/500S 62/125 62/125P 62/294 62/294S 62/371 62/371P 62/457.3 62/457.9 62/457.900S 62/60 62/60S 62/77

[Classification Explorer](#)

Cited documents: WO9609506 A1, US7107783 BB, US7021559 BB, US6817202 BA, US6397624 BA, US6341491 BA, US6220311 BA, US6216913 BA, US6105384 A, US6102108 A, US6065300 A, US5960998 A, US5904267 A, US5845501 A, US5447039 A, US4881666 A, US4802343 A, US4735348 A, US4669273 A, US4350267 A, US4319464 A, US2005066682 AA,

Forward Citations: WO10078217, US9581375, US8117856, US7690533, US2015338152, US2013333404, US2010233343, US2010162734, US2009166378, US2008083763,

Abstract:

Source: US2007033959A Self-cooling food and beverage containers and processes for manufacturing such container0s with cryogenic high-pressure refrigerant cooling apparatus are disclosed. A self-cooling beverage container apparatus containing a beverage or other food product, a method of storing cryogenic gases which then cool said food products, and to methods of assembling and operating the apparatus. A self-cooling beverage container includes a container body having an openable portion, a pressure vessel substantially housed within said container body, the pressure vessel having a first chamber for containing a refrigerant and a charging port, an actuation valve system is configurable from a closed configuration wherein the refrigerant is maintained within the pressure vessel to an open configuration wherein said refrigerant is allowed to expand and exit the pressure vessel upon opening of said container whereby refrigerant expansion and flow through said outlet conduit cools the contents of said container.

0) US2002148400A – FLEXIBLE FLUID CONTAINMENT VESSEL

54) Family number: 30128345 (US2002148400A)

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Title: FLEXIBLE FLUID CONTAINMENT VESSEL

Priority: AU20020250511 20020405 AU20080229853 20081009 EP20020719430 20020405
 US20010908877 20010618 US20010921617 20010803 EP20020762000 20020405
 US20010832739 20010411 US20010908877 20010718 US20010621617 20010803
 WO2002US10558 20020405 US20040966525 20041015 US20040823008 20040413
 US20010923936 20010807 WO2002US10585 20020405 WO2002US10694 20020405
 WO2002US10586 20020405 WO2002US10558 20031010

Family:

Publication number	Publication date	Application number	Application date
AT316490 E	20060215	AT20020762000T	20020405
AT340129 E	20061015	AT20020762004T	20020405
AT349371 E	20070115	AT20020762001T	20020405
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Abstract:

Source: US2002148400A A seamless, woven, flexible fluid containment vessel or vessels for transporting and containing a large volume of fluid, particularly fresh water, having beam stabilizers, beam separators, reinforcing, and the method of making the same.

55) Family number: 40801303 (US2009308834A)

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Title: CAP AND COVERED CONTAINER

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 LS LT LU LV LY MA MC MD MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL
 NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG
 TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): B65D17/44 B65D41/04 B65D41/10 B65D41/28 B65D41/34 B65D47/08 B65D47/36
B65D51/18 B65D51/20 B65D51/22 (Advanced/Invention);
B65D41/10 B65D41/28 B65D41/34 B65D47/36 B65D51/18 B65D51/20 (Advanced/Non-invention);
B65D41/02 B65D41/04 B65D41/34 B65D51/18 (Core/Invention);
B65D (Subclass/Invention)

CPC: B65D47/106 B65D47/0838 B65D47/122 B65D51/228 B65D2251/0015 B65D2251/0025
B65D2251/0087

European class: B65D47/08B4C B65D47/10B B65D47/12B B65D51/22C L65D251/00Y2D L65D251/00Y2J
L65D251/00Y6J

US class: 215/253 215/256 215/257 215/329 215/48 220/277 222/541.2 222/541.5 222/541.6 222/83

[Classification Explorer](#)

Cited documents: US8235232 BB, US5482176 A, US5295518 A, US5090581 A, US4874101 A, US4793475 A, US4747501 A, US4723687, US4723687, US4662529 A, US4494663 A, US4434904 A, US4405053 A, US4402417 A, US4402415 A, US4111325 A, US2004104193 AA, US2002179605 AA, US1234567 A, KR20040096997 A, KR10200496997, JPS6197145 U, JPS5628117 Y2, JPS517356 U, JP8058816 A2, JP6293351, JP6293351, JP61097145 U1, JP61097145 U, JP61097145 U, JP56028117 Y2, JP56028117 Y2, JP55090559 U1, JP55090559 U, JP55090559 U, JP54103189 A2, JP54103189, JP51007356 U, JP50149452 U1, JP50149452 U, JP50149452 U, JP50140854 U1, JP50140854 U1, JP47041396 B4, JP47041396 B4, JP47041396 B1, JP47041396 B1, JP4189759 A2, JP4189759, JP4189755, JP4189755, JP2005088997 A2, JP2005082203 A2, JP2005082203,

Forward Citations: WO15083724, WO15004802, WO15004800, WO14115857, WO14115856, WO13114677, WO12080766, WO10149233, US9156669, US9096359, US8616400, US8496129, US2016288967, US2016244224, US2016167849, US2015353247, US2015321798, US2015034644, KR20150143815, KR20150143695, KR200480236, JP6231996, JP6177677, JP6144056, JP6108866, JP6073100, JP6057848, JP6002361, JP5916988, JP5877557, JP5801596, JP5777969, JP2015113122, JP2014162499, JP2014144780, JP2014115857, JP2014115856, JP2014069809, JP2014061943, JP2013154916, JP2013154897, JP2013028397, JP2012224375, JP2012111535, JP2012086888, JP2012071875, JP2011225220, JP2011162215, JP2010275000, JP2010274998, JP2010274977, JP2010052810, JP2010030606, ITMI20091112, EP3078603, EP2266883, CN105992742, CN105228917, CN105073596, CN104936865, CN104936865, CN104053608, CN104053608, CN103515673, CN103515673, CN102574670,

Abstract:

Source: US2009308834A Provided are a cap capable of being easily and reliably opened and unsealed, not limited in design even if an inner cap with a small diameter is used for the cap, producing no refuse after the unsealing, and not unnecessarily large in size, and a container with the cap. When an over cap (3) is rotated in the opening direction, a pair of screw threads (10a, 10b) as opening means are advanced in the direction in which they are tightened together, and this cuts off an planned opening section (4) from the inner cap (2). Thus, the cap has a relatively simple structure and can be simply and reliably unsealed by small force. Further, it is enough if the screw threads (10a, 10b) can be formed in the region of the opening, so that the structure can be applied to a cap with an inner cap with a small diameter and the design of the cap (1) is not limited. Also, the planned opening section (4) is integrated with the over cap (3) after unsealing the inner cap (2), so that no refuse is produced after the unsealing, eliminating the need to clear it away from a table.

56) Family number: 16056656 (US2003098287A)

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Title: CLOSURE CAP WITH INJECTION MOLDED ANNULAR GASKET AND METHOD OF MAKING SAME

Priority: CA20012418015 20010621 CA20012641761 20010621 KR20027004539 20010621
 US20000634182 20000809 PH20010001748 20010710 EP20010952906 20010621
 US20080115270 20080505 WO2001US41079 20020409 US20050217989 20050901
 US20030339545 20030109 WO2001US41079 20010621

Family:

Publication number	Publication date	Application number	Application date
AT453583 E	20100115	AT20010952906T	20010621
AU200173613 A1	20020218	AU20010073613	20010621
AU200173613 A5	20020218	AU20010073613D	20010621
AU784785 B2	20060622	AU20010073613	20010621
BRPI0107085 A	20020618	BR2001PI07085	20010621
BRPI0107085 B1	20130618	BR2001PI07085	20010621
CA2418015 AA	20030204	CA20012418015	20010621
CA2418015 C	20090217	CA20012418015	20010621
CA2641761 AA	20020214	CA20012641761	20010621
CA2641761 C	20111011	CA20012641761	20010621
CN1224556 C	20051026	CN20018002780	20010621
CN1398237 A	20030219	CN20018002780	20010621
CY1110277 T1	20150114	CY20101100145T	20100212
DE60140944 D1	20100211	DE20016040944	20010621
DK1307389 T3	20100503	DK20010952906T	20010621
EP1307389 A1	20030507	EP20010952906	20010621
EP1307389 A4	20060419	EP20010952906	20010621
EP1307389 B1	20091230	EP20010952906	20010621
ES2336889 T3	20100419	ES20010952906T	20010621
HK1053454 A1	20070105	HK20030105816	20030814
HU0203604 AB	20030328	HU20020003604	20010621
HU0203604 AC	20041028	HU20020003604	20010621
HU228555 B1	20130328	HU20020003604	20010621
JP2004505860 T2	20040226	JP20020517397T	20010621
JP4964391 B2	20120627	JP20020517397T	20010621
KR100916764 B1	20090914	KR20027004539	20010621
KR20020048954 A	20020624	KR20027004539	20010621
MXPA03001131 A1	20050225	MX2003PA01131	20010621
PH2007000137 A	20081103	PH20070000137	20070413
PL205329 B1	20100430	PL20010365897	20010621
PL365897 A1	20050110	PL20010365897	20010621
PT1307389 I	20100224	PT20010952906T	20010621
US2003098287 AA	20030529	US20030339545	20030109
US2005284838 AA	20051229	US20050217989	20050901
US2008272514 AA	20081106	US20080115270	20080505
US6964346 BA	20051115	US20000634182	20000809
US7367465 BB	20080506	US20050217989	20050901
US7740785 BB	20100622	US20080115270	20080505
WO0212087 A1	20020214	WO2001US41079	20010621

ZA200202735 A	20030408	ZA20020002735	20020408	

Probable Assignee: SILGAN HOLDINGS INC

Assignee(s):^(std): KRAS STEPHEN J ; SILGAN HOLDINGS INC ; WHITE CAP INC ; TABER JAMES ; WHITE CAP ; WHITE CAP INC DOWNERS GROVE

Assignee(s): WHITE CAP INC DOWNERS GROVE ILLINOIS ; AM COR WHITE CAP KO PO RAY LTD ; AMCOR WHITE CAP INC

Inventor(s):^(std): KRAS STEPHEN ; KRAS STEPHEN J ; STEVEN J KRAS ; TABER JAMES ; KRAS STEVEN B ; STEVEN B KRAS ; STEPHEN J KRAS ; JAMES TABER ; KRAS STEPHEN B

Agent(s): WRAYS; OSLER HOSKIN AND HARCOURT LLP; JORDAN VOLKER OTTO WILHELM; MASUI CHUJI; SHAMOTO ICHIO; KOBAYASHI YASUSHI; TOMITA HIROYUKI; CHIBA AKIO; ITOH SHIGERU; ROMULO ET AL; COOK ALEX MCFARRON MANZO CUMMINGS AND MEHLER LTD; COOK ALEX LTD

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

International class
(IPC 8-9): [B29C45/00](#) [B29C45/14](#) [B29C45/26](#) [B29C70/80](#) [B29D1/00](#) [B65D41/00](#) [B65D41/04](#) [B65D41/34](#) [B65D53/00](#) [B65D53/02](#) [B65D53/06](#) (Advanced/Invention); [B29B11/08](#) [B29C45/00](#) [B29C45/26](#) [B29C70/80](#) [B29L31/56](#) [B65D41/00](#) [B65D53/00](#) (Advanced/Non-invention); [B29C45/00](#) [B29C45/14](#) [B29C45/26](#) [B29C70/00](#) [B29D1/00](#) [B65D41/00](#) [B65D41/04](#) [B65D41/34](#) [B65D53/00](#) (Core/Invention); [B29B11/00](#) [B29C70/00](#) (Core/Non-invention); [B65D](#) (Subclass/Invention)

International class
(IPC 1-7): [B29C45/14](#) [B29C45/26](#) [B29L31/56](#) [B65D41/00](#) [B65D53/00](#) [B65D53/02](#)

CPC: [Y10S425/809](#) [B29C45/0025](#) [B29C45/14](#) [B29C45/14336](#) [B29C2045/0044](#) [B29C2045/14983](#) [B29L2031/26](#) [B29L2031/565](#) [B65D41/0442](#) [B65D41/045](#) [B65D41/3428](#)

European class: [B29C45/00G](#) [B29C45/14](#) [B29C45/14F](#) [B65D41/04D1](#) [B65D41/04D2](#) [B65D41/34C1](#) [L29C45/00G10](#) [L29C45/14Z10](#) [L29L31/26](#) [L29L31/56B](#)

US class: [215/252](#) [215/341](#) [215/343](#) [215/349](#) [215/349S](#) [215/352](#) [264/241](#) [264/241S](#) [264/268](#) [264/268P](#) [264/268S](#) [264/328.1](#) [264/328.12](#) [264/328.9](#) [425/127](#) [425/129.1](#) [425/542](#) [425/809](#)

[Classification Explorer](#)

Cited documents: WO0212087 A1, WO0212087, US6964346 BA, US6468455 BA, US6399170 BA, US6369155 BA, US6202871 BA, US6103170 A, US6082632 A, US5989480 A, US5839592 A, US5728484 A, US5686032 A, US5685443 A, US5021515 A, US4981231 A, US4851176 A, US4697716 A, US4311317 A, US3689625 A, US3550987 A, US3360148 A, US2823837 A, US2387439 A, JPS59107223, JPH1190961, JP9050794 A2, JP8301314 A2, JP59107223 U, JP59107223 A2, JP2205569 A2, JP1190961, JP11090961 A2, JP0950794, GB2235184 A1,

Forward Citations: WO13023742, WO06016184, WO06016184, WO06009806, USD755251, USD687299, USD632958, USD590353, USD585846, USD585392, USD585391, USD585390, USD585389, USD584697, US9650179, US9428292, US9221586, US8893906, US8777032, US8596477, US8101041, US8034272, US7969308, US7605339, US7367465, US7306108, US2015016755, US2012325768, US2011204546, US2011097431, US2011012001, US2010314025, US2009321611, US2009273121, US2008258401, US2007278232, US2007187352, US2005284838, US2005284837, US2005224447, US2005189355, JP4964391, JP2004505860, EP2562095, CN105984065, CN101992906,

Abstract:

Source: US2003098287A A closure cap and method of making the same wherein an annular or ring-shaped gasket is injection molded onto the inner surface of a cap shell formed of plastic or metal. The annular or ring-shaped gasket includes radially extending tabs integrally formed therewith, one of said tabs being formed at a location wherein the plastic melt is fed to an annular gasket-forming channel in a mold core and another of said tabs being formed at the location wherein plastic melt is discharged from said channel. Preferably, said other tab includes a cold well formation which communicates with the annular gasket through a connecting portion of reduced cross-sectional area with respect to the cross-sectional areas of both the gasket and the cold well formation.

57) Family number: 32536711 (US2009111173A)

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Title: MICRO-ORGANISM TEST APPARATUS AND METHODS OF USING THE SAME

Priority: CA20052613311 20050623 CA20152613311 20150713 EP20050757540 20050623
 NZ20040533706 20040623 WO2005NZ00139 20050623 US20070922785 20071221
 US20120351637 20120117 NZ20050588578 20050623 NZ20050596586 20050623

Family:	Publication number	Publication date	Application number	Application date
	AR049361 AA	20060719	AR2005P102589	20050623
	AU2005257683 AA	20060105	AU20050257683	20050623
	AU2005257683 BB	20110804	AU20050257683	20050623
	BRPI0512480 A	20080311	BR2005PI12480	20050623
	CA2613311 AA	20071220	CA20052613311	20050623
	CA2895994 AA	20060105	CA20052895994	20050623
	CN101061232 A	20071024	CN200580027695	20050623
	DE602005046038 D1	20150423	DE200560046038T	20050623
	EP1883706 A1	20080206	EP20050757540	20050623
	EP1883706 A4	20090909	EP20050757540	20050623
	EP1883706 B1	20150311	EP20050757540	20050623
	EP2647723 A2	20131009	EP20120184133	20050623
	EP2647723 A3	20140115	EP20120184133	20050623
	EP2647723 B1	20170201	EP20120184133	20050623
	NZ588578 A	20120330	NZ20050588578	20050623
	NZ596586 A	20120629	NZ20050596586	20050623
	TH76826 A	20060330	TH20051002914	20050623
	TW200621992 A	20060701	TW20050121098	20050623
	US2009111173 AA	20090430	US20050922785	20050623
	US2012115216 AA	20120510	US20120351637	20120117
	US8642323 BB	20140204	US20120351637	20120117
	US9260740 BB	20160216	US20050922785	20050623
	WO06001716 A1	20060105	WO2005NZ00139	20050623

Probable Assignee: ZYZEBA TESTING LIMITED

Assignee(s):^(std): ROSEMARY SHARPIN ; SHARPIN ROSEMARY KATHERINE ; SHARPIN ROSEMARY KATHERINE CAM ; SHARPIN ROSEMARY KATHERINE CAMERON ; ZYZEBA TESTING LTD

Assignee(s): PIPER JAMES WILLIAM ; ROSEMARY KATHERINE CAMERON SHARPIN ; ZYZEBA TESTING LIMITED

Inventor(s):^(std): CAM SHARPIN ROSEMARY KATHERINE ; CAMERON SHARPIN ROSEMARY KATHERINE ; PIPER JAMES WILLIAM ; SHARPIN ROSEMARY K C ; SHARPIN ROSEMARY KATHERINE CAM ; SHARPIN ROSEMARY KATHERINE CAMERON ; ZYZEBA TESTING LIMITED ; ZYZEBA TESTING LTD

Inventor(s): SHARPIN ROSEMARY KATHERINE CAMERON REMUERA ; SHARPIN ROSEMARY KC ; ROSEMARY KATHERINE CAMERON SHARPIN

Agent(s): PIPERS; PIPERS PATENT ATTORNEYS; BORDEN LADNER GERVAIS LLP; HALLAM ARNOLD VINCENT ET AL; WARD DAVID IAN; BHIMANI ALAN; YOUNG AND THOMPSON

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B01L3/00 B65D25/08 B65D51/22 C12M1/00 C12M1/24 C12M1/34 C12M3/00 C12Q1/00 C12Q1/02 C12Q1/04 C12Q1/08 G01N21/00 G01N33/00 G01N33/48 (Advanced/Invention); B01L3/00 B65D25/04 B65D51/18 C12M1/00 C12M1/24 C12Q1/00 C12Q1/02 G01N33/00 G01N33/48 (Core/Invention)

International class
(IPC 1-7): B65D25/08 B65D51/22 C12Q1/00 C12Q1/02 G01N33/00 G01N33/48

CPC: C12Q1/08 C12M23/34 C12M41/36 C12Q1/04 Y10T436/173076

European class: C12M23/32 C12M23/34 C12Q1/08

US class: 1/1 422/82.05 435/287.1 435/288.6 435/288.7 435/288.700P 436/110

[Classification Explorer](#)

Cited documents: WO9838104 A1, WO9533069 A1, WO9523026 A1, WO9002816 A1, WO06123946 A1, WO06001716 A1, WO04060766 A1, WO04009756 A1, WO0210708 A2, WO0169330 A2, WO0169329 A2, US8284772, US7912561 BB, US7781185 BB, US7313447 BB, US7229783 BB, US6985779 BB, US6849422 BA, US6783950 BB, US6730496 BB, US6653096 BA, US6597450 BA, US6509168 BB, US6472167 BA, US6387650 BA, US6372485 BA, US6329166 BA, US6287797 BA, US6148996 A, US6055050 A, US5985594 A, US5965453 A, US5827675 A, US5817475 A, US5780259 A, US5753456 A, US5728542 A, US5700655 A, US5690825 A, US5620895 A, US5620865 A, US5610029 A, US5605812 A, US5528363 A, US5523560 A, US5518892 A, US5501959 A, US5496518 A, US5429933 A, US5411867 A, US5393662 A, US5364766 A, US5292644 A, US5284772 A, US5164301 A, US5003611 A, US4925789 A, US4551766 A, US3715189 A, US3504376 A, US2005130198 AA, US2003032171 AA, US2003027206 AA, US2002031768 AA, NZ543476 A, NZ539210 A, NZ504061 A, JP9159671 A2, JP10150976 A2, FR2831182 A1, EP1358459 A2, EP0301699 A2, CA2199445 AA, CA2176895 AA,

Forward Citations: WO17008071, US9741529, US9726585, US9260740, US8642323, US2017032928, US2016121322, US2014255984, DE102014208748, DE102014208748, CN103765193, CN102435487,

Abstract:

Source: US200911173A A micro-organism testing apparatus comprising a multi-compartment resealable container provided with or adapted to receive a growth medium (97) in one compartment (83) and having a growth medium additive in another compartment (84, 85, 86), the compartments being separated by a barrier (95) whose removal or puncture will expose the medium to the additive. A barrier puncture mechanism, such as "saw tooth" shaped teeth can be used and further compartments and barrier puncture mechanisms can be used.

58) Family number: 29367095 (US5662233A)

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Title: Wine bottle closure
Priority: US19950421492 19950412 US19970908908 19970808 WO1996US04972 19960410
Family:

Publication number	Publication date	Application number	Application date
AT260825 E	20040315	AT19960912672T	19960410
AU199655402 A1	19961030	AU19960055402	19960410
AU715994 B2	20000217	AU19960055402	19960410
CA2218036 AA	19971010	CA19962218036	19960410
CA2218036 C	20070807	CA19962218036	19960410
DE69631756 D1	20040408	DE19966031756	19960410
DE69631756 T2	20050224	DE19966031756T	19960410
EP0815029 A1	19980107	EP19960912672	19960410
EP0815029 A4	20000329	EP19960912672	19960410
EP0815029 B1	20040303	EP19960912672	19960410
NZ306759 A	19990830	NZ19960306759	19960410
US5662233 A	19970902	US19950421492	19950412
US5975322 A	19991102	US19970908908	19970808
WO9632337 A1	19961017	WO1996US04972	19960410

Probable Assignee: INNOVATIVE MOLDING

Assignee(s):^(std): INNOVATIVE MOLDING ; INNOVATIVE MOLDING INC

Assignee(s): INNOVATIVE MOLDING INC A CORP OF CA ; JPMORGAN CHASE BANK NA
 COLLATERAL AGENT AS ; REID GRAHAME W ; TRIMAS CORP ; BANK OF NEW
 YORK MELLON TRUST CO NA

Inventor(s):^(std): REID GRAHAME W ; REID W ; GRAHAME W REID

Agent(s): PATENT ATTORNEY SERVICES; FINLAYSON AND SINGLEHURST

Designated states: AT AU BE CA CH DE DK ES FI FR GB GR HU IE IT LI LU MC NL NO NZ PT RU SE

International class
 (IPC 8-9): [B65D1/02](#) [B65D39/08](#) [B65D41/04](#) [B65D41/58](#) [B65D41/62](#) [B67B7/06](#) (Advanced/Invention);
[B65D1/02](#) [B65D39/00](#) [B65D41/00](#) [B65D41/04](#) [B65D41/32](#) [B67B7/00](#) (Core/Invention)

International class
 (IPC 1-7): [B65D1/02](#) [B65D39/08](#) [B65D41/04](#) [B65D41/58](#) [B65D41/62](#) [B65D45/00](#)

CPC: [B65D41/0471](#) [B65D41/58](#) [B65D41/62](#) [B65D2101/0023](#) [B67B7/06](#)

European class: [B65D41/04E](#) [B65D41/58](#) [B65D41/62](#) [B67B7/06](#) [L65D101/00A3](#)

US class: [215/217](#) [215/247](#) [215/273](#) [215/277](#)

[Classification Explorer](#)

Cited documents: US5662233 A, US5480915 A, US5455180 A, US5431305 A, US5269429 A, US5096083
 A, US5080245 A, US5071017 A, US5012942 A, US4948000 A, US4844273 A,
 US4834251 A, US4830970 A, US4812408 A, US4809858 A, US4771923 A, US4767016
 A, US4733787 A, US4664276 A, US4605135 A, US4493427 A, US4436401 A,
 US4373641 A, US4084717 A, US3946891 A, US3831796 A, US3736899 A, US3695475
 A, US3612325 A, US3589983 A, US3499568 A, US3339772 A, US2987175 A,
 US2742170 A, US1942810 A, FR2444081 A1, FR1237031 A, DE3123902 A1,
 DE2541318 A1,

Forward Citations: WO16044544, WO16015115, WO15169415, WO08046416, WO08046416, WO03099671,
 WO03068622, USD795693, USD606400, US9821930, US9763853, US9637269,
 US9382049, US9272819, US9022079, US8807363, US8714383, US8596477,
 US8573424, US8479952, US8356722, US8322573, US8307982, US8132600,
 US8056751, US8011535, US8011531, US7954521, US7426999, US7207454,
 US6929137, US6913157, US6832634, US6793972, US6763961, US6651834,
 US6588614, US6568549, US6510957, US6454126, US6341706, US5975322,

US2014014612, US2013076019, US2013075356, US2013043215, US2011253666, US2011052768, US2010252524, US2010242414, US2010176129, US2009145908, US2009032488, US2008142469, US2008107785, US2008105681, US2007194047, US2005284839, US2005233109, US2005167390, US2005092707, US2005056612, US2004238479, US2004232102, US2004232101, US2004232099, US2004206721, US2004169001, US2004164084, US2004105954, US2004031770, US2003160020, JP6143342, JP2014234184, FR2792617, EP1925561, EP1494934, EP1486428, EP0908393, CN103662300, CN103662300, AU769322, AU2003203053,

Abstract:

Source: US5662233A A wine closure replaces the traditional cork and foil and includes a gasket/stopper which engages into the neck of the bottle. Encasing the finish and upper neck of the bottle is a plastic outer closure cap, generally cylindrical, with a top center disc which is adhered to the top of the stopper. A circle of frangible elements at the periphery of the disc provide for breakage of the disc away from the sleeve, causing it to remain with the stopper when the plastic cap is opened. Coarse, short-length threads are formed on the outside of the container neck, spaced appreciably below the finish, to be engaged by internal thread lugs of the plastic cap. On initial unscrewing of the cap, the disc breaks away from the remainder of the cap. A small vertical clearance is provided in the engagement between the internal cap structure and the gasket/stopper, so that the cap does not begin to lift the gasket/stopper until static friction against the elastomeric gasket/stopper has been overcome.

59) Family number: 28219786 (US2002079280A)

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Title: Snap-on plastic neck for containers
Priority: US20000585140 20000601 US20010997847 20011130 WO2001US17556 20010531
Family:

Publication number	Publication date	Application number	Application date
AT273178 E	20040815	AT20010941727T	20010531
AU200175056 A1	20011211	AU20010075056	20010531
AU200175056 A5	20011211	AU20010075056D	20010531
AU769322 B2	20040122	AU20010075056	20010531
CA2380017 AA	20020118	CA20012380017	20010531
CA2380017 C	20080805	CA20012380017	20010531
DE60104849 D1	20040916	DE20016004849	20010531
DE60104849 T2	20050929	DE20016004849T	20010531
EP1292498 A2	20030319	EP20010941727	20010531
EP1292498 B1	20040811	EP20010941727	20010531
ES2228882 T3	20050416	ES20010941727T	20010531
JP2003534990 T2	20031125	JP20010588099T	20010531
JP4708663 B2	20110622	JP20010588099	20010531
PT1292498 T	20041130	PT20010941727T	20010531
US2002079280 AA	20020627	US20010997847	20011130
US6341706 BA	20020129	US20000585140	20000601
US6588614 BB	20030708	US20010997847	20011130
WO0192116 A2	20011206	WO2001US17556	20010531
WO0192116 A3	20020404	WO2001US17556	20010531

Probable Assignee: COLOR ACCESS INC

Assignee(s):^(std) COLOR ACCESS INC ; NEUNER CHARLES P

Inventor(s):^(std) NEUNER CHARLES P ; NEUNER P ; CHARLES P NEUNER

Agent(s): PHILLIPS ORMONDE FITZPATRICK; OSLER HOSKIN AND HARCOURT LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

International class
 (IPC 8-9): [A45D40/26](#) [B65D23/00](#) [B65D45/32](#) [B65D47/12](#) [B65D51/32](#) [B65D83/00](#) (Advanced/Invention);
[A45D40/26](#) [B65D23/00](#) [B65D83/00](#) (Advanced/Non-invention);
[B65D23/00](#) [B65D45/00](#) [B65D47/12](#) [B65D51/24](#) [B65D83/00](#) (Core/Invention);
[A45D40/26](#) (Core/Non-invention)

International class
 (IPC 1-7): [B65D1/00](#) [B65D1/02](#) [B65D23/00](#) [B65D45/00](#) [B65D47/12](#) [B65D83/00](#)

CPC: [A45D40/267](#) [B65D45/322](#) [B65D47/123](#) [B65D51/32](#)

European class: [B65D45/32A](#) [B65D47/12B1](#) [B65D51/32](#) [K45D40/26C2A](#)

US class: [215/228](#) [215/4](#) [215/40](#) [222/570](#)

[Classification Explorer](#)

Cited documents: US6341706 BA, US6253941 BA, US5938082 A, US5857579 A, US5662233 A, US5615788 A, US5562219 A, US5176278 A, US5123555 A, US4773553 A, US4582207 A, US4129236 A, US4037746 A, US3850328 A, US3840137 A, US3659736 A, JP9308524 A2, JP8207947 A2, JP59151505 A2, JP49044871 A2, FR2738550 A1,

Forward Citations:

WO09033135, WO07060350, WO07001789, US9821926, US9776350, US9414699, US9382044, US8844770, US8820552, US8763829, US8684225, US8684204, US8678211, US8668097, US8573422, US7882970, US7866496, US7207452, US7104474, US6886722, US6772893, US6588614, US2016083149, US2013020276, US2011315566, US2010327022, US2010304357, US2010294770, US2010213159, US2010000958, US2009277865, US2009266783, US2009158580, US2008296309, US2007068972, US2006151352, US2005145717, US2004232176, US2003102282, US2002100742, GB2457813, GB2457813, EP1954595,

Abstract:

Source: US2002079280A A container made from a vial-like mass produced bottle with a structurally detailed, separately molded plastic neck mounted securely thereon, and a simple method for securely mounting the plastic neck to the bottle is disclosed. The open end of the bottle has a neck with a flange forming an annular shoulder. A plastic neck insert is provided that has a threaded neck opposite a resilient sleeve. The resilient sleeve is adapted to expand to receive the flange in a snap fit type engagement. An aluminum ferrule is press fit over the resilient sleeve of the plastic neck insert to lock the plastic neck insert onto the flange. The ferrule has an upwardly directed edge that engages a downwardly directed edge of the sleeve in interference fit to lock the ferrule onto the sleeve. An elastic seal is provided between the plastic neck insert and the bottle to ensure that the connection of the two components is airtight.

60) Family number: 46546850 (US2010199611A)

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Title: SYSTEM AND METHOD FOR PRESSURIZING A PLASTIC CONTAINER**Priority:** US20090151363P 20090210 US20100702370 20100209 WO2010US23568 20100209
US20120649530P 20120521 US20130798389 20130313**Family:**

Publication number	Publication date	Application number	Application date
<u>AR078019 AA</u>	20111012	AR2010P100358	20100210
<u>AU2010213950 AA</u>	20100819	AU20100213950	20100209
<u>AU2010213950 BB</u>	20160211	AU20100213950	20100209
<u>CA2750551 AA</u>	20100819	CA20102750551	20100209
<u>CN102307786 A</u>	20120104	CN201080006944	20100209
<u>CN102307786 B</u>	20160817	CN201080006944	20100209
<u>EP2396229 A2</u>	20111221	EP20100705473	20100209
<u>IL218194 A0</u>	20120430	IL20100218194	20100209
<u>IL218194 A1</u>	20171031	IL20100218194	20100209
<u>IN02664KN2011 A</u>	20120113	IN2011KN02664	20110627
<u>JP2012517390 T2</u>	20120802	JP20110550181T	20100209
<u>JP5694961 B2</u>	20150401	JP20110550181T	20100209
<u>KR101764116 B1</u>	20170814	KR20117021418	20100209
<u>KR20110117232 A</u>	20111026	KR20117021418	20100209
<u>MX2011007479 A1</u>	20110804	MX20110007479	20100209
<u>NZ598258 A</u>	20131220	NZ20100598258	20100209
<u>RU2011137439 A</u>	20130320	RU20110137439	20100209
<u>RU2526274 C2</u>	20140820	RU20110137439	20100209
<u>SG179555 A1</u>	20120530	SG20120014049	20100209
<u>TW201032982 A</u>	20100916	TW20100104094	20100210
<u>TWI593542 B</u>	20170801	TW20100104094	20100210
<u>US2010199611 AA</u>	20100812	US20100702370	20100209
<u>US2013199130 AA</u>	20130808	US20130798389	20130313
<u>US8596029 BB</u>	20131203	US20100702370	20100209
<u>US9731850 BB</u>	20170815	US20130798389	20130313
<u>UY32434 A1</u>	20100430	UY20100032434	20100210
<u>WO10093602 A2</u>	20100819	WO2010US23568	20100209
<u>WO10093602 A3</u>	20101007	WO2010US23568	20100209
<u>WO13177150 A1</u>	20131128	WO2013US42002	20130521

Probable Assignee: PLASTIPAK PACKAGING INC**Assignee(s):^(std):** DARR RICHARD C ; PEDMO MARC ; PLASTIPAK PACKAGING INC ; PLASTIPEHK
PEHKEHDZHING INK**Assignee(s):** WELLS FARGO BANK NA ADMINISTRATIVE AGENT AS ; PLASTIPAK PACKAGING
INC US ; PEDMO MARC A**Inventor(s):^(std):** DELAGE JEAN GUY ; PEDMO MARC ; PEDMO MARC A ; DARR RICHARD C ; PEDMO
MARK ; MARC PEDMO ; DARR RICHARD K**Inventor(s):** RICHARD CDARR ; RICHARD C DARR ; DARR RICHARD**Agent(s):** DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; NORTON ROSE OR
SENCRL SRL LLP; WEISS PETER; DR SHLOMO COHEN AND CO; DYKEMA
GOSSETT PLLC; FISHMAN STEWART PLLC; GUENTHER JOHN P**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE

GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA
LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA
NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK
SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM
ZW

International class (IPC 8-9): B29C43/32 B29C43/56 B29C49/64 B29L31/56 B65B B65B1/04 B65B31/00 B65B31/04 B65B61/24 B65D6/00 B65D6/02 B67C3/04 B67C3/14 B67C3/24 (Advanced/Invention);
B29L31/56 B67C3/22 (Advanced/Non-invention);
B29C49/64 B65B1/04 B65B61/00 (Core/Invention);
B29C43/32 B29C43/56 B29L31/56 (Core/Non-invention);
B65B (Subclass/Invention)

International class (IPC 1-7): B65B61/00 B65B61/24

CPC: B65B31/00 B65B31/06 B65B31/006 B65B61/24 B67C3/045 B67C3/222 B67C2003/226

European class: B65B61/24 L67C3/22L

US class: 425/524 425/524S 425/526 425/526S 53/403 53/467 53/467P 53/471 53/79

[Classification Explorer](#)

Cited documents: WO9007451 A1, WO08004458 A1, WO07127337 A2, WO07127337, WO07080327, WO07012737 A2, US8596029 BB, US8528304 BB, US8028498 BB, US8011166 BB, US7726106 BB, US7574846 BB, US7243483 BB, US7219480 BB, US7159374 BB, US6877297 BB, US6698160 BB, US6568156 BB, US6502369 BA, US6394364 BA, US61151363, US6062408 A, US5934042 A, US5884792 A, US5826400 A, US5735420 A, US5673808 A, US5614148 A, US5540879 A, US5419866 A, US5398485 A, US5337796 A, US5281387 A, US5224586 A, US5090180 A, US4863046 A, US4595121 A, US4356681 A, US4338765 A, US4318882 A, US4293359 A, US4040233 A, US2010199611 AA, US2010018166 AA, US2009218003 AA, US2009130274 AA, US2008289299 AA, US2007157563 AA, US2007051073 AA, US2007005173, US2005121408 AA, US2004131735 AA, US2003110736 AA, US2002020149 AA, US2002004090 AA, TW200624337, JP63122517, JP60036779 U, JP3504220 T2, JP3504220, JP2008201461, JP2008178994 A2, JP2008178994, JP200813186, JP2008013186, JP2007216981, FR2896232 A1, FR2887238 A1, FR2772365 A1, DE19520925 A1, CN1318494,

Forward Citations: WO17099703, WO14005023, WO13177150, US9828130, US9731850, US9284092, US2014083059, US2013306588, US2013283729, US2013199130, TWI540081, EP2851333, DE102012017364, CN104443608,

Abstract:

Source: US2010199611A A system for manufacturing a plastic container, including a thin-walled container, includes an actuator and a base unit. The actuator may include a body portion and a holding/securing member configured to hold or secure a portion of a container. The base unit includes a heating surface and may optionally include an insert. In an embodiment, the actuator may be configured to apply a force or pressure on a container to contact the base unit, the base unit may be configured to receive a base portion of the container, and the heating surface may be configured to convey energy or heat to a portion of the base portion of said container. Embodiments of a method for providing a plastic container are also disclosed.

- **search:** SS3 TAC=(((((tamper W2 evident) or secur*) and closure) and FT=B65D and FT=(sleeve and cap and band) (Results 12)
- List: SS3 1-50 (TAC=(((((tamper W2 evident) or secur*) and closure) and FT=B65D and FT=(sleeve and cap and band)) (Results 12)

0) US4343754A – PROCESS AND APPARATUS FOR MOLDING LINERS IN CON...

1) Family number: 30141675 (US4343754A)

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Title: PROCESS AND APPARATUS FOR MOLDING LINERS IN CONTAINER CLOSURES

Priority: CA19800360433 19800917 CA19820407905 19820723 CA19820407931 19820723
 CA19860515832 19860812 EP19820106577P 19820720 JP19800502288 19800908
 EP19820106577 19820720 EP19820106577 19820720 CA19820515832 19820723
 US19810286375 19810726 US19810270241 19810604 JP19820127821 19820723
 US19830608318 19831201 US19810286375 19810724 US19820390346 19820622
 US19810310769 19811013 US19790077566 19790921 WO1980US01143 19800908
 US19790077584 19790921 WO1980US01142 19800908

Family:	Publication number	Publication date	Application number	Application date
	<u>AR226863 A1</u>	19820831	AR19800282599	19800919
	<u>AR230239 A1</u>	19840301	AR19820290077	19820723
	<u>AU198063343 A1</u>	19810414	AU19800063343	19800908
	<u>AU198063392 A1</u>	19810414	AU19800063392	19800908
	<u>AU198285551 A1</u>	19830127	AU19820085551	19820702
	<u>AU198285552 A1</u>	19830127	AU19820085552	19820702
	<u>AU538906 B2</u>	19840830	AU19800063343	19800908
	<u>AU540432 B2</u>	19841115	AU19800063392	19800908
	<u>AU556794 B2</u>	19861120	AU19820085551	19820702
	<u>AU560751 B2</u>	19870416	AU19820085552	19820702
	<u>BR8008834 A</u>	19810630	BR19800008834	19800908
	<u>BR8008835 A</u>	19810630	BR19800008835	19800908
	<u>BR8204327 A</u>	19830719	BR19820004327	19820723
	<u>BR8204330 A</u>	19830719	BR19820004330	19820723
	<u>CA1168812 A1</u>	19840612	CA19800360433	19800917
	<u>CA1190519 A1</u>	19850716	CA19820407905	19820723
	<u>CA1215206 A1</u>	19861216	CA19820407931	19820723
	<u>CA1289104 A1</u>	19910917	CA19820515832	19820723
	<u>CA1289104 A2</u>	19910917	CA19860515832	19860812
	<u>DE3070670 D1</u>	19850627	DE19803070670	19800919
	<u>DE3070923 D1</u>	19850905	DE19803070923	19800919
	<u>DE3237764 A1</u>	19830519	DE19823237764	19821012
	<u>DE3277686 D1</u>	19871223	DE19823277686	19820720
	<u>DE3279680 D1</u>	19890615	DE19823279680	19820720
	<u>DE3280195 D1</u>	19900726	DE19823280195	19820720
	<u>EP0025991 A1</u>	19810401	EP19800105619	19800919
	<u>EP0025991 B1</u>	19850731	EP19800105619	19800919
	<u>EP0026405 A2</u>	19810408	EP19800105620	19800919
	<u>EP0026405 A3</u>	19811202	EP19800105620	19800919
	<u>EP0026405 B1</u>	19850522	EP19800105620	19800919
	<u>EP0072924 A1</u>	19830302	EP19820106577	19820720
	<u>EP0072924 B1</u>	19890510	EP19820106577	19820720
	<u>EP0073334 A1</u>	19830309	EP19820106576	19820720
	<u>EP0073334 B1</u>	19871119	EP19820106576	19820720
	<u>EP0224649 A1</u>	19870610	EP19860111058	19820720
	<u>EP0224649 B1</u>	19900620	EP19860111058	19820720
	<u>ES275170 U</u>	19840201	ES19820275170U	19820723
	<u>ES275170 Y</u>	19841001	ES19820275170U	19820723

<u>ES275170 Y1</u>	19841031	ES19820275170U	19820723
<u>ES514301 A0</u>	19831201	ES19820514301	19820723
<u>ES514301 A2</u>	19831230	ES19820514301	19820723
<u>ES525302 A0</u>	19841001	ES19830525302	19830901
<u>ES525302 A2</u>	19841031	ES19830525302	19830901
<u>ES8400967 A1</u>	19840216	ES19820514301	19820723
<u>ES8500125 A1</u>	19850101	ES19830525302	19830901
<u>FR2514326 A1</u>	19830415	FR19820017157	19821013
<u>FR2514326 B3</u>	19840817	FR19820017157	19821013
<u>GB2102776 A1</u>	19830209	GB19820021566	19820726
<u>GB2102776 B2</u>	19850320	GB19820021566	19820726
<u>GB2108892 A1</u>	19830525	GB19820021565	19820726
<u>GB2108892 B2</u>	19850918	GB19820021565	19820726
<u>IT1156206 A</u>	19870128	IT19820068197	19821012
<u>IT8253786 U0</u>	19821012	IT19820053786U	19821012
<u>IT8268197 A0</u>	19821012	IT19820068197	19821012
<u>JP1500044 C3</u>	19890628	JP19820127822	19820723
<u>JP1692038 C3</u>	19920827	JP19820127821	19820723
<u>JP1752393 C3</u>	19930408	JP19870063657	19870318
<u>JP3053181 B4</u>	19910814	JP19820127821	19820723
<u>JP4022794 B4</u>	19920420	JP19870063657	19870318
<u>JP56501121 T2</u>	19810813	JP19800502226T	19800908
<u>JP56501315 T2</u>	19810917	JP19800502288T	19800908
<u>JP58030949 A2</u>	19830223	JP19820127821	19820723
<u>JP58051116 A2</u>	19830325	JP19820127822	19820723
<u>JP62122964 A2</u>	19870604	JP19860154307	19860702
<u>JP63044627 B4</u>	19880906	JP19800502288T	19800908
<u>JP63048704 B4</u>	19880930	JP19800502226T	19800908
<u>JP63048705 B4</u>	19880930	JP19820127822	19820723
<u>JP63096052 A2</u>	19880426	JP19870063657	19870318
<u>MX151062 A</u>	19840919	MX19800183841	19800908
<u>MX151733 A</u>	19850218	MX19800183842	19800908
<u>MX156662 A</u>	19880922	MX19820193741	19820726
<u>MX157545 A</u>	19881130	MX19820193643	19820719
<u>US4343754 A</u>	19820810	US19790077584	19790921
<u>US4378893 A</u>	19830405	US19810270241	19810604
<u>US4407422 A</u>	19831004	US19810310769	19811013
<u>US4418828 A</u>	19831206	US19810286375	19810724
<u>US4497765 A</u>	19850205	US19820390346	19820622
<u>US4545496 A</u>	19851008	US19830608318	19831201
<u>WO8100822 A1</u>	19810402	WO1980US01142	19800908
<u>WO8100838 A1</u>	19810402	WO1980US01143	19800908
<u>ZA8204808 A</u>	19830427	ZA19820004808	19820706
<u>ZA8205312 A</u>	19830727	ZA19820005312	19820723

Probable Assignee: HC IND

Assignee(s):^(std): HC IND

Assignee(s): H C PLASTIC INC ; H C INDUSTRIES INC ; HC IND INC ; H C PLASTIC INC A DE CORP ; H C INDUSTRIES INC CRAWFORDSVILLE IND US ; WILDE SHELDON L ; MCCANDLESS THOMAS J ; SAUNDERS ROBERT M ; EICHI SHII IND INC ; ETSUCHI SHII IND INC ; H C IND ; H C IND INC ; H C IND INC A CORP INDIANA ; H C IND INC A

CORP OF IN ; H C IND INC A CORP OF IND ; H C IND INC AN CORP

Inventor(s):^(std): SHERUDON ERU WAIRUDO ; SHIERUDON ERU WAIRUDO ; SL WILDE ; SOUNDERS ROBERT M ; THOMAS J MCCANDLESS ; TJ MCCANDLESS ; TOOMASU JEI MATSUKIYANDORES ; TOOMASU JIEI MATSUKIYANDORES ; WAIRUDO TSUERUDON ERU ; WILDE S ; WILDE SHELDON ; WILDE SHELDON L ; WILDE SL MCCANDLESS TJ SAUNDERS RM ; MCCANDLESS T ; MCCANDLESS THOMAS ; MCCANDLESS THOMAS J ; ROBAATO EMU SAUNDAAZU ; SAUNDERS R ; SAUNDERS ROBERT ; SAUNDERS ROBERT M ; SHELDON L WILDE ; SAUNDERS SHELDON L WILDE THOMA ; SAUDERS R ; MACCANDLESS T ; MCCANDLESS T J ; WILDE S L MCCANDLESS T J SAUND ; WAIRUDO SHIERUDON ERU ; WAIRUDO SHERUDON ERU ; SAUNDAAZU ROBAATO EMU ; MATSUKANDORES TOOMASU JIEI ; MATSUKANDORES TOOMASU JEI ; WILDE S L ; SAUNDERS R M ; ROBERT M SAUNDERS ; RM SAUNDERS

Inventor(s): R M SAUNDERS ; T J MCCANDLESS ; SHELDON L WILDE THOMAS J MCCANDLESSROBERT M... ; M SOUNDERS ROBERT ; L WILDE SHELDON ; WILDE S L MCCANDLESS T J SAUNDERS R M ; S L WILDE ; SHELDON WILDE THOMAS MCCANDLESS ET ROBERT SAUNDERS ; SHELDON L WILDE THOMAS J MCCANDLESSROBERT M SAUNDE

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; FETHERSTONHAUGH AND CO

Designated states: AU BR DE FR GB IT JP NL SE

International class
(IPC 8-9): B29C33/00 B29C37/00 B29C41/20 B29C43/00 B29C43/02 B29C43/14 B29C43/18 B29C43/36 B29C43/40 B29C43/42 B29C43/50 B29C53/02 B29C55/00 B29C57/00 B29C59/02 B29C63/26 B29C65/00 B29C65/56 B29C67/00 B29C69/02 B29C70/80 B29D99/00 B65D41/02 B65D41/04 B65D41/20 B65D41/34 B65D41/38 B65D41/40 B65D49/12 B65D53/00 B65D53/04 B65D53/06 B65D55/02 B65D55/08 G09F3/03 (Advanced/Invention); B29C33/00 B29C37/00 B29C43/00 B29C43/02 B29C43/18 B29C53/02 B29C55/00 B29C59/02 B29C63/26 B29C65/00 B29C65/56 B29C67/00 B29L31/56 B65D41/04 B65D53/00 G09F3/03 (Advanced/Non-invention); B29C33/00 B29C37/00 B29C43/00 B29C43/02 B29C43/14 B29C43/18 B29C43/32 B29C43/36 B29C55/00 B29C57/00 B29C59/02 B29C63/26 B29C65/00 B29C65/56 B29C67/00 B29C69/02 B29C70/00 B29D99/00 B65D41/02 B65D41/04 B65D41/32 B65D41/34 B65D49/00 B65D53/00 B65D55/02 G09F3/03 (Core/Invention); B29C43/18 B29C53/00 (Core/Non-invention)

International class
(IPC 1-7): B29C13/02 B29C27/00 B29C3/00 B29C41/20 B29C43/00 B29C43/10 B29C63/26 B29C67/00 B29D1/00 B29D3/00 B29D31/00 B29D7/16 B29D9/08 B29L31/56 B65D39/00 B65D41/02 B65D41/04 B65D41/20 B65D41/32 B65D41/34 B65D41/38 B65D41/40 B65D49/12 B65D53/00 B65D53/04 B65D53/06 B65D55/02 B65D55/08 B65D55/12 B67B3/02 G09F3/03

CPC: B65D41/3423 Y10S425/809 Y10S425/058 B29C43/361 B65D41/04 B65D41/34 B29C43/146 B26F2210/04 B29C37/0014 B29C37/0017 B29C43/18 B29C43/184 B29C53/02 B29C57/00 B29C69/02 B29C2791/001 B29C2793/009 B29L2031/56 B65D41/0407 B65D41/3428 B65D2101/0046 B65D2101/0053 B65D41/045 B29C37/0082 B29C43/021 B29C43/42 B29C59/022 B29C67/0003 B29C67/0044 B29C70/80 B29L2001/00 B29L2031/565 B65D41/0435 B65D41/3466

European class: B29C37/00B3 B29C37/00B4 B29C37/00K2 B29C43/02B B29C43/14C B29C43/36C B29C43/42 B29C57/00 B29C59/02C B29C67/00B B29C67/00K B29C69/02 B29C70/80 B65D41/04 B65D41/04B B65D41/04D B65D41/04D2 B65D41/34 B65D41/34C B65D41/34C1 B65D41/34E1 L26F210/04 L29C37/00K2 L29C43/18 L29C43/18B2 L29C53/02 L29C66/71 L29C791/00B L29C793/00J L29L1/00 L29L31/56 L29L31/56B L65D101/00A3D L65D101/00A3E

US class: 215/246 215/252 215/329 215/343 215/350 248/163.2 249/59 264/154 264/230 264/250 264/266 264/268 264/274 264/291 425/110 425/112 425/127 425/291 425/809 425/DIG.58

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Abstract:

Source: US4343754A A process for making a composite closure having a plastic cap with specially configured pedestals that are interconnected to a plastic liner. In one embodiment, the pedestals are each formed with an overhang, such as a mushroom-shaped overhang, to provide a mechanical interlock with the liner. In other embodiments, the pedestals are each formed with a fusible heat concentration zone that is fused to the liner as the liner is compression molded and heated in the cap. In one embodiment, each of the fusible pedestals are formed with a cylindrical configuration. In another embodiment, each of the fusible pedestals are formed in the shape of a pyramid.

0) US2002033374A – TAMPER EVIDENCING CLOSURE

2) Family number: 28185285 (US2002033374A)

© PatBase

Title: Tamper evidencing closure

Priority: EP20030770468 20030924 KR20007000005U 20000522 US19970904878 19970801
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Family:

Publication number	Publication date	Application number	Application date
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<u>ZA200205290 A</u>	20030410	ZA20020005290	20020702	

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; ADAMS BRIAN M ; MA MIKE X ; MA MIKE XIAOLI

Assignee(s): MA XIAOLI ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL CORP ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; WAYZATA INVESTMENT PARTNERS LLC ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AS AGENT ; WELLS FARGO FOOTHILL LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS

Inventor(s):^(std): MIKE X MA ; MA XIAOLI ; MA MIKE XIAOLI ADAMS BRIAN M ; MA MIKE X ; ADAMS BRIAN M ; XIAOLI MA ; MA MIKE XIAOLI ; BRIAN M ADAMS

Inventor(s): THE DESIGNATION OF THE INVENTOR HAS NOT YET BEEN FILED ; MA MIKE ; ADAMS BRIAN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL; DAVID J BREZNER DORSEY AND WHITNEY LLP; ADAM K SACHAROFF MUCH SHELST FREED DENENBERG AMENT AND RUBENSTEIN PC; DORSEY AND WHITNEY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B28B13/06 B28B7/10 B29C41/42 B29C45/44 B65D1/00 B65D39/00 B65D41/00 B65D41/32 B65D41/34 B65D49/12 B65D50/00 B65D51/00 B65D51/16 B65D55/02 (Advanced/Invention); B65D41/34 (Advanced/Non-invention); B65D39/00 B65D41/34 B65D50/00 B65D55/02 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B28B13/06 B28B7/10 B29C41/42 B65D0/0000 B65D1/00 B65D39/00 B65D41/00 B65D41/34 B65D50/00 B65D55/02

CPC: B65D41/3428 B29C43/42 B29C43/50 B29C45/4407 B29L2031/565 B65D41/3409 B65D2101/0046

European class: B29C43/42 B29C43/50 B29C45/44B B65D41/34A1 B65D41/34C1 L29C43/50 L29L31/56B L65D101/00A3D

US class: 215/252 215/254 215/256 215/258 215/258S 215/307 215/307S 215/329 215/344 215/344S 215/43 215/44 264/328.1 264/328.100S 264/334 264/334S

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Abstract:

Source: US2002033374A A container including a neck and an opening, in combination with a tamper-evidencing closure including a top, a depending annular skirt and a tamper-evidencing band frangibly connected to the annular skirt. The container includes a first securing structure on the neck spaced from the opening. The tamper-evidencing band includes an inwardly turned retaining rim that extends at least partially upwardly. The retaining rim has a free edge for engagement with the locking surface as the closure is removed from the neck. The retaining rim includes a plurality of outwardly directed flutes spaced circumferentially thereon and a second securing structure located on the retaining rim between the flutes.

0) US2003031386A – RECLOSABLE BAGS

3) Family number: 30377332 (US2003031386A)

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Title: RECLOSABLE BAGS

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Family:

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Inventor(s): SHEPARD WILLIAM ; G A PROVOST ; PROVOST GEORGE ; W H SHEPARD

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MUELLER-BORE AND PARTNER PATENTANWALTE; FISH AND RICHARDSON PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW

HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG
MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI
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Forward Citations: WO16096378, WO15191504, WO15179365, WO15049220, WO13178584, WO13122972, WO13122970, WO13122940, WO13057725, WO12103418, WO12103395, WO12073999, WO11137097, WO11130022, WO11130020, WO11081703, WO11081703, WO11019511, WO11019503, WO09108640, WO09072068, WO09004135, WO09004135, WO08022308, WO07046965, WO06112448, WO06061062, WO06056635, WO06005849, WO06005849, WO05082736, WO04058584, WO04058584, WO04058062, WO04014751, WO04014751, WO03004379, WO0230772, WO0230771, WO0220363, WO02074645, WO02074645, US9781980, US9776353, US9770178, US9656784, US9649792, US9586724, US9550617, US9532584, US9504295, US9487333, US9475616, US9382461, US9365326, US9346249, US9322746, US9315299, US9260214, US9254620, US9221591, US9211976, US9156224, US9126735, US9096780, US9096351, US8979370, US8900109, US8893457, US8875478, US8875356, US8858077, US8807834, US8800250, US8763890, US8727621, US8685194, US8646975, US8641278, US8622618, US8597721, US8596867, US8568031, US8550716, US8545740, US8540428, US8506165, US8470404, US8469593, US8448305, US8413306, US8398306, US8389596, US8314283, US8301458, US8231816, US8231273, US8225467, US8182407, US8167487, US8123219, US8117804, US8105638, US8069537, US8051540, US7967509, US7963007, US7946766, US7887653, US7887238, US7874731, US7857515, US7819244, US7806677, US7748200, US7681732, US7641469, US7601284, US7462313, US7458575, US7451532, US7441389, US7424796, US7406810, US7395583, US7340807, US7308783, US7305805, US7303711, US7262335, US7241255, US7217119, US7192266, US7186025, US7163706, US7032751, US6991375, US6939282, US6928657, US6756097, US6692149, US6660202, US6656403, US6544245, US6332250, US2016318666, US2016128381, US2016073717, US2016031608, US2016016692, US2015375902, US2015104614, US2014069061, US2013209004, US2013182977, US2013180345, US2013071047, US2013053710, US2012314979, US2012270712, US2012269469, US2012224795, US2012207410, US2012067374, US2012035036, US2011253289, US2011038571, US2011038570, US2011036741, US2011026855, US2010290723, US2010288394, US2010183247, US2010150477, US2010144507, US2010139217, US2010135600, US2010119180, US2010101135, US2010074562, US2010069211, US2009297071, US2009282654, US2009279813, US2009263051, US2009226119, US2009217492, US2009216371, US2009212098, US2009178945, US2009165922, US2009152139, US2009148081, US2009108519, US2009025868, US2009010735, US2008159666, US2008131035, US2008118609, US2008093241, US2008056622, US2008050247, US2008050055, US2008050052, US2008044114, US2008002919, US2008000200, US2007264469, US2007242905, US2007190194, US2007140600, US2007127850, US2007104395, US2007102106, US2007101557, US2007062161, US2007029695, US2007021284, US2006263463, US2006249870, US2006226571, US2006200107, US2006177158, US2006168776, US2006162289, US2006162288, US2006117537, US2006071417, US2006066002, US2006062496, US2006023974, US2006003879, US2005286817, US2005186387, US2005181352, US2005166372, US2005151293, US2005117819, US2005078891, US2005051567, US2004181156, US2004167456, US2004131731, US2004121694, US2004121107, US2004078869, US2004078860, US2004008909, US2004008908, US2003228078, US2003084553, US2003081864, US2003031386, US2002168120, US2002035747, US2002000488, RU2578567, RU2516477, KR20120057628, KR101654050, KR101568885, KR101494587, KR101447529, JP5952742, JP4787833, JP4787833, JP2013542147, JP2006213366, GB2393433, GB2393433, FR2939775, FR2917275, EP2829391, EP2567907, EP2535288, EP2371527, EP2351691, EP2340790, EP2202173, EP2172385, EP2067710, EP1832524, EP1829789, EP1785052, EP1783063, EP1720775, EP1689259, EP1686061, EP1677639, EP1640133, EP1594752, EP1464585, DE102011053275, DE102004056043, DE10121525, CN105764664, CN104995011, CN103231846, CN102958396, CN102958396, CN102947192, CN102947092, CN102947092, CN102548869, CN102548860, CN102548859, CN102548859, AU2013221766, AU2012211147, AU2010282895, AU2010282811, AU2008270170, AU2008270170, AU2002317292,

Abstract:

Source: US2003031386A A reclosable bag has a closure including first and second fastener strips. The first fastener strip includes a strip form base having an array of discrete hook fastener elements integrally molded with and extending from the base. The second fastener strip includes loop elements engageable by the hook fastener elements. The polyethylene bases of the fastener strips are welded directly to the body of the mailer, which is formed of a coextrusion of polyethylene materials. One of the fastener strips is unattached to the bag body along most of its length, so as to avoid undesired opening by shifting of bag contents. The bag is useful as an interoffice mailing envelope, for example.

0) US2004182814A – CLOSURE CAP COOPERATING WITH A BOTTLE CONTAINER...

4) Family number: 24022795 (US2004182814A)

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Title: CLOSURE CAP COOPERATING WITH A BOTTLE CONTAINER
Priority: DE20011021448 20010205 DE20011021448 20010502 DE20025001791 20020419
WO2002EP04339 20020419

Family:	Publication number	Publication date	Application number	Application date
	AT284818 E	20050115	AT20020735273T	20020419
	BRPI0209328 A	20040720	BR2002PI09328	20020419
	CA2445854 AA	20031029	CA20022445854	20020419
	DE10121448 A1	20021107	DE20011021448	20010502
	DE50201791 D1	20050120	DE20025001791	20020419
	EP1383688 A1	20040128	EP20020735273	20020419
	EP1383688 B1	20041215	EP20020735273	20020419
	ES2233823 T3	20050616	ES20020735273T	20020419
	HU0400086 AB	20040428	HU20040000086	20020419
	HU0400086 AC	20051128	HU20040000086	20020419
	HU228664 B1	20130528	HU20040000086	20020419
	MXPA03009951 A1	20040630	MX2003PA09951	20020419
	PL199463 B1	20080930	PL20020366849	20020419
	PL366849 A1	20050207	PL20020366849	20020419
	PT1383688 T	20050531	PT20020735273T	20020419
	US2004182814 AA	20040923	US20040476629	20040510
	US7334694 BB	20080226	US20040476629	20040510
	WO02087984 A1	20021107	WO2002EP04339	20020419
	WO02087984 B1	20030109	WO2002EP04339	20020419

Probable Assignee: ALPLA WERKE ALWIN LEHNER GMBH AND CO KG

Assignee(s):^(std): ALPLA WERKE ; ALPLA WERKE ALWIN LEHNER GMBH AND CO KG ; SUFFA UDO

Assignee(s): ALPLA WERKE ALWIN LEHNER GMBH U CO KG ; ALPLA WERKE ALWIN LEHNER GMBH UND CO KG ; ALPLA WERKE ALWIN LEHNER GMBH AND CO KG ; ALPLA WERKE ALWIN LEHNER GMBH ; ALPLA WERKE ALWIN LEHNER GMBH AND CO HARD KG ; ALPLA WERKE ALWIN LEHNER GMBH AND CO KG HARD

Inventor(s):^(std): UDO SUFFA ; SUFFA UDO

Agent(s): MCCARTHY TETRAULT LLP; FARBER MARTIN A; MARTIN A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class
(IPC 8-9): [B65D41/17](#) [B65D50/04](#) [B65D55/02](#) (Advanced/Invention);
[B65D41/02](#) [B65D50/00](#) (Core/Invention)

International class
(IPC 1-7): [B65D41/04](#) [B65D41/17](#) [B65D41/26](#) [B65D41/34](#) [B65D47/26](#) [B65D50/04](#) [B65D50/10](#)
[B65D55/02](#)

CPC: [B65D50/046](#)

European class: [B65D50/04F2](#)

US class: [215/212](#) [215/213](#) [215/215](#) [215/216](#) [215/218](#) [215/219](#)

[Classification Explorer](#)

Cited documents: WO0128868 A2, USD357557 S1, US7100785 BA, US6763965 BB, US6609637 BA, US6431381 BA, US6361004 BA, US6357615 BA, US6152315 A, US6036036 A,

US5927526 A, US5915576 A, US5836466 A, US5711442 A, US5706962 A, US5687863 A, US5671853 A, US5657905 A, US5247877 A, US5147053 A, US4948002 A, US4921119 A, US4756435 A, US4313612 A, US4197796 A, US4134513 A, US4117945 A, US3885700 A, US2249832 A, US2004187698 AA, US2004113032 AA, US2003183633 AA, DE19824714 A1,

Forward Citations: WO16188588, WO12170731, WO12022475, USD801172, US9771190, US9371165, US9320862, US9045265, US8651304, US8479935, US8444610, US8286811, US8245880, US8123057, US8052016, US8051999, US7866497, US7854352, US7762419, US7563256, US7007523, US2014350492, US2012187074, US2012085778, US2010243598, US2010145287, US2009277912, US2009223985, US2009184122, US2007278174, US2007233020, US2006191959, US2005144992, CN103702926, CN103702926, AU2004218872,

Abstract:

Source: US2004182814A The invention relates to a closure cap (1) which cooperates with a bottle container (4). A catching protection (5) is disposed on the neck (3) of the bottle container (4) and a lower-engaging projection (6') is disposed on the closure cap (1). An insert (2) is associated with the closure cap (1). Said insert (2) can be fixed to the neck (3) of the bottle, resulting in a structurally advantageous, functionally reliable solution whereby the insert (2) is provided with means (22, 26) for rotationally secure retention on the neck (3) of the bottle and the closure cap (1) which can be pressed onto said insert (2) can be unscrewed from the insert (2).

5) Family number: 20746130 (US2003000908A)

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Title: Security closure for bottles of liquor and the like
Priority: EP20000830142 20000228 KR20027009837 20020731 WO2001EP01969 20010221
 WO2001EP01969 20020731

Family:	Publication number	Publication date	Application number	Application date
	AU2001252141 AA	20010912	AU20010252141	20010221
	BRPI0108731 A	20021105	BR2001PI08731	20010221
	CN1125757 C	20031029	CN20018004346	20010221
	CN1396880 A	20030212	CN20018004346	20010221
	DE60009445 D1	20040506	DE20006009445	20000228
	DE60009445 T2	20050324	DE20006009445T	20000228
	EP1127803 A1	20010829	EP20000830142	20000228
	EP1127803 B1	20040331	EP20000830142	20000228
	ES2219292 T3	20041201	ES20000830142T	20000228
	KR100740374 B1	20070716	KR20027009837	20010221
	KR20020079817 A	20021019	KR20027009837	20010221
	MXPA02008358 A1	20021213	MX2002PA08358	20010221
	PL195996 B1	20071130	PL20010366069	20010221
	PL366069 A1	20050124	PL20010366069	20010221
	RU2002125512 A	20040320	RU20020125512	20010221
	RU2258648 C2	20050820	RU20020125512	20010221
	US2003000908 AA	20030102	US20020226548	20020823
	US6619492 BB	20030916	US20020226548	20020823
	WO0164539 A1	20010907	WO2001EP01969	20010221

Probable Assignee: GUALA CLOSURES SPA

Assignee(s):^(std): BATTEGAZZORE PIERO ; GUALA CLOSURES SPA

Assignee(s): GUALA CLOSURES S P A ; GUALA CLOSURES S P A ALESSANDRIA

Inventor(s):^(std): BATTEGADZORE P ERO ; BATTEGAZZORE PIERO

Inventor(s): PIERO BATTEGAZZORE ; BATTEGADZORE P'ERO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

International class
 (IPC 8-9): [B65D49/04](#) (Advanced/Invention);
[B65D49/04](#) (Advanced/Non-invention);
[B65D49/00](#) (Core/Invention)

International class
 (IPC 1-7): [B65D47/02](#) [B65D49/04](#)

CPC: [B65D49/04](#)

European class: [B65D49/04](#)

US class: [215/2](#) [215/20](#) [215/21](#) [215/252](#) [215/263](#) [215/28](#) [215/312](#) [215/321](#) [222/152.1](#) [222/153.09](#)
[222/541.5](#)

[Classification Explorer](#)

Cited documents: WO9601216 A2, US6454126 BA, US6276544 BA, US5740932 A, US5611443 A, US5246124 A, US5131549 A, US4700859 A, US4458817 A, US4382520 A, US3850328 A, GB2302867 A1,

Forward Citations: WO12134414, WO12134413, WO05110882, WO04089776, WO04078613, USD613163, USD542657, USD541155, US9346591, US9145240, US8931654, US8668099, US8448604, US8132685, US8091727, US7681492, US7398890, US7207452, US7140519, US7124905, US7124905, US7117818, US6981600, US6908013, US6776314, US6758165, US2016347520, US2015158622, US2015090714, US2014319178, US2011031209, US2010282174, US2010206874, US2009173283, US2009145872, US2009120934, US2009084804, US2007144998, US2007090131, US2007062375, US2006102584, US2005115915, US2005109283, US2005040130, US2004129729, US2003233986, US2003150191, US2003021919, RU2550904, KR100884650, ES2257141, EP2564693, EP1659073, EP1659071, EP1659071, EA015739, CN106458380, CN105480551, BG65696, AU2005209675,

Abstract:

Source: US2003000908A The present invention relates to a security closure for bottles for liquor and the like having a neck, comprising a stopper cap having an end wall, a skirt, and a longitudinal axis X-X perpendicular to said end wall of the stopper cap, a security seal attached to said skirt, a groove in the outer surface of said neck axially positioned onto said neck, said sleeve being provided with an upper edge and said upper edge snap-fitting into said groove of the neck, stop means on said skirt radially extending towards said longitudinal axis X-X, said stop means providing a bearing surface for an abutment present on said sleeve.

0) US2006180643A – BAG IN BOX (BIB)

6) Family number: 32195967 (US2006180643A)

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Title: BAG IN BOX (BIB)

Priority: GB20030014815 20030625 GB20040003439 20040217 WO2004GB02609 20040617
WO2005GB00570 20050216

Family:

Publication number	Publication date	Application number	Application date
<u>AU2004251098 AA</u>	20050106	AU20040251098	20040617
<u>AU2005214140 AA</u>	20050901	AU20050214140	20050216
<u>BRPI0411912 A</u>	20060808	BR2004PI11912	20040617
<u>CA2531432 AA</u>	20051216	CA20042531432	20040617
<u>CA2556633 AA</u>	20060816	CA20052556633	20050216
<u>CN101014511 A</u>	20070808	CN200580011599	20050216
<u>CN1812916 A</u>	20060802	CN200480017818	20040617
<u>CN1812916 B</u>	20101201	CN200480017818	20040617
<u>EP1641681 A1</u>	20060405	EP20040742964	20040617
<u>EP1716054 A2</u>	20061102	EP20050708375	20050216
GB200314815 A0	20030730	GB20030014815	20030625
GB200403439 A0	20040324	GB20040003439	20040217
GB200413509 A0	20040721	GB20040013509	20040617
<u>GB2403467 A1</u>	20050105	GB20040003439	20040217
<u>GB2403467 B2</u>	20070314	GB20040003439	20040217
<u>GB2403468 A1</u>	20050105	GB20040013509	20040617
<u>IL172749 A0</u>	20060410	IL20050172749	20051222
<u>IL172749 A1</u>	20101230	IL20040172749	20040617
<u>IN00202KN2006 A</u>	20070316	IN2006KN00202	20060125
<u>IN03346CN2006 A</u>	20070622	IN2006CN03346	20060915
<u>MXPA06000279 A1</u>	20060703	MX2006PA00279	20040617
<u>MXPA06009428 A1</u>	20070321	MX2006PA09428	20050216
<u>US2006180643 AA</u>	20060817	US20040561676	20040617
<u>US2008041018 AA</u>	20080221	US20050590096	20050216
<u>US7681783 BB</u>	20100323	US20040561676	20040617
<u>WO05000705 A1</u>	20050106	WO2004GB02609	20040617
<u>WO05080219 A2</u>	20050901	WO2005GB00570	20050216
<u>WO05080219 A3</u>	20051117	WO2005GB00570	20050216
<u>ZA200600723 A</u>	20080730	ZA20060000723	20060125

Probable Assignee: INTELLECTUAL PROPERTY SHOP LTD

Assignee(s):^(std): INTELLECTUAL PROPERTY SHOP IPS LTD ; INTELLECTUAL PROPERTY SHOP LTD ; JOHN STEPHENSON ; PHILIP STEPHENSON JOHN ; STEPHENSON JOHN ; STEPHENSON JOHN H ; STEPHENSON JOHN PHILIP ; STEPHENSON JOHN THE INTERLLECT ; STEPHENSON JOHN INTERLLECT

Assignee(s): STEPHENSON JOHN INTERLLECTUAL PROPERTY SHOPSTEPHENSON JOHN INTERLLECT ; THE INTELLECTUAL PROPERTY SHOP LIMITED IPS ; STEPHENSON JOHN THE INTERLLECTUAL PROPERTY SHOPSTEPHENSON JOHN THE INTERLLECT

Inventor(s):^(std): JOHN STEPHENSON ; PHILIP STEPHENSON JOHN ; STEPHENSON JOHN H ; STEPHENSON JOHN PHILIP ; STEPHENSON JOHN

Agent(s): AHEARN FOX; PHILLIPS ORMONDE FITZPATRICK; SMITHS IP; MACRAE AND CO; REINHOLD COHN AND PARTNERS; JOHN ALEXANDER GALBREATH; WATSON INTELLECTUAL PROPERTY GROUP PLC; JOVAN N; VLADAN M; WATSON IP GROUP

PLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B31B1/84 B31B1/86 B31B1/98 B31B7/00 B65B17/00 B65B3/00 B65B3/02 B65B3/04 B65D5/46 B65D5/46B B65D5/56 B65D5/72 B65D77/04 B65D77/06 B65D77/22 (Advanced/Invention);
B31B1/74 B31B7/00 B65B17/00 B65B3/00 B65B3/04 B65D5/46 B65D5/56 B65D5/72 B65D77/00 B65D77/04 B65D77/06 B65D77/22 (Core/Invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B31B7/00 B65B3/00 B65B3/02 B65B3/04 B65D77/06 B65D77/22

CPC: B65D5/727 B65D5/46008 B65D5/4608 B65D5/46096 B65D77/22 B65B3/00 B65D77/068 B65D77/065 B65B3/02 B65B3/045 B31B50/84 B31B50/87 B31B50/98 B31B2105/00 B31B2120/408

European class: B31B1/84 B31B1/86 B31B1/98 B31B7/00 B31B7/00K B65B3/00 B65B3/02 B65B3/04B B65D5/46A B65D5/46B1 B65D5/46B2A B65D5/72F B65D77/06B2 B65D77/06B3 B65D77/22 L31B201/90J L31B201/90K1 L31B201/92B L31B217/00C2

US class: 220/495.01 229/117.3 229/117.35 53/167 53/167S 53/449 53/449P

[Classification Explorer](#)

Cited documents: WO9601766 A1, WO9419255 A1, WO9314984 A1, WO9119651 A1, WO8808401 A1, WO05080219 A3, WO05080219 A2, WO0121496 A1, US6877654 BB, US6736289 BB, US6651845 BA, US6637623 BB, US6446859 BA, US6378733 BA, US6375040 BA, US6290124 BB, US6209781 BA, US6196452 BA, US6195452 BA, US6062431 A, US6059182 A, US6053401 A, US5909841 A, US5826752 A, US5803348 A, US5803346 A, US5715992 A, US5474203 A, US5265753 A, US5156295 A, US4834255 A, US4815631 A, US4781314 A, US4696840 A, US4560090 A, US4524883 A, US4445550 A, US4386923 A, US4379455 A, US4322018 A, US4280634 A, US4209092 A, US4176748 A, US4174051 A, US4165023 A, US3599840 A, US3458084 A, US3448889 A, US3363807 A, US3349960 A, US3233817 A, US3184117 A, US3171571 A, US3100587 A, US3090526 A, US3087655 A, US3042271 A, US2973119 A, US2954901 A, US2946494 A, US2721674 A, US2412544 A, US2003160092 AA, US2002047040 AA, US2001030228 AA, US1207421 A, JP9164609 A2, JP8048376 A2, JP62206427, JP2002225941 A2, JP2002145322, JP2002012265 A2, JP2000185743 A2, JP10251417 A2, JP10147369 A2, GB959306 A, GB927866 A, GB2403467 A1, GB1207421 A, FR2624107 A1, FR2483893 A1, FR2446233 A1, FR2436082 A1, FR2371355 A1, FR2112854 A5, EP1129961 A2, EP0225677 A2, EP0053310 A1, DE9006586 U, DE89082702, DE8908270 U, DE3802793 A1,

Forward Citations: WO15187374, WO15021483, WO14066467, WO13017119, WO11124508, WO10138174, WO10047933, WO10030801, WO09068764, WO09068764, WO08155431, WO08090362, WO07133952, WO07057677, WO06051320, WO05080219, WO05080219, US785448, USD772054, USD729342, USD729341, USD727458, USD725465, USD705054, USD703529, USD691883, USD684049, USD682679, USD682093, USD671405, USD671404, USD668951, USD606863, USD602778, US9758285, US9751656, US9751548, US9725193, US9708113, US9650169, US9643768, US9637300, US9555920, US9533814, US9522773, US9498929, US9452863, US9428326, US9415997, US9211993, US9144642, US9126717, US9090362, US8991635, US8950657, US8807418, US8757440, US8746541, US8720769, US8701933, US8672184, US8627999, US8511538, US8474655, US8387817, US8365939, US8333224, US8276806, US8245844, US8091768, US8025208, US8025206, US7726503, US7708186, US7681783, US2016090289, US2015164248, US2015041494, US2014374447, US2014356488, US2014353364, US2014312107, US2014144974, US2014083061, US2014027007, US2012217265, US2012104079, US2011259916, US2011215136, US2011068034, US2011056983, US2011031243, US2010326562, US2010308053, US2010301108, US2010301106, US2010200585, US2010127057, US2010116824, US2010102112, US2010084361, US2010065581, US2008267538, US2008116206, US2008087713, US2008073317, US2006243783, NL2002235, JP6146643, JP2014122066, ITBO20110703, GB2487422, GB2420558, FR2921644, EP2189391, DE102010014481, CN106687388, CN105501669, CN105307849, CN105283309, CN105283309, CN103350898, CN103350898, CN102639405, CN102639405, CN102481999, CN102481999, AU2009307929,

Abstract:

Source: US2006180643A A bag in box container package (10) has a recessed neck piece (14)—such as a discrete insert or part—integrated with box or bag—between inner bag liner (12) and outer box carton (11), to emulate a (rigid neck) jerrycan; with optional collapse fold, pull-out spout (33) and handle (34).

7) Family number: 30939038 (WO04078612A1)

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Title: TAMPER EVIDENT CLOSURE FOR BOTTLES, PARTICULARLY FOR BOTTLES CONTAINING VALUABLE DRINKS

Priority: CO20050102643 20051007 EP20030712661 20030307 WO2003IT00141 20030307
KR20050016639 20050906 KR20057016639 20050906 WO2003IT00141 20050906

Family:	Publication number	Publication date	Application number	Application date
	AT340136 E	20061015	AT20030712661T	20030307
	AU2003217473 AA	20040928	AU20030217473	20030307
	BRPI0318168 A	20060221	BR2003PI18168	20030307
	BRPI0318168 B1	20151103	BR2003PI18168	20030307
	CN100351147 C	20071128	CN20038026112	20030307
	CN1750975 A	20060322	CN20038026112	20030307
	CO5611189 A2	20060228	CO20050102643	20051007
	DE60308556 D1	20061102	DE20036008556	20030307
	EA007129 B1	20060630	EA20050001438	20030307
	EA200501438 A1	20060224	EA20050001438	20030307
	EP1603809 A1	20051214	EP20030712661	20030307
	EP1603809 B1	20060920	EP20030712661	20030307
	ES2272957 T3	20070501	ES20030712661T	20030307
	KR100737644 B1	20070709	KR20057016639	20030307
	KR20050106501 A	20051109	KR20057016639	20030307
	MXPA05009441 A1	20051123	MX2005PA09441	20030307
	UA79550 C2	20070625	UA20050009431	20030307
	WO04078612 A1	20040916	WO2003IT00141	20030307

Probable Assignee: GUALA CLOSURES SPA

Assignee(s):^(std): BATTEGAZZORE PIERO ; GUALA CLOSURES SPA

Assignee(s): GUALA CLOSURES S P A

Inventor(s):^(std): BATTEGAZZORE PIERO ; PIERO BATTEGAZZORE

Agent(s): ERNESTO CAVELIER

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class (IPC 8-9): [B65D49/00](#) [B65D49/02](#) [B65D49/04](#) [B65D49/12](#) [B65D55/02](#) [B65D55/08](#) (Advanced/Invention);
[B65D49/00](#) [B65D55/02](#) (Core/Invention)

International class (IPC 1-7): [B65D49/02](#) [B65D49/04](#) [B65D49/12](#) [B65D55/08](#)

CPC: [B65D49/04](#) [B65D55/0863](#) [B65D49/12](#) [B65D49/02](#)

European class: [B65D49/04](#) [B65D55/08C](#)

[Classification Explorer](#)

Cited documents: US2723773 A, GB2302867 A1, FR2179622 A1, EP1238919 A1,

Forward Citations: WO08104313, WO06123961, US8453857, KR101277818, EP1964787, EP1816085, EA015240, CN102001484,

Abstract:

The invention relates to a tamper evident closure for a bottle, particularly a bottle suitable for containing valuable drinks, having a neck (5, 34, 54) which extends axially along the longitudinal axis (X-X) from the body of the bottle

(2, 31, 51), the neck (5, 34, 54) has an opening (7, 33, 56) at its free end and the closure comprises means of a threaded connection to a pouring device (6, 38, 55), the pouring device (6, 38, 55) is connected to a sleeve (17, 47, 65) arranged axially along the outer surface of said neck (5, 34, 54) having the characteristic of comprising annular means (18, 45, 70) arranged between the base of said neck (5, 34, 54) and the lower end of the sleeve (17A, 47B, 65B) and being connected by means of breakable connecting means (46, 64, 82) to said sleeve (17, 47, 65), the annular means (18, 45, 70) and said lower end (17A, 47B, 65B) of said sleeve (17, 47, 65) having respective surfaces (11A, 18E, 47C, 45I, 65C, 70D) facing towards each other and at least one of said facing surfaces (11A, 18E; 47C, 45I; 65C, 70D) of said annular means (18, 45, 70) and of said lower end (17A, 47B, 65B) being inclined relative to the longitudinal axis (X-X) of the neck (5, 34, 54), so that as a result of an axial movement of said annular means (18, 45, 70) towards said opening in said neck (5, 34, 54), breakage of said breakable means (46, 64, 82) occurs and consequent radial movement of at least one circumferential zone of said annular means (18, 45, 70).

0) US4768667A – TEAR-OFF CONTAINER CLOSURE

8) Family number: 2685388 (US4768667A)

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Title: Tear-off container closure

Priority: SE19860004926 19861117 SE19870004321 19871105 US19870038227 19870414

Family:

Publication number	Publication date	Application number	Application date
AR246040 A1	19940330	AR19870309290	19871113
AT299287 A	19911215	AT19870002992	19871112
AT394837 B	19920625	AT19870002992	19871112
AU198780874 A1	19880602	AU19870080874	19871106
AU594524 B2	19900308	AU19870080874	19871106
BE1001837 AF	19900320	BE19870001292	19871116
BRPI8706155 A	19880621	BR1987PI06155	19871116
CA1278538 A1	19910102	CA19870551753	19871113
CH675570 A	19901015	CH19870004492	19871112
CN1005704 B	19891108	CN19871007297	19871117
CN87107297 A	19880622	CN19871007297	19871117
DE3737467 A1	19880519	DE19873737467	19871105
DE3737467 C2	19900503	DE19873737467	19871105
DK162709 B	19911202	DK19870006004	19871116
DK162709 C	19920427	DK19870006004	19871116
DK600487 A	19880518	DK19870006004	19871116
DK600487 A0	19871116	DK19870006004	19871116
ES2008326 AF	19890716	ES19870003233	19871113
FI875073 A	19880518	FI19870005073	19871117
FI875073 A0	19871117	FI19870005073	19871117
FI89031 B	19930430	FI19870005073	19871117
FI89031 C	19930810	FI19870005073	19871117
FR2606746 A1	19880520	FR19870015636	19871112
FR2606746 B1	19900622	FR19870015636	19871112
GB2198422 A1	19880615	GB19870025464	19871030
GB2198422 B2	19901114	GB19870025464	19871030
GB8725464 A0	19871202	GB19870025464	19871030
GR871730 B	19880314	GR19870101730	19871112
IL84349 A0	19880429	IL19870084349	19871103
IN170356 A	19920321	IN1987MA00821	19871113
IT1223131 A	19900912	IT19870022646	19871113
IT8722646 A0	19871113	IT19870022646	19871113
JP1889235 C3	19941207	JP19870198360	19870810
JP1889243 C3	19941207	JP19870285673	19871113
JP6017142 B4	19940309	JP19870198360	19870810
JP6017143 B4	19940309	JP19870285673	19871113
JP63138956 A2	19880610	JP19870198360	19870810
JP63138957 A2	19880610	JP19870285673	19871113
KR19880006096 A	19880721	KR19870012888	19871116
KR920001349 B1	19920211	KR19870012888	19871116
MX163231 B	19920320	MX19870009298	19871113
NL8702737 A	19880616	NL19870002737	19871117

<u>NO169707 B</u>	19920421	NO19870004776	19871116	
<u>NO169707 C</u>	19920729	NO19870004776	19871116	
<u>NO874776 A</u>	19880518	NO19870004776	19871116	
<u>NO874776 A0</u>	19871116	NO19870004776	19871116	
<u>PH23696 A</u>	19890927	PH19870036064	19871112	
<u>PT86141 A</u>	19881215	PT19870086141	19871116	
<u>SE469592 B</u>	19930802	SE19870004321	19871105	
<u>SE469592 C</u>	19931125	SE19870004321	19871105	
<u>SE8604926 A0</u>	19861118	SE19860004926	19861117	
<u>SE8704321 A</u>	19880518	SE19870004321D	19871105	
<u>SE8704321 A0</u>	19871105	SE19870004321	19871105	
<u>SE8704321 L</u>	19880518	SE19870004321	19871105	
<u>US4768667 A</u>	19880906	US19870119103	19871110	

Probable Assignee: WICANDERS CLOSURES A CORP OF SWITZERLAND AG

Assignee(s):^(std): BIKANDERUSU KAPUSHIRU AB ; BITSUKANDAASU KUROOJIYAAZU AG ; MAGNUSSON SVEN AAKE ; MAGNUSSON SVEN AKE ; MAGNUSSON SVEN AOKE ; WICANDERS CLOSURES AG ; TOYO SEIKAN KAISHA LTD ; SVEN AAKE MAGNUSSON ; WICANDERS KAPSYL AB ; WICANDERS CLOSURES A G

Assignee(s): WICANDERS CLOSURES AG TE ZUG ZWITSERLAND ; TOYO SEIKAN K K ; WICANDERS CLOSURES A CORP OF SWITZERLAND AG ; WICANDERS CLOSURES AG ZUG CH

Inventor(s):^(std): SVEN AKE MAGNUSSON ; SUBENNEKE MAGUNUTSUSON ; MAGNUSSON SVEN AOKE ; MAGNUSSON S A ; MAGNUSSON SVEN AAKE ; MAGNUSSON SVEN AKE ; SVEN AAKE MAGNUSSON ; MAGNUSSON SUEN AKE ; MAGNUSSON SVEN KE ; MAGNUSSON SVEN AALE

Inventor(s): S A MAGNUSSON ; SUEN AKE MAGNUSSON ; MAGNUSSON SVEN YKE ; MAGNUSSON SVEN AKE KUNGAELV SE

Agent(s): E F WELLINGTON AND CO

International class
(IPC 8-9): B65D41/32 B65D41/40 B65D41/42 B65D41/44 B65D41/48 (Advanced/Invention);
B65D41/32 (Advanced/Non-invention);
B65D41/32 (Core/Invention)

International class
(IPC 1-7): B65D17/00 B65D41/20 B65D41/32 B65D41/40 B65D41/42 B65D41/44 B65D41/48 B65D47/36 B65D51/16 B67B3/02 B67B7/40 B67B7/52

CPC: B65D41/40

European class: B65D41/40

US class: 215/255 215/304

[Classification Explorer](#)

Cited documents: WO8203837 A1, US801281 A, US4453644 A, US4149647 A, US3976215 A, US3489308 A, US3425580 A, US3206055 A, US2046173 A, JP59051749 U1, JP57178730 A2, GB678114 A, GB343830 A, GB275491 A, FR1041035 A, DE2456695 A1, AU8333482 A1, AU497391 B2, AU3327978 A1,

Forward Citations: WO9952788, WO9733802, WO17056918, WO13081638, WO09050165, WO06012944, WO0168467, USD792742, USD772070, USD772064, USD760027, USD745399, USD745398, USD745397, USD745396, USD744833, USD730960, USD722331, USD675865, USD675527, USD671834, USD660081, USD608204, US9694953, US9649254, US9592936, US9533800, US9321562, US8720717, US8453858, US8365940, US8276773, US8061544, US7568586, US6283318, US5924739, US5415268, US5145084, US5069345, US2016207671, US2011024381, US2011017697, US2010200534, US2008283486, US2007181526, US2005189313, TWI301530, JP5030706, JP3553501, JP3176370, JP2009051557, JP1999052788, EP1621475, EP0412231, CN106232494, CN103330435, CN103330435, CN101817418, AU754441,

Abstract:

Source: US4768667A A tear-off container closure, such as a cap for sealing bottles, has an upper covering panel, a cylindrical cap skirt, a tear-off strip defined by score lines in the covering plate and cap skirt. The strip continues as (a) a tongue protruding outside the cap skirt and (b) a pulling member joined to the tongue of the

tear-off strip. The pulling member includes a connecting portion, made of plastic. This connecting portion is joined to the tongue of the tear-off strip to form a joint between tongue and connecting portion which joint is resistant to tensile and torsional stress. The outwardly directed side of the joint is also provided with a protruding spacer, the upper operative surface of which is spaced from the root of the tongue by a distance substantially less than the height of the cap skirt.

9) Family number: 29446204 (US6981600B)

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Title: TAMPER EVIDENT CLOSURE FOR BOTTLES OF QUALITY LIQUOR
Priority: IT1999MI02006 19990927 IT1999MU02006 19990927 WO2000IT00357 20000912
Family:

Publication number	Publication date	Application number	Application date
AT245575 E	20030815	AT20000964615T	20000912
AU200075536 A1	20010430	AU20000075536	20000912
AU200075536 A5	20010430	AU20000075536	20000912
BRPI0014356 A	20020611	BR2000PI14356	20000912
BRPI0014356 B1	20110517	BR2000PI14356	20000912
CN1120789 C	20030910	CN20008013410	20000912
CN1376127 A	20021023	CN20008013410	20000912
DE60004076 D1	20030828	DE20006004076	20000912
DE60004076 T2	20040415	DE20006004076T	20000912
EP1222121 A1	20020717	EP20000964615	20000912
EP1222121 B1	20030723	EP20000964615	20000912
ES2203512 T3	20040416	ES20000964615T	20000912
IN216002 B	20080331	IN2002CN00574	20020419
IT1313634 B1	20020909	IT1999MI02006	19990927
ITMI992006 A0	19990927	IT1999MI02006	19990927
ITMI992006 A1	20010327	IT1999MI02006	19990927
MXPA02003198 A1	20020930	MX2002PA03198	20000912
PL201580 B1	20090430	PL20000354326	20000912
PL354326 A1	20040112	PL20000354326	20000912
RU2002111352 A	20040227	RU20020111352	20000912
RU2232116 C2	20040710	RU20020111352	20000912
UA73323 C2	20020715	UA20020403555	20000912
US6981600 BA	20060103	US20000088373	20000912
WO0123265 A1	20010405	WO2000IT00357	20000912

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):^(std):** BATTEGAZZORE PIERO ; GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A ; GUALA CLOSURES S P A ALESSANDRIA**Inventor(s):^(std):** BATTEGAZZORE PIERO ; PIERO BATTEGAZZORE ; BATTEGAZZORE PIERO ; BATTEGATSTSOE P ERO**Inventor(s):** BATTEGATSTSOE P'ERO ; PIERO BATTEGAZZORE**Agent(s):** NOTARO AND MICHALOS PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

International class [B65D41/34](#) [B65D47/06](#) [B65D47/12](#) (Advanced/Invention);
 (IPC 8-9): [B65D41/34](#) [B65D47/06](#) [B65D47/12](#) (Core/Invention)

International class [B65D41/30](#) [B65D41/34](#) [B65D47/06](#) [B65D47/12](#) [B65D50/00](#)
 (IPC 1-7):

CPC: [B65D41/3442](#) [B65D47/123](#) [B65D2101/00](#) [B65D2101/0069](#)**European class:** [B65D41/34D](#) [B65D47/12B1](#) [L65D101/00](#) [L65D101/00A4](#)

US class: 215/230 215/252

[Classification Explorer](#)

Cited documents: WO9731838 A1, WO9106486 A2, US6619492 BB, US6439411 BA, US5740932 A, US5433331 A, US5244107 A, US5176270 A, US5105961 A, US4919285 A, US4775064 A, US4679696 A, US4133462 A, US3850328 A, US3737064 A, GB453025 A, GB2240098 A1, GB2176467 A1, GB2172273 A1, FR2490598 A1, FR2290364 A1, FR2263165 A1,

Forward Citations: WO13059332, WO09002291, WO07033686, WO07033685, USD613163, USD542657, USD541155, US9694948, US9399534, US8702663, US8453857, US2016347520, US2010178148, US2010018942, RU2613090, RU2607859, RU2604323, EP2548811, EP2006212, EP1950144, EA007668, CN103987626, CN103987626,

Abstract:

Source: US6981600B A closure particularly for a bottle for a good-quality liquor which renders the difference between an intact bottle and a wrongfully opened bottle unusually clear, comprises a pourer body of predetermined axis fixed axially and angularly to the bottle, a cap having a skirt screwed onto the pourer body, a sleeve in at least two portions extending around the bottle, and a tubular appendix forming around an extension of the skirt of the cap and extending around the sleeve in order to keep the at least tow portions juxtaposed.

10) Family number: 48953482 (CO5720987A)

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Title: TAPA DE RESINA SINTETICA, DISPOSITIVO DE CIERRE, Y BEBIDA EMBOTELLADA EN UN ENVASE SYNTHETIC RESIN CAP, CLOSING DEVICE, AND DRINK BOTTLED IN A CONTAINER (Machine translation)

Priority: CO20050128612 20051221

Publication number	Publication date	Application number	Application date
<u>CO5720987 A2</u>	20070131	CO20050128612	20051221

Probable Assignee: ALCOA CLOSURE SYSTEMS JAPAN

Assignee(s):^(std): ALCOA CLOSURE SYSTEMS JAPAN

Assignee(s): ALCOA CLOSURE SYSTEMS JAPAN LIMITED

Inventor(s):^(std): HARADA MITSU HARU ; HISANO MASATAKA ; TSUTSUMI HIROAKI

International class B65D41/04 (Advanced/Invention)
(IPC 8-9):

[Classification Explorer](#)

Abstract:

Source: CO5720987A 1.– Una tapa de resina sintetica que comprende:un cuerpo de la tapa con una placa superior y una seccion cilindrica que se extiende hacia abajo desde una periferia de la placa superior;una proyeccion circular selladora interna, formada en una superficie interior de la placa superior y que encaja en una boca del envase; y una proyeccion circular selladora del borde de la boca, formada en la superficie interior de la placa superior y que contacta un borde de la boca del envase, en donde la proyeccion selladora del borde se dobla y se deforma en la direccion radial de expansion hasta contactar el cuerpo de la tapa en el momento de asegurar la tapa de resina sintetica a la boca del envase, y en donde se provee una proyeccion de posicionamiento en la placa superior, que contacta el borde de la boca cuando la proyeccion selladora del borde se dobla y se deforma hasta contactar el cuerpo de la tapa.

Machine translation: 1.– A synthetic resin cover comprising: a body of the lid with a top plate and a cylindrical section extending downward from a periphery of the top plate, a circular projection inner seal formed in a inner surface of the top plate that fits on a container mouth, and a circular projection sealing the edge of the mouth, formed on the inner surface of the top plate and contacts an edge of the mouth of the container, where the projection Sealing the edge is bent and deformed in the radial direction of expansion to contact the body of the cap at the time to ensure the synthetic resin cap to the mouth of the container, and wherein is provided a projection of the upper plate positioning which contacts the edge of the mouth when the edge seal projection bends and deforms to contact the body of the lid.

11) Family number: 55880810 (CO6750130U)

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Title: TAPON DISPENSADOR PLUG DISPENSER (Machine translation)**Priority:** CO20120152485U 20120906

Family:	Publication number	Publication date	Application number	Application date
	<u>CO6750130 U1</u>	20130916	CO20120152485U	20120906

Probable Assignee: DUQUE RESTREPO ENRRIQUE**Assignee(s):**^(std): DUQUE RESTREPO ENRRIQUE**Inventor(s):**^(std): DUQUE RESTREPO ENRRIQUE**International class** B65D45/20 B65D45/30 B65D50/00 (Advanced/Invention)
(IPC 8-9):[Classification Explorer](#)**Abstract:**

Source: CO6750130U La invencion se trata de un tapon para botellon de agua, fabricado en polipropileno y cuenta con un diseno eficiente en su flujo, sin permitir que ocasione derrame de liquido.El diseno del tapon que disenamos, no permite que el usuario tenga contacto con la parte por la cual sale el liquido, haciendolo 100 percent higienico, esto gracias a que el ingreso del aire permite la salida del agua, lo cual se hace solo en el momento en que el usuario gira de acuerdo a la flecha (abrir?, cerrar?), de modo que solo salga el agua deseada por el usuario y sin tener contacto con el liquido, haciendolo ademas eficiente.La inyeccion del tapon se hace simultaneamente con la inyeccion del linner, lo cual permite que el sellado sea total y por lo tanto el linner hace parte del tapon. The invention is a cap for water bottle, made of polypropylene and has an efficient design in its flow, without allowing liquido.El spill cause of the cap design we design does not allow the user to have contact the part where the liquid comes out, making it 100 percent hygienic, this thanks to the entry of air allows the flow of water, which is done only when the user rotates according to the arrow (to open?, close?) so that only the desired water user without coming into contact with the liquid comes out, also making it eficiente.La injection of the cap is made simultaneously with the injection of linner, which allows the sealing is complete and therefore the linner is part of the cap.

12) Family number: 30740638 (US2007010700A)

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Title: SAFETY CONTAINERS FOR BIOLOGICALLY ACTIVE SUBSTANCES AND METHOD FOR PRODUCING SAID CONTAINER

Priority: DE20031000323 20030109 US20030438822P 20030109 US20040541692 20040109
US20060541692 20060829 WO2004EP00098 20040109

Family:	Publication number	Publication date	Application number	Application date
	AU2004203918 AA	20040729	AU20040203918	20040109
	AU2004203918 AB	20060209	AU20040203918	20040109
	BRPI0406668 A	20051220	BR2004PI06668	20040109
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	NO20053708 A	20051003	NO20050003708	20050729
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	PL377761 A1	20060220	PL20040377761	20040109
	US2007010700 AA	20070111	US20040541692	20040109
	WO04063036 A1	20040729	WO2004EP00098	20040109

Probable Assignee: BAXTER HEALTHCARE SA

Assignee(s):^(std): BAXTER HEALTHCARE SA ; BAXTER INT ; BENSMANN HUBERT ; KRANZMANN HEIKO ; MILSMANN ECKHARD ; WICHERT BURKHARD ; BAXTER INT INC

Assignee(s): BAXTER INT INCORPORATED ; BAXTER HEALTHCARE S A ; BAXTER HEALTHCARE S A WALLISELLEN ; BAXTER INTERNATIONAL INCORPORATED

Inventor(s):^(std): BURKHARD BENSMANN HUBERT KRANZ ; BURKHARD WICHERT ; KRANZMANN HEIKO ; MILSMANN ECKHARD ; WICHERT BURKHARD ; HUBERT BENSMANN ; HEIKO KRANZMANN ; ECKHARD MILSMANN ; BENSMANN HUBERT

Inventor(s): BENSMANN HUBERT KRANZMANN HEIKO MILSMANN ; BENSMANN HUBERT KRANZMANN HEIKO MILSMANN ECKHARD W

Agent(s): CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; SIM AND MCBURNEY; SENNIGER POWERS

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [B65D23/00](#) [B65D23/08](#) [B65D25/20](#) [B65D25/34](#) [G21F9/00](#) (Advanced/Invention);
[B65D23/00](#) [B65D25/00](#) [B65D25/20](#) (Core/Invention)

International class
(IPC 1-7): [A61J1/06](#) [B65B33/00](#) [B65D23/08](#) [B65D85/82](#) [F17C](#)

CPC: [B65D23/0807](#) [B65D23/0821](#) [B65D1/0215](#) [B65D41/28](#)

European class: [B65D1/02B1](#) [B65D23/08B](#) [B65D23/08B1A](#) [B65D41/28](#)

US class: [588/1](#) [588/1P](#)

[Classification Explorer](#)

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DE2424263 A1, DE2310850 A1, DE2051549 A1, DE19921303 C1, DE19728746 A1, DE10158811 A1, DE10128625 A1, CH681530,

Forward Citations: WO17158099, WO12090218, WO11046853, US9795568, US9717649, US9717648, US9713572, US9707155, US9707154, US9707153, US9700486, US9700485, US9603775, US9474688, US9428302, US9198829, US9186296, US9186295, US9149480, US9101529, US9066955, US8992980, US8920820, US8246983, US2013216742, US2013196097, US2013196094, US2013040915, US2011020434, US2009099062, US2007065498, JP2010236926, JP2008525136, EP3219305, EP1674105, AU2010307096,

Abstract:

Source: US2007010700A The invention relates to safety containers for biologically active substances, in particular cytostatic agents, said container having increased or higher fracture strength and shatterproof qualities, in addition to an uncontaminated exterior. The invention also relates to a method for producing said containers and to the use of a medium containing at least one polymer for decontaminating the exterior of a container that is filled with a biologically active substance, sealed and optionally labelled.

- **search:** SS4 TAC=(tamper and evident and closure) and IC=B65D (Results 1721)
- **List:** SS4 1–50 (TAC=(tamper and evident and closure) and IC=B65D) (Results 1721)

0) US2001000602A – SNAP–ON, SCREW–OFF CAP AND CONTAINER NECK

1) Family number: 30455912 (US2001000602A)

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Title: Snap-on, screw-off cap and container neck

Priority:

CA19912047916	19910725	EP19910309273	19911009	GB19930011495	19930603
GB19950017979	19940310	GB19940004495	19921006	GB19940023499	19921006
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Family:

Publication number	Publication date	Application number	Application date
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AU199516602 A1	19960216	AU19950016602	19950117
AU199745044 A1	19980424	AU19970045044	19970926
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<u>US5858141 A</u>	19990112	US19960721852	19960930
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<u>US5975320 A</u>	19991102	US19970853669	19970509
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<u>US6637611 BB</u>	20031028	US20020210716	20020730
<u>WO9307070 A1</u>	19930415	WO1992US08493	19921006
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<u>WO9814373 A1</u>	19980409	WO1997US17340	19970926
<u>WO9957033 A1</u>	19991111	WO1999US07951	19990412
<u>ZA9300100 A</u>	19930810	ZA19930000100	19930107

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): CAP SNAP CO ; PORTOLA PACKAGING INC

Assignee(s): WAYZATA INVESTMENT PARTNERS LLC ; WELLS FARGO FOOTHILL LLC AS AGENT ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AGENT AS ; HELLER FINANCIAL INC A DELAWARE BUSINESS TRUST ; LUCH DANIEL ; PORTOLA PACKAGING INC F K A CAP SNAP CO ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS ; REPP RICHARD E ; CAP SNAP CO A CORP OF CALIFORNIA ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; HELLER FINANCIAL INC A DE CORP

Inventor(s):^(std):

ABSOLOM ANNA ; BIETZER STEVEN H ; CHENAULT RAWSON L ; LUCH DANIEL ;
REPP RICHARD E ; WEST WILLIAM R ; KRISCHKE KURT A ; KRISCHKE KURT ;
HENSON JOHNNY S ; RICHARD E REPP ; DANIEL LUCH

Inventor(s): ANNA ABSOLOM ; RAWSON L CHENAULT ; STEVEN H BIETZER

Agent(s): SMART AND BIGGAR; DORSEY AND WHITNEY LLP

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CS CU CY CZ
DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE
KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO
NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

International class
(IPC 8-9): B29C65/00 B29C65/02 B65B7/28 B65D1/02 B65D39/00 B65D41/04 B65D41/17
B65D41/34 B65D41/46 B65D41/47 B65D41/48 B65D51/18 B65D51/20 B65D55/08
B65D77/20 B67B3/00 B67B3/20 (Advanced/Invention);
B65D77/20 (Advanced/Non-invention);
B29C65/00 B29C65/02 B65D1/02 B65D41/02 B65D41/04 B65D41/32 B65D41/34
B65D51/18 (Core/Invention);
B65D77/10 (Core/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65B7/28 B65D B65D1/02 B65D39/00 B65D41/00 B65D41/16 B65D41/17 B65D41/22
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B67B3/00 B67B3/20

CPC: B29C65/561 B29C65/58 B29C66/542 B29L2031/7158 B65D41/485 B29C66/5346
B29C66/53461 B29C66/545 B29C65/366 B29C66/72321 B29C65/3644 B29C65/3656
B29C65/368 B65D41/47 B65D51/20 B67B3/2046 B65B7/2878 B67B3/00 B67B3/20
B29C66/83423 B29C66/8322 B29C66/24221 B65D41/3409 B29C66/65 B65D1/023
B65D41/0421 B65D41/0471 B65D41/17 B65D41/34 B65D41/3404 B65D2101/0023
B65D2101/0038 B65D2101/0053 B65D2251/0015 B65D2251/0093 B65D2501/0081
B65D2577/205 B29C66/112 B29C66/131 B29C66/1122

European class: B29C65/02T4 B29C65/36B12 B29C65/36F2F B29C66/534 B29C66/65 B29C66/72321
B65B7/28F4 B65D1/02D1 B65D41/04B1A B65D41/04E B65D41/17 B65D41/34
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US class: 156/69 215/232 215/254 215/256 215/307 215/318 215/32 215/320 215/329 215/332
215/350 215/351 215/354 215/44 215/45 220/258 220/258.2 220/270 220/276 220/296
220/359 53/478 53/485 53/490

[Classification Explorer](#)

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 BE1016618, BE1016618, AU768786, AU2010202765,

Abstract:

Source: US2001000602A A tamper-evident, snap-on, screw-off closure is used with a specially shaped

container neck. The neck has double lead external threads and, below the threads, a conical wall having external ratchet teeth. The closure has an upper skirt having internal threads mating with the neck threads. A conical lower skirt is connected to the upper skirt by a plurality of frangible bridges. The lower skirt has internal ratchet teeth to mate with the neck ratchet teeth. The cap skirt threads are double pitch and slightly over 360 degrees in length. When the cap is applied to the neck it snaps on in two stages. The lower skirt has a tear tab which, when pulled, fractures the lower skirt on a vertical line. Continued pulling on the tab sequentially fractures the bridges.

0) US5213225A – CONTAINER AND CLOSURE

2) Family number: 13261905 (US5213225A)

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Title: CONTAINER AND CLOSURE

Priority:

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Probable Assignee: BEESON AND SONS LTD

Assignee(s):^(std): BEESON AND SONS LTD ; BISAN END SANZ LIMITED ; BEESON AND SONS LIMITED COMPAN

Assignee(s): BEESON AND SONS LIMITED COMPANHIA DE REINO UNIDO ; BEESON AND SONS LILIMITED ; BEESON AND SONS LIMITED ; BISAN EHND SANS LIMITED ; BEESON AND SONS LTD RICKMANSWORTH HERTFORDSHIRE GB ; BISAN EHND SANZ LIMITED ; KING WITNEY MILNER ; KING ROGER MILNER ; POWELL ROGER EDWIN ; OFFLEY RODNEY GEORGE

Inventor(s):^(std): CROSS ; KING ROGER ; KING ROGER M ; KING ROGER MILNER ; KING WITNEY M ; KING WITNEY MILNER ; OFFLEY RODNEY GEORGE ; OFFLEY RODNEY ; OFFLEY RODNEY G ; OFFLEY RODNEY GEORGE ; POWELL ROGER ; POWELL ROGER E ; POWELL ROGER EDWIN ; ROGER MILNER KING ; RODNEY GEORGE OFFLEY ; RODNI DZHORDZH OFFLEJ ; RODZHER EDVIN PAUELL ; RODZHER MILNER KING ; ROGER EDWIN POWELL

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Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; GOWLING LAFLEUR HENDERSON LLP; REINHOLD COHN AND PARTNERS

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IT JP KP KR LI LK LU MC MG ML MN MR MW NL NO PL RO RU SD SE SN SU TD TG US

International class
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B29C49/06 B65D41/34 (Advanced/Non-invention);
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US class: 205/305 205/329 205/330 205/331 215/214 215/216 215/217 215/218 215/219 215/220 215/228 215/252 215/305 215/317 215/321 215/329 215/330 215/331 215/332 215/341

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Abstract:

Source: US5213225A A container neck (14) and a container closure comprises a first thread (15) on one of the neck and the closure, a complementary second thread on the other of the neck and the closure such that the closure is moveable from fully disengaged from the neck to fully closed by turning the closure relative to the neck by less than 360 DEG, at least one stop formation (17,18) carried by said one of the neck (14) and the closure, and stop means on said other of the neck and the closure engageable with the stop formation or at least one of the stop formations to hold the closure in a closed position on the neck The arrangement of the or each stop formation (17,18), the stop means and the threads is such that the stop means is rotated past the stop formation or at least one of the stop formations (17,18) without engagement therewith when the closure is screwed on to the neck, engagement of the stop means with the stop formation or at least one of the stop formations commencing only when the closed positioned is neared.

0) US2002030031A – TAMPER EVIDENT CLOSURE

3) Family number: 34432422 (US2002030031A)

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Title: Tamper evident closure

Priority: AU1992PL03569 19920716 AU1992PL05933 19921118 IL19930106350 19930714
 EP19930915531 19930714 EP19980201802 19930714 AU19930045484 19930714
 IN1996CA00630 19960408 IN1993CA00405 19930715 NZ19930253982 19930714
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Family:

Publication number	Publication date	Application number	Application date
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<u>WO9402371 A1</u>	19940203	WO1993AU00352	19930714
<u>ZA9304880 A</u>	19940606	ZA19930004880	19930707

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Inventor(s):^(std): TANSEY CHARLES MARTIN ; DRUITT RODNEY MALCOLM

Inventor(s): CHARL'Z MARTIN TEHNSI[AU] ; RODNI MEHLKOM DRUITT[AU] ; DRUITT RODNEY MALCOLM NORTH LUFFENHAM RUTLAND LE1 58JR GB ; TANSEY CHARLES MARTIN PENSHURST NSW 2222 AU ; TANSEY CHARLES MARTAIN ; TANSEY CHARLES M ; TANSEY CHARLES ; STULZ MEINHARD ; RODNI MEHLKOM DRUITT ; RODNEY MALCOM DRUITT ; RODNEY MALCOLM DRUITT ; R M DRUITT ; DRUITT RODNEY MALCOM ; DRUITT RODNEY MALCOLM NORTH LUFFENHAM RUTLAND ; DRUITT RODNEY MALCOLM BILBURY GLOUCESTERSHIRE GB ; DRUITT RODNEY M ; DRUITT RODNEY ; CHARLES MARTIN TANSEY ; CHARL Z MARTIN TEHNSI ; C M TANSEY ; Rodney Malcolm ; Druitt

Agent(s): FB RICE; FB RICE PTY LTD; KIRBY EADES GALE BAKER; REINHOLD COHN AND PARTNERS; SANFORD TCOLB AND CO

Designated states: AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CZ DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR KZ LI LK LU MC MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SK SN TD TG UA US VN

International class
(IPC 8-9): B29C45/26 B65D41/32 B65D41/34 B65D49/12 B65D53/02 B65D55/02 H04L12/28 H04L12/46 H04L29/08 (Advanced/Invention);
B65D41/32 B65D41/34 (Advanced/Non-invention);
B65D41/34 B65D55/02 H04L12/28 H04L12/46 H04L29/08 (Core/Invention);
B65D41/32 (Core/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B29C45/00 B29C45/26 B29C45/40 B45D41/34 B65D41/04 B65D41/32 B65D41/34 B65D41/43 B65D49/12 B65D51/08 B65D51/16 B65D53/00 B65D55/02 B65D56/02

CPC: B65D41/3447

European class: B65D41/34D1

US class: 215/252 215/307 215/344 215/344S 264/328.1 264/328.100S 264/334 425/547

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Abstract:

Source: US2002030031A A container closer (10) particularly for use on screw top containers such as carbonated beverage containers, the container closure (10) having a generally cylindrical continuous tamper evident band (11) joined by a plurality of frangible bridges (13) to the free edge of a skirt (16) of the closure (10). The band (11) has a segmented internal rib (18) which engages an external retaining flange of the container when the closure (10) is applied to the container so that on removal of the closure (10) the tamper evident band (11) remains on the container or is visually clearly damaged by removal of the closure (10) from the container. The band (11) is provided with longitudinal reinforcement by projections (25 and 28) or other areas of thickening (26) to provide the band (11) with longitudinal stiffness while still permitting it to expand over the retaining flange on the container. The rib (18) has a first annular side (21), the first annular side (21) having a compound surface comprising a radially outer frusto-conical to (23) which assists in the molding of the rib (18) and a radially inner substantially planar portion (24) which increases the difficulty of removing the closure (10) intact from the container without rupturing the bridges joining the tamper evident band (11) from the remainder of the closure (10).

0) US5711443A – TAMPER-EVIDENT CONTAINER CLOSURE

4) Family number: 15938794 (US5711443A)

© PatBase

Title: Tamper-evident container closure

Priority: US19930157730 19931124 US19960697272 19960821 US20050285727 20051121
US20050285728 20051121 US19990440903 19991116 US19980014075 19980127
WO1998US01037 19980121

Family:	Publication number	Publication date	Application number	Application date
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	USRE40003 E	20080115	US20050285727	20051121
	WO9937549 A1	19990729	WO1998US01037	19980121

Probable Assignee: BENNETT PAUL H

Assignee(s):^(std): BENNETT PAUL H ; PERLMUTTER THOM M

Inventor(s):^(std): BENNETT PAUL H ; PERLMUTTER THOM M

Agent(s): STETINA BRUNDA GARRED AND BRUCKER

Designated states: AT BE CA CH DE DK ES FI FR GB GR IE IT JP LU MC NL PT SE

International class [B65D41/18](#) [B65D41/34](#) [B65D41/48](#) [B65D41/62](#) (Advanced/Invention);
(IPC 8-9): [B65D41/32](#) (Core/Invention)

International class [B65D41/48](#)
(IPC 1-7):

CPC: [B65D41/3428](#) [B65D41/62](#) [B65D2101/0038](#) [B65D41/48](#)

European class: [B65D41/34C1](#) [B65D41/62](#) [L65D101/00A3C](#)

US class: [215/251](#) [215/256](#) [215/258](#) [220/255](#) [220/256.1](#) [220/257.2](#) [220/259.4](#)

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Forward Citations: WO9951507, WO9937549, WO17079585, USRE39867, USD712738, US9782326, US9533326, US9522098, US9475624, US9428308, US9346591, US9340332, US9309019, US9254943, US9066711, US8813987, US8763830, US8550737, US8479936, US8231025, US8231019, US7882977, US7857154, US7632244, US6908013, US6796737, US6655553, US6637321, US6338425, US6332550, US6302289, US6095354, US2016166473, US2015158622, US2014310943, US2014166659, US2014166511, US2013136382, US2012223044, US2012091134, US2011303632, US2011180536, US2011155758, US2011036839, US2011024420, US2010230375, US2009294452, US2009277861, US2008264893, US2008097310, US2008093363, US2008053947, US2007181578, US2006169355, US2006006178, US2004129729, US2004126178, US2003217987, JP6068489, JP2014534136, ITMI20111812, EP3219637, DE102014011539, DE102014011539, AU2004321861,

Abstract:

Source: US5711443A A tamper-evident closure for a container includes an outer tamper-evident cap engagable over an inner container sealing cap which may form part of the tamper-evident closure or part of the container, cap retaining prongs on the outer cap which permit placement of the outer cap on the container neck over the sealing cap but prevent upward removal of the outer cap from the container, a tear strip for severing the outer cap between its upper and lower ends to permit upward removal of the upper portion of the outer cap from the container, and a circumferential rupture line along which the outer cap separates to evidence tampering if an attempt is made to forcibly remove the outer cap from the container without tearing the tear strip from the outer cap.

5) Family number: 53957536 (US2014312038A)

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Title: CLOSURE WITH TAMPER-EVIDENT STRIP**Priority:** EP20120794546 20121113 NL20112007838 20111122 WO2012NL50802 20121113
US20140358187 20140514 US20150744109 20150619**Family:**

Publication number	Publication date	Application number	Application date
<u>AU2012341129 AA</u>	20130530	AU20120341129	20121113
<u>AU2012341129 BB</u>	20170420	AU20120341129	20121113
<u>AU2012341129 CA</u>	20170713	AU20120341129	20121113
<u>BR112014012142 A2</u>	20170613	BR20141112142	20121113
<u>BR112014012142 A8</u>	20170613	BR20141112142	20121113
<u>CA2855457 AA</u>	20140509	CA20122855457	20121113
<u>DE602012008715 D1</u>	20150820	DE201260008715T	20121113
<u>EP2782842 A1</u>	20141001	EP20120794546	20121113
<u>EP2782842 B1</u>	20150708	EP20120794546	20121113
<u>ES2545052 T3</u>	20150908	ES20120794546T	20121113
<u>IN01097MN2014 A</u>	20150213	IN2014MN01097	20140603
<u>MX2014006181 A1</u>	20141208	MX20140006181	20121113
<u>MX346006 B</u>	20170221	MX20140006181	20121113
NL2007838 C	20130523	NL20112007838	20111122
<u>RU2014123776 A</u>	20151227	RU20140123776	20121113
<u>RU2624179 C2</u>	20170630	RU20140123776	20121113
<u>TR201509667 T4</u>	20150821	TR20150009667T	20121113
<u>US2014312038 AA</u>	20141023	US20120358187	20121113
<u>US2015291324 AA</u>	20151015	US20150744109	20150619
<u>US9090386 BB</u>	20150728	US20120358187	20121113
<u>US9511906 BB</u>	20161206	US20150744109	20150619
<u>WO13077732 A1</u>	20130530	WO2012NL50802	20121113

Probable Assignee: PLASTICUM NETHERLANDS BV**Assignee(s):^(std):** PLASTICUM GROUP B V ; PLASTICUM GROUP BV ; PLASTICUM NETHERLANDS BV ;
WEENER PLASTICS NETHERLANDS BV**Assignee(s):** DEN BOER SEBASTIAAN WILHELMUS JOSEPHUS ; VAN ALFEN JAN ; STEGEMAN
GERRIT JAN ; PLASTICUM NETHERLANDS BV9, ZEVENHEUVELENWEGNL-5048
ANTILBURGNL ; PUN SHI MING**Inventor(s):^(std):** ALFEN JAN ; ALFEN JAN VAN ; BOER SEBASTIAAN WILHELMUS JOSEPHUS ; BOER
SEBASTIAAN WILHELMUS JOSEPHUS DEN ; DEN BOER SEBASTIAAN WILHELMUS
JOSEPHUS ; DEN BUR SEBASTIAN VILKHELMUS JOSEFUS ; GERRIT JAN
STEGEMAN ; JAN VAN ALFEN ; PUN SHI MIN ; PUN SHI MING ; SEBASTIAAN
WILHELMUS JOSEPHUS DEN BOER ; SHI MING PUN ; STEGEMAN GERRIT JAN ;
STEGEMAN GERRIT YAN ; VAN ALFEN JAN ; VAN ALFEN YAN**Inventor(s):** VAN ALFEN JANNL ; STEGEMAN GERRIT JANNL ; PUN SHI MINGNL ; DEN BOER
SEBASTIAAN WILHELMUS JOSEPHUSNL**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; BROUILLETTE AND ASSOCIES PARTNERS;
MEISSNER BOLTE AND PARTNER GBR; EP AND C; PONTI ADELAIDA; EVIN
KAZMIRCI; HOFFMANN AND BARON LLP; HOUBEN C H W F**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE
GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA
LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA
NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK
SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM

ZW

International class B65D43/16 B65D47/08 B65D50/00 (Advanced/Invention);
(IPC 8-9); B65D50/00 (Core/Invention)

CPC: B65D47/0804 B65D2101/003 B65D43/16 B65D2101/0053 B65D50/00

US class: 1/1 220/214 220/810

[Classification Explorer](#)

Cited documents: USD713724 S1, USD711231 S1, USD672654 S1, US6631820 BB, US6405885 BA, US6321923 BA, US6039197 A, US5875907 A, US4487324 A, US2010252556 AA, US2009314792 AA, US2009152269 AA, US2008257852 AA, US2008169261 AA, US2006249474 AA, US2006186077 AA, US2006043052 AA, US2005279727 AA, US2004188374 AA, US2004069806 AA, JP2007045422 A2, DE29512523 U1,

Forward Citations: USD791590, USD776541, USD776540, USD776539, US9682797, US2016236838, EP2966002,

Abstract:

Source: US2014312038A A tamper-evident dispensing closure includes a body adapted to be attached to a container and a pivotable lid which is hingedly attached to the body. A tamper-evident strip is located within the contour of the body and attached to the body by means of predetermined frangible connecting points. The tamper-evident strip is engaged or engageable by at least one locking member provided on a skirt portion of the lid, such that the lid is only pivotable to the open position when the tamper-evident strip is permanently removed. The body and the pivotable lid in the closed position define a recess in which the tamper-evident strip is received in a countersunk manner. The recess has a height which essentially corresponds to the height of the tamper evident strip such that the edges of the tamper-evident strip are essentially unreachable.

0) US2004045925A – TAMPER EVIDENT CLOSURE WITH LOCKING BAND

6) Family number: 30359630 (US2004045925A)

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Title: TAMPER EVIDENT CLOSURE WITH LOCKING BAND

Priority: EP20010306874 20010813 EP20020794765 20020809 US20020241416 20020911
 US20040775885 20040209 US20020486658 20020809 US20040957924 20041004
 US20040771614 20040204 US20040486658 20040811 WO2002EP08948 20020809
 WO2003EP10028 20030910

Family:

Publication number	Publication date	Application number	Application date
AR036260 AA	20040825	AR2002P103047	20020813
AT286478 E	20050115	AT20020794765T	20020809
AU2002333387 AA	20030303	AU20020333387	20020809
AU2002333387 BB	20080904	AU20020333387	20020809
AU2003302391 AA	20040618	AU20030302391	20030910
AU2003302391 BB	20091203	AU20030302391	20030910
BRPI0211822 A	20040831	BR2002PI11822	20020809
BRPI0211822 B1	20130122	BR2002PI11822	20020809
BRPI0314228 A	20050726	BR2003PI14228	20030910
CA2455289 AA	20040128	CA20022455289	20020809
CA2455289 C	20090505	CA20022455289	20020809
CA2497144 AA	20050225	CA20032497144	20030910
CN100396573 C	20080625	CN20038021637	20030910
CN100515876 C	20090722	CN20028015797	20020809
CN1541175 A	20041027	CN20028015797	20020809
CN1681713 A	20051012	CN20038021637	20030910
CO5560599 A2	20050930	CO20040016683	20040225
DE60202533 D1	20050210	DE20026002533	20020809
DE60202533 T2	20050602	DE20026002533T	20020809
DK1417135 T3	20050509	DK20020794765T	20020809
EP1288133 A1	20030305	EP20010306874	20010813
EP1417135 A1	20040512	EP20020794765	20020809
EP1417135 B1	20050105	EP20020794765	20020809
EP1545999 A1	20050629	EP20030808261	20030910
ES2236612 T3	20050716	ES20020794765T	20020809
IL166933 A1	20100217	IL20030166933	20030910
MA27400 A1	20050601	MA20050028201	20050406
MXPA04001374 A1	20040603	MX2004PA01374	20020809
MXPA05002803 A1	20050606	MX2005PA02803	20030910
NZ538517 A	20061027	NZ20030538517	20030910
PL202646 B1	20090731	PL20030374637	20030910
PL374637 A1	20051031	PL20030374637	20030910
PT1417135 T	20050531	PT20020794765T	20020809
RU2005110659 A	20050920	RU20050110659	20030910
RU2337865 C2	20081110	RU20050110659	20030910
TH40186 B	20140528	TH20021002992	20020813
TH55829 A	20030318	TH20021002992	20020813
TH64326 A	20040924	TH20031003381	20030910
TNSN05066 A1	20070514	TN2005SN00066	20050308
US2004045925 AA	20040311	US20020241416	20020911

US2004155006 AA	20040812	US20040775885	20040209
US2004168999 AA	20040902	US20040771614	20040204
US2005000931 AA	20050106	US20020486658	20020809
US2005072751 AA	20050407	US20040957924	20041004
US7445130 BB	20081104	US20020486658	20020809
US7451898 BB	20081118	US20040775885	20040209
US7637384 BB	20091229	US20040957924	20041004
WO03016161 A1	20030227	WO2002EP08948	20020809
WO04048220 A1	20040610	WO2003EP10028	20030910

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH

Assignee(s):^(std): BOSL UDO ; CROWN CORK AND SEAL TECH CORP ; CROWN CORK AND SEAL TECHNOLOGI ; SEIDITA THOMAS M ; METAL BOX PLC ; HABERSAAT PATRICK ; CROWN PACKAGING TECHNOLOGY INC ; CROWN PACKAGING TECHNOLOGY ; OBRIST CLOSURES SWITZERLAND ; OBRIST KLOUZHERZ SVITZERLAND G

Assignee(s): BOESL UDO ; PRICE MICHAEL L ; CROWN OBRIST GMBH ; OBRIST KLOUZHERZ SVITZERLAND GMBKH ; OBRIST CLOSURES SWITZERLAND GMBH ; CROWN CORK AND SEAL TECHNOLOGIES CORP ; CROWN CORK AND SEAL TECHNOLOGIES ; CARNAUDMETALBOX PLC ; CITICORP NORTH AMERICA INC ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS

Inventor(s):^(std): BOESL UDO ; HABERSAAT PATRICK ; PATRICK HABERSAAT ; PRICE MICHAEL L ; SEIDITA THOMAS M ; HABERSAAT P ; BOSL U ; SEJDITA TOMAS M ; BOSL UDO ; UDO BOSL

Inventor(s): U BOSL ; P HABERSAAT ; THOMAS M SEIDITA ; SEIDITA THOMAS ; PRICE MICHAEL

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FETHERSTONHAUGH AND CO; REINHOLD COHN AND PARTNERS; VINCENT L RAMIK DILLER RAMIK AND WIGHT; KNOBLE YOSHIDA AND DUNLEAVY; KNOBLE YOSHIDA AND DUNLEAVY LLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [B65D39/00](#) [B65D41/04](#) [B65D41/34](#) (Advanced/Invention);
[B65D39/00](#) [B65D41/04](#) [B65D41/34](#) (Core/Invention)

International class
(IPC 1-7): [A61J1/03](#) [B65B7/28](#) [B65D41/04](#) [B65D41/34](#) [B65D41/43](#) [B65D55/02](#)

CPC: [B65D41/3428](#)

European class: [B65D41/34C1](#)

US class: [215/201](#) [215/252](#) [215/253](#) [215/258](#) [215/330](#) [215/44](#) [222/253](#) [222/258](#)

[Classification Explorer](#)

Cited documents: WO9111369 A1, WO03016161 A1, WO0151375 A1, WO0034133 A2, USD48033 S1, USD470413 S1, US928872 A, US6872227 BB, US6802807 BB, US6691711 BB, US6685629 BB, US6638211 BB, US6638210 BB, US6638209 BB, US6612977 BB, US6605097 BA, US6596001 BB, US6557714 BB, US6530943 BA, US6484896 BB, US6478727 BB, US6475139 BA, US6464093 BA, US6423080 BA, US6382443 BA, US6276543 BA, US6273852 BA, US6264676 BA, US6213321 BA, US6200330 BA, US6116443 A, US6112923 A, US6109464 A, US6099547 A, US6096041 A, US6085921 A, US6050937 A, US6044995 A, US6042534 A, US6006930 A, US5992657 A, US5964139 A, US5954057 A, US5915579 A, US5913437 A, US5884790 A, US5860993 A, US5860542 A, US5782369 A, US5775527 A, US5749884 A, US5749484 A, US5749201 A, US5725115 A, US5715959 A, US5695083 A, US5690649 A, US5683418 A, US5660289 A, US5660288 A, US5645589 A, US5533633 A, US5505735 A, US5439467 A, US5415306 A, US5414306 A, US5400913 A, US5356019 A, US5334185 A, US5314085 A, US5263600 A, US5242068 A, US5207679 A, US5205426 A, US5197621 A, US5152749 A, US5090788 A, US5090581 A, US5084058 A, US5078730 A, US5064435 A, US5056675 A, US5050753 A, US5040692 A, US5007545 A, US5002550 A, US4997097 A, US4971231 A, US4971213 A, US4971212 A, US4946468 A, US4936474 A, US4872451 A, US4828127 A, US4824435 A, US4813561 A,

US4801031 A, US4801030 A, US4798193 A, US4739893 A, US4657153 A, US4638917 A, US4598835 A, US4592476 A, US4572388 A, US4550844 A, US4402418 A, US4402415 A, US4326639 A, US3565073 A, US3484012 A, US3199702 A, US2005021086 AA, US2005000931 AA, US2004133217 AA, US2004106846 AA, US2004097974 AA, US2004087970 AA, US2003204191 AA, US2003176875 AA, US2003176762 AA, US2003171644 AA, US2003160020 AA, US2003149440 AA, US2003102280 AA, US2003065246 AA, US2002156489 AA, US2002147382 AA, US2002077526 AA, US2002072694 AA, US2002066713 AA, US2002033374 AA, US2001002661 AA, US1722587 A, US1170160 A, JP8164960 A2, JP8058817 A2, JP7291318 A2, GB2125382 A1, GB2068912 A1, FR2580593 A1, FR2525565 A1, EP0593396 A1, EP0511502 A2, EP0410059 A1, EP0072924 B1, EP0072924 A1, DE8815335 U, DE8815335, DE8811108 U, DE8811108, CN1271681 A, AU3015900 A1,

Forward Citations: WO13131773, WO13044669, WO12050759, WO08092903, WO08092716, WO07085896, WO07085896, WO07033722, WO05014414, USD723919, USD538654, USD508204, US9821934, US9790005, US8807360, US8763830, US8544666, US8529501, US8453866, US8353413, US8123056, US7878351, US7875000, US7637384, US7510094, US7451898, US2014190968, US2012091134, US2012067892, US2011309048, US2011100947, US2011024423, US2011000915, US2010032402, US2009152229, US2008164235, US2007173756, US2006207960, US2006103135, US2005263476, US2005029217, US2004155006, US2004045925, JP6207394, JP2013542894, FR2987607, EP2627570, EP1953091, EP1757528, EP1654165, DE102005040745, CN105398665, CN104627504, CN103097254, CN102310970, AU2003292243,

Abstract:

Source: US2004045925A A container assembly includes a container that has an externally threaded finish portion as well as retention structure for preventing upward movement of a tamper evident band. The container assembly further includes a closure having a body portion of a base and an internally threaded downwardly depending sidewall portion that is sized and shaped to screw onto the finish portion of the container. The closure further includes a tamper evident band that is frangibly connected to the sidewall portion and that includes a main band portion and a J-hook retention member. The J-hook retention member includes a plurality of pleated retaining elements, each of which has upper portion for engaging the retention structure. Advantageously, at least one of the pleated retaining elements is further constructed and arranged to engage the container so as to resist rotation with respect to the container, whereby separation of said tamper evident band from said body portion is better assured when the closure is unscrewed from the container.

0) US5090788A – TAMPER INDICATING PACKAGE

7) Family number: 10821832 (US5090788A)

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Title: TAMPER INDICATING PACKAGE

Priority: CA19892001023 19891019 CA19982230152 19980223 US19920987035 19921207
 US19920822001 19920116 US19890386391 19890727 CA19982230152 19980223
 US19940224365 19940407 US19940239141 19940506 US19950535803 19950928
 US19970807184 19970227

Family:

Publication number	Publication date	Application number	Application date
AT107597 E	19940715	AT19890310765T	19891019
AT222553 E	20020915	AT19980301411T	19980226
AU199856311 A1	19980903	AU19980056311	19980225
AU600624 B1	19900816	AU19890043669	19891020
AU730107 B2	20010222	AU19980056311	19980225
BRPI8906149 A	19910507	BR1989PI06149	19891204
BRPI9800213 A	19990601	BR1998PI00213	19980227
CA2001023 AA	19910127	CA19892001023	19891019
CA2001023 C	20020129	CA19892001023	19891019
CA2230152 AA	19980827	CA19982230152	19980223
CA2230152 C	20010918	CA19982230152	19980223
CN1200345 A	19981202	CN19981007832	19980226
CO4761097 A1	19990427	CO19980010904	19980227
DE68916425 D1	19940728	DE19896016425	19891019
DE68916425 T2	19941013	DE19896016425	19891019
DE69807271 D1	20020926	DE19986007271	19980226
DE69807271 T2	20021219	DE19986007271T	19980226
EP0410059 A1	19910130	EP19890310765	19891019
EP0410059 B1	19940622	EP19890310765	19891019
EP0861792 A1	19980902	EP19980301411	19980226
EP0861792 B1	20020821	EP19980301411	19980226
ES2056226 T3	19941001	ES19890310765T	19891019
ES2182223 T3	20030301	ES19980301411T	19980226
JP10316155 A2	19981202	JP19980090551	19980227
JP2115686 C3	19961206	JP19890282081	19891031
JP2902391 B2	19990607	JP19980090551	19980227
JP3069460 A2	19910325	JP19890282081	19891031
JP8015912 B4	19960221	JP19890282081	19891031
MX165642 B	19921125	MX19890018335	19891113
MX9801549 A1	19981231	MX19980001549	19980226
SG60209 A1	19990222	SG19980000457	19980227
US5090788 A	19920225	US19890386391	19890727
US5219507 A	19930615	US19920822001	19920116
US5310069 A	19940510	US19920987035	19921207
US5370520 A	19941206	US19940224365	19940407
US5462184 A	19951031	US19940239141	19940506
US5611446 A	19970318	US19950535803	19950928
US5755347 A	19980526	US19970807184D	19970227
ZA8908183 A	19901228	ZA19890008183	19891027
ZA9801614 A	19980831	ZA19980001614	19980226

Probable Assignee: OWENS ILLINOIS CLOSURE INC

Assignee(s):^(std): OWENS ILLINOIS CLOSURE INC

Assignee(s): OWENS ILLINOIS CLOSURE INC TOLEDO ; OWENS ILLINOIS CLOSURE INC TOLEDO OHIO US ; OWENS ILLINOIS KUROOJIYA INC ; REXAM CLOSURE SYSTEMS INC ; REXAM CLOSURE SYSTEMS LLC ; BERRY PLASTICS CORP ; CROWLEY DANIEL J JR ; INGRAM KEITH W ; OENSU IRINOIZU KUROOJAA INC

Inventor(s):^(std): CROWLEY DANIEL J ; CROWLEY JR DANIEL J ; DANIEL J CROWLEY JR ; INGRAM KEITH W ; KEITH W INGRAM ; KIISU DABURIYUU INGURAMU ; DANIERU JIEI KUROURII JIYUNIA ; CROWLEY DANIEL J JR

Inventor(s): KIISU DABURYUU INGURAMU

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; SHELSTON WATERS; GOWLING LAFLEUR HENDERSON LLP; RAMIRO CASTRO DUQUE

Designated states: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

International class
(IPC 8-9): B29C43/00 B29C43/18 B29C45/00 B29C53/02 B29C57/00 B29C69/02 B65D41/00 B65D41/32 B65D41/34 B65D50/00 B65D55/02 (Advanced/Invention); B29C43/00 B29C43/18 B29C45/00 B29C53/02 B65D41/32 (Advanced/Non-invention); B29C57/00 B29C69/02 B65D41/32 B65D41/34 B65D50/00 (Core/Invention); B29C43/00 B29C43/18 B29C45/00 B29C53/00 (Core/Non-invention)

International class
(IPC 1-7): B29C53/02 B65D B65D41/00 B65D41/32 B65D41/34 B65D41/36 B65D50/00 B65D51/0 B65D55/02 B65D55/06 B65D55/08

CPC: B65D41/3428 B29C43/00 B29C43/18 B29C45/00 B29C53/02 B29C57/00 B29C69/02 B29C2793/009 B29L2031/565

European class: B29C57/00 B29C69/02 B65D41/34C1 L29C43/00 L29C43/18 L29C45/00 L29C53/02 L29C793/00J L29L31/56B

US class: 215/252 249/59 264/295 264/296 264/320 264/339 425/324.1 425/383 425/400

[Classification Explorer](#)

Cited documents: US5660289 A, US5488888 A, US5462184 A, US5443171 A, US5310069 A, US5282540 A, US5167335 A, US5129530 A, US5090788 A, US5004112 A, US4997097 A, US4981230 A, US4848614 A, US4807771 A, US4801031 A, US4801030 A, US4732289 A, US4721218 A, US4709824 A, US4673158 A, US4653657 A, US4613052 A, US4595547 A, US4550844 A, US4511053 A, US4506795 A, US4497765 A, US4470513 A, US4402418 A, US4394919 A, US4394918 A, JP62109760 A2, JP61273355 A2, JP61011359 A2, EP0541466 A1, EP0521389 A1, EP0381118 A1, EP0307169 A1, AU3956785 A1,

Forward Citations: WO9858792, WO9703889, WO17133948, WO14017893, WO12135906, WO07034076, WO05067588, WO05067588, WO03016161, WO0214170, WO0056617, WO0023343, WO0007890, WO0007890, USD756776, USD756234, USD747201, USD723919, USD538654, USD508204, USD507745, US9821934, US9399534, US8353413, US7878351, US7775386, US7648670, US7637384, US7611025, US7451898, US7445130, US7344039, US7314366, US7083058, US7059232, US6991123, US6974046, US6968966, US6877624, US6817276, US6729488, US6702133, US6673298, US6622460, US6527132, US6488165, US6405886, US6382443, US6372167, US6371317, US6355201, US6308848, US6260721, US6253939, US6152316, US6119883, US6116442, US6085921, US6019592, US5980806, US5964139, US5916342, US5875908, US5846471, US5829612, US5782369, US5769255, US5755347, US5749484, US5690882, US5648037, US5611446, US5609262, US5564319, US5522293, US5501349, US5488888, US5462184, US5443171, US5400913, US5356019, US5310069, US5242068, US5205426, US5197620, US5167335, US2010178148, US2008173611, US2008164235, US2008092369, US2008067718, US2006284341, US2006283828, US2006266727, US2006021959, US2005189312, US2005173368, US2005173367, US2005167879, US2005167389, US2005116382, US2005072751, US2005005757, US2005000931, US2004168999, US2004155006, US2004149675, US2004045925, US2003192854, US2003150833, US2003121880, US2003116523, TR27602, KR101430780, JP9226790, JP6321244, JP6255661, JP6207394, JP5084649, JP3825078, JP2013542894, JP2010509150, JP2009508778, GB2352714, GB2352714, FR2893591, FR2890943, ES2166698, EP2694386, EP2694386, EP1904285, EP1354811, EP1288133, EP1243520, EP1186546, EP1055609, EP1055609, EP1048585, EP1048584, EP1043242, EP1008530, EP1007335, EP0960700, EP0916587, EP0879180, EP0861792, EP0698559, EP0616951, EP0612668, EP0593396, DE4201997, DE102004014758, AU730107, AU699513, AU2005268561, AU2002333387,

Abstract:

Source: US5090788A A tamper indicating package comprising a container having a neck with a threaded finish, an annular bead on the neck, a plastic closure which includes a base wall and a depending peripheral skirt having threads interengaging the threads of the container, and a tamper indicating band attached to the skirt by a plurality of weakened portions defining a line of severing. An annular flange extends axially upwardly and inwardly from the tamper indicating band toward the base wall of the closure and comprises a first continuous annular flange portion connected to the band by a hinge portion and a second portion which has free ends of the segment portions engaging beneath the bead on the container when the closure is threaded onto the container. In one form the second portion comprises a plurality of segment portions extending upwardly and inwardly from the first continuous portion. In another form, the second portion comprises a second continuous flange portion. The flange is bent intermediate its ends so that the second portion extends inwardly at a greater angle than the first continuous flange portion.

0) US5862953A – TAMPER EVIDENT PUSH–PULL CLOSURE WITH POUR SPOU...

8) Family number: 23545519 (US5862953A)

© PatBase

Title: Tamper evident push–pull closure with pour spout
Priority: US19960633225 19960416 US19960687149 19960724 WO1997US06159 19970416
US20000643087 20000821 US19970927743 19970911 US19970838133 19970415
WO1998US19024 19980911

Family:	Publication number	Publication date	Application number	Application date
	AU199726677 A1	19971107	AU19970026677	19970416
	BRPI9710530 A	19990817	BR1997PI10530	19970416
	CA2303127 AA	20000310	CA19982303127	19980911
	CA2303127 C	20090609	CA19982303127	19980911
	CN1091058 C	20020918	CN19971095346	19970416
	CN1221386 A	19990630	CN19971095346	19970416
	EP0904238 A2	19990331	EP19970918611	19970416
	US5862953 A	19990126	US19960687149	19960724
	US6357628 BA	20020319	US19970927743	19970911
	US6431404 BA	20020813	US20000643087	20000821
	US6769575 BA	20040803	US19970838133	19970415
	WO9738912 A2	19971023	WO1997US06159	19970416
	WO9738912 A3	19971218	WO1997US06159	19970416
	WO9912815 A2	19990318	WO1998US19024	19980911
	WO9912815 A3	19990826	WO1998US19024	19980911
	WO9912815 B1	19991028	WO1998US19024	19980911

Probable Assignee: SILGAN IPEC CORP

Assignee(s):^(std): INT PLASTICS AND EQUIPMEN ; INT PLASTICS AND EQUIPMENT ; INT PLASTICS AND EQUIPMENT COR

Assignee(s): INT PLASTICS AND EQUIPMENT CORP ; INTERNATONAL PLASTICS AND EQUIPMENT CORP ; LONG CHARLES J JR ; SILGAN IPEC CORP

Inventor(s):^(std): LONG JR CHARLES J ; LONG CHARLES J JR

Inventor(s): LONG CHARLES J ; CHARLES J LONG JR

Agent(s): BORDEN LADNER GERVAIS LLP

Designated states: AT AU BE BR CA CH CN CY DE DK ES FI FR GB GR IE IT JP KR LI LU MC MX NL PT RU SE

International class [B65D41/34](#) [B65D41/62](#) [B65D47/24](#) [B65D51/18](#) (Advanced/Invention)
(IPC 8–9):

International class [B65D41/24](#) [B65D41/34](#) [B65D41/62](#) [B65D45/02](#) [B65D47/10](#) [B65D47/24](#) [B65D50/00](#)
(IPC 1–7): [B67D47/10](#) [B67D5/00](#)

CPC: [B65D51/18](#) [B65D41/3447](#) [B65D41/62](#) [B65D47/243](#) [B65D2251/0015](#) [B65D2251/0087](#)

European class: [B65D41/34D1](#) [B65D41/62](#) [B65D47/24A2](#) [B65D51/18](#) [L65D251/00Y2D](#) [L65D251/00Y6J](#)

US class: [222/153.06](#) [222/523](#) [222/525](#) [222/541.06](#) [222/541.6](#)

[Classification Explorer](#)

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US4934546 A, US4930647, US4927065, US4919309 A, US4903849, US4852774, US4844268, US4844250, US4836407, US4834252, US4828128, US4826055, US4815620, US4815617 A, US4807770 A, US4805807, US4801032, US4801030 A, US4796770, US4785952 A, US4779764 A, US4770306 A, US4751036 A, US4749103 A, US4746035 A, US4744478 A, US4739891 A, US4729488 A, US4709823 A, US4700860 A, US4699287 A, US4699286 A, US4687114 A, US4676389 A, US4667839 A, US4664278 A, US4658977 A, US4632265 A, US4625875 A, US4593830 A, US4589561 A, US4572387 A, US4567991 A, US4561553 A, US4548239 A, US4540102 A, US4540098 A, US4534480 A, US4530437 A, US4519569 A, US4506797 A, US4500016 A, US4498597 A, US4497765 A, US4496066 A, US4484687 A, US4469253 A, US4448319 A, US4438857 A, US4437593 A, US4402415 A, US4401227 A, US4385708 A, US4354609 A, US4330067 A, US4307821 A, US4305517 A, US4301937 A, US4298129 A, US4269320 A, US4241841 A, US4230229 A, US4202455 A, US4180175 A, US4177906 A, US4166552 A, US4098419 A, US4084716 A, US4078700 A, US4066182 A, US4053077 A, US4037746 A, US4034882 A, US3980195 A, US3973719 A, US3963139 A, US3942679 A, US3940004 A, US3928109 A, US3913772 A, US3902621 A, US3901404 A, US3893583 A, US3874540 A, US3868039 A, US3844443 A, US3837518 A, US3812994 A, US3792793 A, US3695475 A, US3688942 A, US3682345 A, US3677430 A, US3504818 A, US3434613 A, US3407957 A, US3392860 A, US3372833 A, US33258994, US33214094, US3223269 A, US3120900 A, US3073472 A, US3022917 A, US2998902 A, US2805001 A, US2789717 A, US2684168 A, US2181340 A, US1866770 A, US1630687 A, US1443682 A, NL7312410 A, GB2177384 A1, FR2682357 A1, EP0688724 A1, EP0683106 A1, EP0413466 A1, EP0355949 A1, DE3723235 A1, AU480881 B2, AU480881 A1, AU480881 A1,

Forward Citations:

WO9923002, WO9912815, WO9821110, WO9821110, WO15153598, WO04074120, WO04074120, WO02092452, WO02092452, WO02070363, USD517864, USD503309, US9815598, US8763830, US8646634, US7905820, US7857154, US7803205, US7794515, US7771499, US7744667, US7228982, US7228979, US6793082, US6758359, US6321924, US6257453, US6059134, US2016214770, US2012091134, US2008190080, US2008184893, US2008184681, US2008173611, US2008155947, US2008093363, US2008041809, US2007034590, US2006124579, US2005066469, US2004251228, GB2367055, GB2367055, FR2821829, ES2235588, EP2517974, EP2065314, CN103842264, CN103842264, CN103303561,

Abstract:

Source: US5862953A A resealable push-pull pour spout closure having an annular secondary closure with a central opening through which a plug is adapted to engage to close a container. The central opening is defined by an annular wall having at least one internally extending annular flange. The diameter of the central opening is substantially the same as that of the plug. The plug takes the form of a circular closure disk having an integrally molded depending annular skirt projecting from the periphery of the disk that attaches to angularly extending legs that connect the plug to the spout thereby defining a hollow cavity for the plug interior and increasing the structural flexibility of the plug. The annular seal flange projects radially into opening for form fitting engagement with the plug to substantially eliminate any leakage when the plug is positioned in the central opening.

0) US2002076122A – RECLOSABLE PACKAGE HAVING A ZIPPER CLOSURE, SLI...

9) Family number: 30106789 (US2002076122A)

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Title: Reclosable package having a zipper closure, slider device and tamper-evident structure

Priority: CA20012331269 20010117 US20000176872P 20000118 US20000179031P 20000118
US20000176873P 20000118 US20000176874P 20000118 US20000621597 20000721
US20030397587 20030326 US20020077024 20020215 US20020245879 20020917
US20000621600 20000721 US20000621598 20000721 US20000621599 20000721
WO2001US01619 20010117

Family:	Publication number	Publication date	Application number	Application date
	CA2331269 AA	20010718	CA20012331269	20010117
	CA2397624 AA	20020712	CA20012397624	20010117
	DE60101145 D1	20031211	DE20016001145	20010117
	DE60101145 T2	20040826	DE20016001145T	20010117
	EP1129955 A2	20010905	EP20010100157	20010116
	EP1129955 A3	20010912	EP20010100157	20010116
	EP1248732 A2	20021016	EP20010902106	20010117
	EP1248732 B1	20031105	EP20010902106	20010117
	JP2001247137 A2	20010911	JP20010006323	20010115
	JP2003520160 T2	20030702	JP20010553176T	20010117
	JP4880126 B2	20120222	JP20010006323	20010115
	US2002076122 AA	20020620	US20020077024	20020215
	US2003021499 AA	20030130	US20020245879	20020917
	US2003185945 AA	20031002	US20030397587	20030326
	US6273607 BA	20010814	US20000621597	20000721
	US6290390 BA	20010918	US20000621598	20000721
	US6290391 BA	20010918	US20000621600	20000721
	US6290391 C1	20070313	US20000621600	20000721
	US6347885 BA	20020219	US20000621599	20000721
	US6347885 C1	20070410	US20000621599	20000721
	US6474866 BB	20021105	US20020077024	20020215
	US6572266 BB	20030603	US20020245879	20020917
	US6866420 BB	20050315	US20030397587	20030326
	WO0153158 A2	20010726	WO2001US01619	20010117
	WO0153158 A3	20020207	WO2001US01619	20010117

Probable Assignee: REYNOLDS CONSUMER PROD

Assignee(s):^(std): REYNOLDS CONSUMER PROD ; REYNOLDS CONSUMER PROD INC

Assignee(s): REYNOLDS CONSUMER PRODUCTS INC ; REYNOLDS PRESTO PRODUCTS INC ;
REYNOLDS CONSUMER PRODUCTS INC RICHMOND ; BANK OF NEW YORK
MELLON ; BUCHMAN JAMES E ; CREDIT SUISSE SYDNEY BRANCH

Inventor(s):^(std): BUCHMAN E ; BUCHMAN JAMES E

Agent(s): SIM AND MCBURNEY; GOUDREAU GAGE DUBUC; MAJIMA HIROAKI; FURUTANI
HIDEO; MATSUSHITA TADASHI; ISONO MICHIZO; ECKERT SEAMANS CHERIN AND
MELLOTT; TRACEY D

Designated states: AT BE CA CH CY DE DK ES FI FR GB GR IE IT JP LI LU MC NL PT SE TR

International class [A44B19/16 A44B19/22 B31B1/90 B31B19/90 B65D33/25 B65D33/34](#) (Advanced/Invention);
^{(IPC 8-9):} [A44B19/10 A44B19/18 B31B1/74 B31B19/00 B65D33/25 B65D33/34](#) (Core/Invention)

International class [A44B19/16 A44B19/22 B31B1/90 B31B19/90 B65D1/00 B65D33/16 B65D33/25](#)
^{(IPC 1-7):} [B65D33/34 B65D85/00](#)

CPC: B65D33/2591
European class: B65D33/25C B65D33/34
US class: 383/203 383/204 383/204S 383/21 383/210 383/210.1 383/210S 383/5 383/5P 383/5S 383/61.2 383/61.200S 383/64 383/64S 426/122 426/122P 53/412

[Classification Explorer](#)

Cited documents: WO9962781 A1, WO9962781, WO9906281, WO9824339 A1, WO9824339, WO9806635 A1, WO9806635, WO0067605 A1, US6732491 BB, US6688080 BB, US6652436 BA, US6609828 BB, US6609827 BB, US6572266 BB, US6474866 BB, US6412254 BA, US6390676 BA, US6386760 BA, US6360513 BA, US6357914 BA, US6354738 BA, US6350340 BA, US6347885 BA, US6327837 BA, US6293896 BA, US6290393 BA, US6290391 BA, US6290390 BA, US6273607 BA, US6257763 BA, US6212857 BA, US6183134 BA, US6131369 A, US6010244 A, US5964532 A, US5924795 A, US5911508 A, US5875611 A, US5767184 A, US5713669 A, US5669715 A, US5488807 A, US5456928 A, US5442837 A, US5301395 A, US5224779 A, US5131121 A, US5127208 A, US5121997 A, US5067208 A, US5005707 A, US4966470 A, US4944603 A, US4925316 A, US4923309 A, US4874257 A, US4832505 A, US4786190 A, US4744674 A, US3790992 A, US2002072460 AA, JP61259959 A2, JP61259959, EP0941937 A1, EP0528721 A2, EP00941937,

Forward Citations: WO16164895, WO06122761, WO04037655, WO04037655, USD545217, USD531896, USD484040, USD471088, USD468629, US9643755, US9321560, US9315304, US9315299, US8827556, US8616426, US8540612, US8540427, US8448413, US8419277, US8408793, US8245364, US8241194, US8231273, US8202002, US8182407, US8176604, US8142077, US8127517, US8122687, US8105225, US8070359, US8021048, US7972064, US7967510, US7967509, US7946766, US7887238, US7886412, US7874731, US7870961, US7857515, US7819583, US7797802, US7784160, US7780004, US7748200, US7674039, US7634892, US7604828, US7597657, US7574782, US7574781, US7552907, US7552573, US7549800, US7540662, US7524110, US7510328, US7506487, US7506416, US7481580, US7478950, US7464569, US7461680, US7461434, US7442156, US7430844, US7419301, US7416336, US7398953, US7341160, US7320662, US7316641, US7311443, US7306370, US7254873, US7249887, US7219481, US7213305, US7207718, US7185475, US7185403, US7163338, US7140772, US7134788, US7107738, US7040808, US7036988, US7008106, US6983574, US6983573, US6974256, US6962439, US6962034, US6957914, US6939041, US6939040, US6907713, US6901637, US6874937, US6866420, US6863646, US6834474, US6830377, US6786640, US6712509, US6694704, US6663283, US6662410, US6616333, US6609828, US6595690, US6575625, US6572266, US6517242, US6499878, US6474866, US6467956, US6439771, US6419391, US6390676, US2016107801, US2015063728, US2014270596, US2014213981, US2014023296, US2013221008, US2012196730, US2011293208, US2011158561, US2011033138, US2010308096, US2010209551, US2010195936, US2010166341, US2010147724, US2010029455, US2009265898, US2009263049, US2009263048, US2009245699, US2009136160, US2009129708, US2009097783, US2009013644, US2008230429, US2008063321, US2008037913, US2008037912, US2008019619, US2007258663, US2007211968, US2007199183, US2007186597, US2007184961, US2007175180, US2007151210, US2007127850, US2007104397, US2007092168, US2007086683, US2007066470, US2007065051, US2007065048, US2007051650, US2007028564, US2006269171, US2006265844, US2006265843, US2006265842, US2006246185, US2006228056, US2006228055, US2006228054, US2006207727, US2006191937, US2006185325, US2006171607, US2006133887, US2006133700, US2006131339, US2006131328, US2006115187, US2006112664, US2006096245, US2006090308, US2006072854, US2006029298, US2006021296, US2006003879, US2005286812, US2005286811, US2005286810, US2005254733, US2005244083, US2005229365, US2005220371, US2005194282, US2005188511, US2005069229, US2005063619, US2005063617, US2005063616, US2005025395, US2005018932, US2005008267, US2005003940, US2004252914, US2004195143, US2004161178, US2004161167, US2004146222, US2004138038, US2004131283, US2004123433, US2004091178, US2004079052, US2004074058, US2004066989, US2004047524, US2004038791, US2004023776, US2003235347, US2003231811, US2003223652, US2003220180, US2003219173, US2003198407, US2003185945, US2003124294, US2003118253, US2003113041, US2003074861, US2003063819, US2003041563, US2003022778, US2003002753, US2002154836, JP5756268, JP2012056612, JP2011148550, JP2008540193, JP2004244112, FR2926290, FR2917718, FR2867756, EP3241777, EP2006081, EP1901124, EP1725134, EP1688365, EP1642839, EP1614634, EP1551248, EP1551248, EP1427642, EP1367000, EP1291286, EP1251075, EP1234773, AU2013238065, AU2009200107, AU2009200107,

Abstract:

Source: US2002076122A A flexible, reclosable package having a reclosable zipper construction openable and

closeable by a slider device, and a tamper-evident structure disposed over the zipper construction to provide indication whether access has been gained to the interior of the package. A second tamper-evident structure may be disposed between the zipper construction and the package interior. This second structure may be a web or a peel seal.

0) US2003031386A – RECLOSABLE BAGS

10) Family number: 30377332 (US2003031386A)

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Title: RECLOSABLE BAGS

Priority: EP19990956952 19991105 EP19990956952 19991105 EP20010968751 20010910
 EP20020022308 19991105 US19990293257 19990416 US19980187389 19981106
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 WO2003US25414 20030812

Family:

Publication number	Publication date	Application number	Application date
AU200013448 A1	20000529	AU20000013448	19991105
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Probable Assignee: VELCRO BVBA

Assignee(s):^(std): CLUNE WILLIAM ; CLUNE WILLIAM P ; PROVOST GEORGE A ; SHEPARD WILLIAM H ; VELCRO IND A NETHERLANDS C BV ; VELCRO IND NETHERLAND CORP BV ; VELCRO IND NL BV ; VELCRO IND BV ; VELCRO IND

Assignee(s): VELCRO IND A NETHERLANDS BV CORP ; VELCRO IND CURACAO BV ; VELCRO IND NETHERLAND BV CORP ; VELCRO IND A NETHERLANDS CORP BV ; VELCRO BVBA ; KINGSFORD HOWARD A

Inventor(s):^(std): SHEPARD WILLIAM H ; W CLUNE ; WH SHEPARD ; WILLIAM CLUNE ; WILLIAM H SHEPARD ; WILLIAM P CLUNE ; WILLIAMH SHEPARD ; CLUNE WILLIAM ; CLUNE WILLIAM P ; GA PROVOST ; GEORGE A PROVOST ; GEORGEA PROVOST ; KINGSFORD HOWARD A ; SHEPARD WILLIAM H ; SHEPARD W H ; PROVOST G A ; PROVOST GEORGE A ; CLUNE W ; SHEPARD H ; PROVOST A

Inventor(s): SHEPARD WILLIAM ; G A PROVOST ; PROVOST GEORGE ; W H SHEPARD

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MUELLER-BORE AND PARTNER PATENTANWALTE; FISH AND RICHARDSON PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW

HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG
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B65B9/00 B65D33/00 B65D33/14 B65D33/25 (Advanced/Non-invention);
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B65D77/22 (Core/Invention)

International class
(IPC 1-7):

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US class:

156/244.15 24/30.50R 24/30.5R 24/305R 24/445 24/446 24/452 264/167 264/171.13
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Abstract:

Source: US2003031386A A reclosable bag has a closure including first and second fastener strips. The first fastener strip includes a strip form base having an array of discrete hook fastener elements integrally molded with and extending from the base. The second fastener strip includes loop elements engageable by the hook fastener elements. The polyethylene bases of the fastener strips are welded directly to the body of the mailer, which is formed of a coextrusion of polyethylene materials. One of the fastener strips is unattached to the bag body along most of its length, so as to avoid undesired opening by shifting of bag contents. The bag is useful as an interoffice mailing envelope, for example.

11) Family number: 50639889 (US5174465A)

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Title: One-piece fitment and cap with tamper-evident band

Priority: CA19922062008 19920227 US19910664658 19910305 US19920822200 19920117
 US19910780774 19911022 US19910771057 19911002 US19920823200 19920121
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Family:

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Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; CAP SNAP CO ; INC ; INK ; PORTOLA PEHKADZHING

Assignee(s): WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS ; LUCH DANIEL ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; ADAMS BRIAN M ; WAYZATA INVESTMENT PARTNERS LLC ; WELLS FARGO FOOTHILL LLC AS AGENT ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; CAP SNAP CO A CORP OF CA ; CAP SNAP CO A CORP OF CALIFORNIA ; CAP SUNATSUPU CO ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; HELLER FINANCIAL INC A DELAWARE BUSINESS TRUST ; HELLER FINANCIAL INC A DE CORP ; PORTOLA PACKAGING INC A DE CORP ; PORTOLA PACKAGING INC F K A CAP SNAP CO

Inventor(s):^(std): CHENAULT RAWSON L ; CHENAULT RAWSON ; BURAIAN EMU ADAMUSU ; ADAMS BRIANS M ; ADAMS BRIAN M ; ADAMS BRIAN ; DEHNIEL LACH ; BRAJAN M EHDAMS ; LUCH DANIEL ; DANIERU RUUKU

Inventor(s): DANIEL LUCH ; BRAJAN MEHDAMS ; BRIANS M ADAMS ; BRIAN M ADAMS

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR LI LK LU MC MG ML MN MR MW NL NO NZ PL PT RO RU SD SE SN TD TG UA

International class
(IPC 8-9): B29C45/38 B29C45/44 B29C57/12 B29C65/56 B65B55/02 B65D39/00 B65D39/08 B65D41/32 B65D41/34 B65D41/47 B65D47/06 B65D47/12 B65D47/14 B65D47/36 B65D5/74 B65D55/02 B65D55/06 B65D75/58 F16J13/12 (Advanced/Invention); B65B55/02 B65D55/02 (Advanced/Non-invention); B29C57/00 B29C65/56 B65D39/00 B65D41/34 B65D47/00 B65D47/12 B65D5/74 F16J13/00 (Core/Invention)

International class
(IPC 1-7): B29C45/38 B29C45/44 B65B55/02 B65D17/40 B65D25/42 B65D3/26 B65D33/38 B65D39/00 B65D39/04 B65D39/08 B65D39/16 B65D41/00 B65D41/32 B65D41/34 B65D41/38 B65D41/47 B65D41/62 B65D43/04 B65D43/14 B65D47/06 B65D47/10 B65D47/14 B65D47/36 B65D5/14 B65D5/74 B65D50/00 B65D51/18 B65D51/20 B65D55/02 B65D55/08 B65D55/16 B65D59/08 B65D75/58

CPC: B65D39/08 B65D55/06 B65D75/5877 B65D47/141 B65D2101/00 B29C45/006 B29L2031/565 Y10S425/058 B29C66/53247 B29C65/56 B29C65/58 B65D5/749 B29C57/12 B29C65/568 B29C66/8322 B65D39/00 B65D39/0023 B65D39/0076 B65D39/084 B65D41/3409 B65D47/121 B65D47/36 B65D2101/0038 B65D2539/003 B65D2539/006 B29C66/61 B29C66/112 B29C66/135 B29C66/1312 B29C66/24221 B29C66/232

European class: B29C45/00J3 B29C57/12 B29C65/56 B29C65/56H2 B29C65/58 B29C66/532 B29C66/8322 B65D39/00 B65D39/00F3 B65D39/00G4 B65D39/08 B65D39/08A1 B65D41/34A1 B65D47/12A B65D47/14A B65D47/36 B65D5/74D1C B65D55/06 B65D75/58G3A L29C66/53246 L29L31/56B L65D101/00 L65D101/00A3C L65D539/00Y2 L65D539/00Y6

US class:

215/213 215/214 215/216 215/225 215/232 215/250 215/253 215/256 215/318 215/356
215/44 220/254 220/255.1 220/256 220/258 220/258.3 220/265 220/266 220/270 220/276
220/288 220/307 220/375 220/790 222/541 222/541.2 222/541.5 222/541.6 222/541.9
222/545.1 222/562 222/563 222/566 222/569 229/125.15 229/125.17 264/152 264/238
264/308.1 264/318 264/328.1 264/334 425/554 425/577 425/DIG.58

Classification Explorer

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Forward Citations:

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EP1415926, EP1352840, EP1352840, EP1298063, EP1281626, EP1161379,
EP1100676, EP1100676, EP1092646, EP1042178, EP0968120, EP0931729,
EP0763482, EP0663344, EP0621848, DE19815413, DE10146466, DE10146466,
CN103231847, AU689478, AU2006209845, AU2002300136,

Abstract:

Source: US5174465A A fitment and cap therefor are integrally molded with lugs interconnecting the part. The fitment has a flange to be attached to a container and an internally threaded spout. The cap has an externally threaded skirt. The lugs are diametrically spaced and interconnect the bottom edge of the skirt and upper edge of the spout. After molding, force is applied to break the lugs and snap the skirt inside the spout, the threads slipping past each other and inter-engaging. A temper-evident band extends around the skirt and is connected thereto by frangible bridges. At diametrically spaced locations vertically projecting fingers extend down from the temper evident band and are received in sockets on the fitment flange shaped so that the band fingers prevent unscrewing the cap without removing the temper-evident band. A pull tab and thumb tab assist the consumer in removing the tamper evident band so that the cap may be unscrewed from the fitment.

0) US2004251228A – SNAP-ON SCREW-OFF CLOSURE WITH RETAINING MEMBER...

12) Family number: 15831595 (US2004251228A)

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Title: SNAP-ON SCREW-OFF CLOSURE WITH RETAINING MEMBER FOR
TAMPER-INDICATING BAND

Priority: US19970961440 19971030 US19980145690 19980902 US19990414179 19991007
US20040869622 20040616 WO1998US22933 19981029

Family:	Publication number	Publication date	Application number	Application date
	AT261861 E	20040415	AT19980955191T	19981029
	CA2307851 AA	20000428	CA19982307851	19981029
	CA2307851 C	20070821	CA19982307851	19981029
	DE69822493 D1	20040422	DE19986022493	19981029
	DE69822493 T2	20041223	DE19986022493T	19981029
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	EP1027261 B1	20040317	EP19980955191	19981029
	MXPA00004145 A1	20030801	MX2000PA04145	19981029
	US2004251228 AA	20041216	US20040869622	20040616
	US6059134 A	20000509	US19970961440	19971030
	US6305579 BA	20011023	US19990414179	19991007
	US6793082 BA	20040921	US19980145690	19980902
	US7228979 BB	20070612	US20040869622	20040616
	WO9923002 A2	19990514	WO1998US22933	19981029
	WO9923002 A3	19990819	WO1998US22933	19981029

Probable Assignee: SILGAN IPEC CORP

Assignee(s):^(std) INT PLASTICS AND EQUIPMEN ; INT PLASTICS AND EQUIPMENT COR

Assignee(s): INT PLASTICS AND EQUIPMENT CORP ; LONG CHARLES J ; INT PLASTICS AND
EQUIPMENT CORP NEW CAST ; SILGAN IPEC CORP ; INT PLASTICS AND
EQUIPMENT CORP NEW CASTLE ; LONG CHARLES J JR

Inventor(s):^(std) LONG J ; LONG JR CHARLES J ; LONG CHARLES J ; LONG JR CHARLES C ; LONG
CHARLES J JR ; CHARLES J LONG JR

Inventor(s): LONG ; JR CHARLES J

Agent(s): BORDEN LADNER GERVAIS LLP; DAVID V; ROBERT A

Designated states: AT BE CA CH CY DE DK ES FI FR GB GR IE IT LI LU MC MX NL PT SE

International class
^(IPC 8-9): [B65D41/00](#) [B65D41/34](#) [B65D41/47](#) [B65D41/58](#) ^(Advanced/Invention);
[B65D41/00](#) [B65D41/32](#) [B65D41/34](#) ^(Core/Invention)

International class
^(IPC 1-7): [B65D41/34](#) [B65D41/58](#)

CPC: [B65D41/3447](#) [B65D41/47](#) [B65D41/58](#)

European class: [B65D41/34D1](#) [B65D41/47](#) [B65D41/58](#)

US class: [215/252](#) [215/253](#) [215/318](#) [215/329](#) [215/341](#) [215/354](#) [215/44](#) [215/45](#) [220/296](#) [222/153.02](#)
[222/153.06](#) [222/525](#)

[Classification Explorer](#)

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Forward Citations: WO15065481, WO14041442, WO05009854, US9796265, US9611079, US8757416, US8397927, US8353413, US8308005, US8231025, US7882977, US7712619, US7694835, US7228979, US7198170, US7114625, US7114625, US6988642, US6938787, US6878340, US6793082, US6367640, US2011155758, US2011100947, US2011088505, US2009277861, US2009188888, US2009173738, US2009114651, US2009057261, US2008173611, US2008164235, US2007272647, US2007181578, US2006265951, US2006159237, US2006124644, US2005145629, US2005045578, US2004251228, US2004079765, US2004011757, US2003155361, US2002073647, JP2006182357, EP2796382, EP1847469, DE102006017259, CN105705425, AU2004202619,

Abstract:

Source: US2004251228A A closure is provided with a thread configuration adapted for snap-on or screw-on application to a container neck finish. The closure is optionally provided with at least one member attached to the tamper-indicating ring which cooperates with the arcuate projection to assist in breaking said tamper indicating ring during removal of the closure from the container neck.

0) US2005017007A – TAMPER RESISTANT CONTAINER WITH TAMPER-EVIDENT ...

13) Family number: 31487603 (US2005017007A)

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Title: TAMPER RESISTANT CONTAINER WITH TAMPER-EVIDENT FEATURE AND METHOD OF FORMING THE SAME

Priority: CA20062533236 20060119 US20030489093P 20030721 US20040895687 20040721
 US20050065681 20050224 US20060483900 20060710 US20110044776 20110310
 WO2004US23473 20040721 US20130068924 20131031 US20140310965 20140620
 US20140473619 20140829 US20150869868 20150929

Family:

Publication number	Publication date	Application number	Application date
AT407889 E	20080915	AT20040778821T	20040721
AT442311 E	20090915	AT20060003237T	20060217
CA2533046 AA	20060119	CA20042533046	20040721
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US2006289541 AA	20061228	US20060483900	20060710
US2008087669 AB	20080417	US20060483900	20060710
US2011175261 AA	20110721	US20110044776	20110310
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WO08008343 A3	20081113	WO2007US15739	20070710

Probable Assignee: INLINE PLASTICS CORP

Assignee(s):^(std): BOBACK PETER ; INLAJN PLASTIKS CORP ; INLAJN PLASTIKS KORP ; INLINE PLASTICS CORP ; LANDAN DANIEL A ; KLIMASZEWSKI TADEUSZ J ; KLIMASZEWSKI TADEUSZ ; LANDAN DANIEL ; SELLARI ROBERT ; STEIN BRUCE

Assignee(s): PNCBANK NATIONAL ASSOCIATON AGENT AS ; INLINE PLASTICS CORP42 CANAL STREETSHELTONCT06612US ; INLAJN PLASTIKS KORPOREJSHN

Inventor(s):^(std): BOBACK PETER ; BOBACK PETER SELLARI ROBERT ST ; BRUCE SELLARI ROBERT BOBACK PE ; KLIMASZEWSKI TADEUSZ ; KLIMASZEWSKI TADEUSZ J ; LANDAN DANIEL ; LANDAN DANIEL A ; SELLARI ROBERT ; STEIN BRUCE ; STEIN BRUCE K ; STEHJN BRJUS ; BOBAK PITER ; ROBERT SELLARI ; PETER BOBACK ; BRUCE STEIN ; LEHNDAN DEHNIEHL A ; KLIMASHEVSKI TADEUSH J

Inventor(s): STEIN BRUCEUS ; SELLARI ROBERT BOBACK PETER STEIN BRUCE ; SELLARI ROBERTUS ; LANDAN DANIEL AUS ; KLIMASZEWSKI TADEUSZ JUS ; BOBACK PETER SELLARI ROBERT STEIN BRUCE LANDAN ; BOBACK PETER SELLARI ROBERT STEIN BRUCE LANDAN DAN ; BOBACK PETERUS

Agent(s): RIDOUT AND MAYBEE LLP; LISKA HORST ET AL; LISKA HORST; EDWARDS AND ANGELL LLP; RICHARD H NEWMAN EDWARDS AND ANGELL LLP; EDWARDS ANGELL PALMER AND DODGE LLP; ADAM P; BARRY; EDWARDS WILDMAN PALMER LLP; LOCKE LORD LLP; ALICIA J; DAVID J; POLLACK BRIAN R ET AL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class^(IPC 8-9): B29C37/00 B29C51/00 B29C51/10 B29C69/00 B29C69/02 B29D22/00 B65D17/34 B65D39/00 B65D41/32 B65D43/02 B65D43/08 B65D43/10 B65D43/16 B65D43/22 B65D51/00 B65D55/00 B65D55/02 B65D55/06 (Advanced/Invention); B65D39/00 B65D41/32 B65D51/00 (Core/Invention)

International class^(IPC 1-7): B65D17/34 B65D43/02

CPC: B65D43/021 B65D43/0245 B65D2101/0015 B65D2101/0023 B65D2101/0092 B65D2205/00 B65D2543/00194 B65D2543/00268 B65D2543/00277 B65D2543/0049 B65D2543/00842 B65D43/162 B65D2543/00092 B65D2543/00101 B65D2543/00296 B65D2543/00351 B65D2543/00509 B65D2543/00546 B65D2543/0062 B65D2543/00685 B65D2543/00731 B65D2543/00796 B65D41/32 B29D22/003 B65D55/024 B65D43/163 B65D43/22 B65D43/0254

European class: B65D43/02S3D B65D43/02T3A6 B65D43/02T3D B65D43/16B L65D101/00A2 L65D101/00A3 L65D101/00A7 L65D205/00 L65D543/00Y10B2 L65D543/00Y1F2C L65D543/00Y1F2D L65D543/00Y1F4C3 L65D543/00Y1M2 L65D543/00Y1M4 L65D543/00Y1M6 L65D543/00Y2D L65D543/00Y8D1 L65D543/00Y8D1C L65D543/00Y8D3N L65D543/00Y8S1B2 L65D543/00Y8S1D2 L65D543/00Y8S3B2 L65D543/00Y8S3D2

US class: 220/266 220/270 220/270P 220/270S 220/315 220/377 220/4.21 220/42.1 220/780 220/789 220/810 264/138 264/138S 264/239 264/239S 264/241 264/241S 264/319 264/319S 264/322 264/544 264/553 264/554 264/571 264/571P

[Classification Explorer](#)

Cited documents: WO9513222 A2, WO05009857 A1, USD352000 S1, USD328705 S1, US9278786 BB, US9242769 BB, US8925755 BB, US8795580 BB, US8684212 BB, US8640914 BB, US8261933 BB, US8240505 BA, US7073680 BB, US6715632 BB, US6625955 BB, US6609623 BB, US6572909 BA, US6530870 BB, US6517242 BA, US646563 A, US6220529 BA, US6196408 BA, US6095324 A, US5985079 A, US5979687 A, US5938068 A, US5931332 A, US5897011 A, US5860549 A, US5860530 A, US5758791 A, US5685444 A, US5584408 A, US5573134 A, US5507406 A, US5429833 A, US5398836 A, US5303839 A, US5287959 A, US5284959 A, US5219087 A, US5092479 A, US5052574 A, US5046659 A, US5040695 A, US5027969 A, US4986438 A, US4886204 A, US4771934 A, US4742935 A, US4576370 A, US4576330 A, US4555043 A, US4555038 A, US4535889 A, US4433793 A, US4225275 A, US4224275 A, US3767110 A, US3669606 A, US3536251 A, US3511433 A, US3389825 A, US3164478 A, US2915214 A, US2798631 A, US2016023815 AA, US2016016707 AA, US2015367987 AA, US2015329249 AA, US2015298853 AA, US2015266611 AA, US2015225139 AA, US2015083725 AA, US2015060455 AA, US2015028033 AA, US2014367383 AA, US2014300034 AA, US2014138383 AA, US2014069922 AA, US2014041343 AA,

US2013320015 AA, US2013160406 AA, US2013020325 AA, US2012103990 AA, US2012005994 AA, US2011000929 AA, US2010276422 AA, US2010072217 AA, US2009206082 AA, US2009134180 AA, US2009120937 AA, US2007045317 AA, US2006289541 AA, US2005017007 AA, US2004118848 AA, US2003052133 AA, US2003052125 AA, US2003051350 AA, JP7267275 A2, JP2144531 U1, JP2144531 U, JP2002012283 A2, JP200201228, JP2002001228 A2, JP1114536 U1, JP1114536 U, GB2257118 A1, GB2219284 A1, EP0752374 A1, EP0083197 A1, DE7816353 U, DE7816353, DE4418935 A1, DE29819718 U1, DE1999083197, DE19908319, CA2074836 AA,

Forward Citations: WO17172843, WO17106361, WO16205491, WO16114867, WO16054297, WO11163445, WO11163445, WO07057133, WO06091471, WO06091471, USD795651, USD776974, USD746678, USD742222, USD737679, USD736634, USD727730, USD717161, USD698241, USD697795, USD695109, USD694617, USD686064, USD675517, USD673847, USD666905, USD646563, USD645737, USD645339, USD637481, USD634617, USD634188, USD615862, USD604161, USD602774, USD599203, USD559059, USD548551, USD545152, USD534403, USD500653, USD497786, US9796511, US9745106, US9725222, US9676527, US9656785, US9650184, US9643761, US9630756, US9624009, US9611078, US9580219, US9561885, US9527640, US9527633, US9493277, US9475621, US9433469, US9409683, US9365331, US9278786, US9187209, US9132942, US9120595, US9016503, US9010560, US8985386, US8944270, US8939307, US8854395, US8851315, US8849853, US8849043, US8833589, US8807385, US8795580, US8794481, US8714394, US8701919, US8657138, US8646648, US8627977, US8608008, US8512306, US8408793, US8381946, US8360262, US8322555, US8292111, US8286817, US8251249, US8251242, US8245875, US8215485, US8186531, US8167490, US8146766, US8127961, US8123064, US8083089, US8056750, US8028851, US7992743, US7967510, US7938286, US7874453, US7712626, US7681732, US7568589, US7124910, US2016023815, US2015344196, US2015329249, US2015114853, US2015096987, US2015096986, US2015060455, US2014332539, US2014284346, US2014238950, US2014224804, US2014224803, US2013306636, US2013043247, US2011192860, US2011175261, US2011031246, US2010236966, US2010224630, US2010181323, US2010155402, US2010140267, US2010108680, US2010102074, US2010089922, US2010072217, US2010051620, US2010018969, US2009321463, US2009223619, US2009211941, US2009120937, US2009101647, US2009090712, US2009071927, US2008308557, US2008277397, US2008116098, US2008037913, US2008037912, US2008006632, US2008000904, US2007284276, US2007205206, US2007138180, US2007045317, US2007012710, US2005061810, KR20130000260, KR200483289, KR200482136, KR101281450, JP2015085954, GB2498449, GB2489872, FR2903970, ES2525192, EP3100962, EP2210819, EP1884478, EP1695919, DE202015006516, DE202015006515, DE202015004033, DE202015004032, DE202015004030, DE202015004029, DE102016004044, AU2011270905, AU2006236072,

Abstract:

Source: US2005017007A A tamper-resistant container with tamper evident feature which includes a cover portion defining a outwardly extending peripheral flange, a base portion defining an upper peripheral edge, and a hinge joining the outwardly extending peripheral flange with the base portion. The upper peripheral edge includes an upwardly projecting bead extending substantially about the perimeter of the base portion that is configured to render the outwardly extending flange of the cover portion relatively inaccessible when the container is closed. The hinge includes a frangible section, which upon severing, provides a projection that extends out beyond the upwardly projecting bead of the upper peripheral edge of the base portion, for facilitating removal of the cover portion from the base portion to open the container.

14) Family number: 44129158 (US2011024423A)

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Title: TAMPER-EVIDENT PACKAGE WITH IMPROVED OPENING PERFORMANCE
Priority: US20080125981P 20080430 US20090934916 20090430 WO2009US02632 20090430
Family:

Publication number	Publication date	Application number	Application date
AU2009260868 AA	20091223	AU20090260868	20090430
AU2009260868 BB	20150702	AU20090260868	20090430
CA2721234 AA	20091223	CA20092721234	20090430
CN102015472 A	20110413	CN200980115609	20090430
CN102015472 B	20130828	CN200980115609	20090430
EG26024 A	20121211	EG20100101820	20101028
EP2268554 A2	20110105	EP20090766980	20090430
EP2268554 A4	20111207	EP20090766980	20090430
IN06911CN2010 A	20110708	IN2010CN06911	20101027
JP2011519330 T2	20110707	JP20110507444T	20090430
MX2010011796 A1	20101130	MX20100011796	20090430
RU2010148807 A	20120610	RU20100148807	20090430
RU2507137 C2	20140220	RU20100148807	20090430
US2011024423 AA	20110203	US20090934916	20090430
US8807360 BB	20140819	US20090934916	20090430
WO09154666 A2	20091223	WO2009US02632	20090430
WO09154666 A3	20100218	WO2009US02632	20090430
ZA201006949 A	20110629	ZA20100006949	20100929

Probable Assignee: CLOSURE SYSTEMS INT INC

Assignee(s):^(std): CLOSURE SYSTEMS INT ; CLOSURE SYSTEMS INT INC ; CLOSURE SYSTEMS INTERNAT ; CLOSURE SYSTEMS INTERNATIONAL ; CLOSURE SYSTEMS INTERNATIONAL INC ; MCBRIDE STEVE ; SMEYAK LAWRENCE M ; GEVERS DAVE ; ERSPAMER JOHN ; CLOSURE SYSTEMS INTERNATIONAL INC ; KLOUZHER SISTEMZ INTERNEHSHNL INK

Inventor(s):^(std): DAVE GEVERS ; DZHEVERS DEHJV ; EHRSPAMER DZHON ; ERSPAMER JOHN ; GEVERS DAVE ; JOHN ERSPAMER ; LARRY SMEYAK ; MAKBRAJD STIV ; MCBRIDE STEVE ; SMEYAK LARRI ; SMEYAK LARRY ; SMEYAK LAWRENCE M ; STEVE MCBRIDE ; MEBRIDE STEVE

Agent(s): FB RICE; FB RICE PTY LTD; ALGEMEEN OCTROOI EN MERKENBUREAU; WOOD PHILLIPS KATZ CLARK AND MORTIMER; GEIMER D STEPHEN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
^{(IPC 8-9):} [B65D B65D1/02 B65D39/00 B65D41/34 B65D41/36 B65D41/38](#)
[B65D41/62](#) (Advanced/Invention);
[B65D41/34](#) (Advanced/Non-invention);
[B65D39/00 B65D41/00](#) (Core/Invention)

International class
^{(IPC 1-7):} [B65D39/00](#)

CPC: [B65D41/3428](#)

European class: [B65D41/34C1](#)

US class: [215/252 215/307 215/329 215/336 215/344 215/44 215/902 220/266 220/268 220/276](#)

Cited documents: WO9743190 A1, US7975864 BB, US7942287 BB, US7637384 BB, US7607547 BB, US7503468 BB, US7451898 BB, US7344039 BB, US7014055 BB, US6991123 BB, US6779672 BB, US6705479 BB, US6673298 BB, US6557714 BB, US6527132 BA, US6484896 BB, US6371317 BA, US6325225 BA, US6276543 BA, US6202872 BA, US6089390 A, US6006930 A, US5950850 A, US5860542 A, US5800764 A, US5797506 A, US5782369 A, US5715959 A, US5588545 A, US5564582 A, US5501349 A, US5450972 A, US5356021 A, US5328044 A, US5205426 A, US5167335 A, US5050753 A, US5004112 A, US4997097 A, US4993570 A, US4971212 A, US4938370 A, US4573601 A, US4562931 A, US4550844 A, US4506795 A, US4505401 A, US4470513 A, US4458822 A, US3667638 A, US2009159555 AA, US2008087625 AA, US2007131641 AA, US2007125785 AA, US2006163193 AA, US2005189312 AA, US2004238478 AA, US2004155007 AA, US2004060893 AA, US2003116523 AA, US2002134747 AA, US2002066713 AA, US2002030031 AA, US2001027957 AA, JP9501636 T2, JP8503189 T2, JP2011114313 A2, JP2007514619 T2, JP2001114313 A2, JP2000503944 T2, JP2000085810 A2, GB1593072 A,

Forward Citations: WO15123666, USD732391, US9708105, US9428292, US9290306, US2016185586, US2016068311, US2016046421, US2014360970, US2014319144, US2014263475, US2014021157, US2013202228, JP2013209104, CN106103297,

Abstract:

Source: US2011024423A A tamper-evident package having pressurized contents includes a closure and associated container which cooperate to provide desired tamper-evidence upon initial removal of the closure from the container, while promoting convenient and comfortable removal and use by consumers. In particular, the package is configured such that from a fully applied position of the closure on the container, the closure is movable through a predetermined angle prior to actuation of the tamper-evident feature on the package. In this fashion, the torque which must be applied to the closure for overcoming the static friction at the sealing interface between the closure and the container can be overcome prior to the application of torque required for operating the tamper-evident feature of the package. The present invention contemplates enhancing the opening performance of the package by configuring the package to include certain structure features to facilitate convenient, consistent, and comfortable use by consumers.

0) US2005279727A – HINGED LID CLOSURE PROVIDED WITH A TAMPER-EVIDE...

15) Family number: 29779887 (US2005279727A)

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Title: HINGED LID CLOSURE PROVIDED WITH A TAMPER-EVIDENT ELEMENT FOR A CONTAINER CONTAINING A FREE-FLOWING PRODUCT

Priority: DE20022007423U 20020510 DE20035003489 20030506 WO2003EP04738 20030506

Family:

Publication number	Publication date	Application number	Application date
AU2003232727 AA	20031124	AU20030232727	20030506
AU2003232727 BB	20070125	AU20030232727	20030506
AU2003232727 BH	20090730	AU20030232727	20030506
BRPI0310004 A	20050215	BR2003PI10004	20030506
BRPI0310004 B1	20140225	BR2003PI10004	20030506
CA2485422 AA	20041109	CA20032485422	20030506
CA2485422 C	20110308	CA20032485422	20030506
CN100333977 C	20070829	CN20038010367	20030506
CN1652981 A	20050810	CN20038010367	20030506
DE20207423 U1	20020829	DE20022007423U	20020510
DE50303489 D1	20060629	DE20035003489	20030506
EP1503942 A1	20050209	EP20030749870	20030506
EP1503942 B1	20060524	EP20030749870	20030506
ES2265579 T3	20070216	ES20030749870T	20030506
IN01839KN2004 A	20060804	IN2004KN01839	20041202
IN238828 B	20100226	IN2004KN01839	20041202
JP2005529804 T2	20051006	JP20040503358T	20030506
JP4509772 B2	20100721	JP20040503358T	20030506
MXPA04011094 A1	20050214	MX2004PA11094	20030506
PL208680 B1	20110531	PL20030372362	20030506
PL372362 A1	20050725	PL20030372362	20030506
RU2004136184 A	20050810	RU20040136184	20030506
RU2312801 C2	20071220	RU20040136184	20030506
US2005279727 AA	20051222	US20050513547	20050622
WO03095323 A1	20031120	WO2003EP04738	20030506

Probable Assignee: SEAGUIST LOFFLER KUNSTSTOFFWERK

Assignee(s):^(std): GRASWALD MARTIN ; JACKEL GERHARD F ; SEAGUIST LOEFFLER KUNSTSTOFFWE ; JAECKEL GERHARD ; SEAGUIST LOFFLER KUNSTSTOFFWER ; SEAGUIST LOEFFLER KUNSTSTOFFWERK GMBH ; SEAGUIST LOFFLER KUNSTSTOFFWERK GMBH ; CIQUEZET LOFFLER PLASTIC PROC ; SIKVIST LEFFLER KUNSTSHTOFFVER

Assignee(s): SEAGUIST LOFFLER KUNSTSTOFFWERK ; CIQUEZET LOFFLER PLASTIC PROCESSING CO ; SIKVIST LEFFLER KUNSTSHTOFFVERK GMBKH ; CIQUEZET LOFFLER PLASTIC PROCESSING CO LTD ; JACKEL GERHARD

Inventor(s):^(std): EHKKE GERKHARD ; GERHARD JAECKEL ; GERHARD JACKEL ; GERHARD GRASWALD MARTIN JAECKE ; GRASWALD MARTIN ; JACKEL GERHARD ; GRASVAL D MARTIN ; JAECKEL GERHARD ; JOCKEL GERHARD ; MARTIN GRASWALD ; JACKEL GERHARD F

Inventor(s): JACKEL GERHARD FK ; JACKEL GERHAND ; GRASVAL'D MARTIN ; GERHARD JOCKEL ; GRASWALD MARTIN JAECKEL GERHARD ; EHKKE GERKHARD

Agent(s): SHELSTON IP PTY LTD; SHELSTON IP; SMART AND BIGGAR; WOOD PHILLIPS KATZ CLARK AND MORTIMER

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW

HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK
ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ
TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class B65D47/08 B65D47/36 B65D49/12 B65D51/20 B65D55/02 B65D55/06 (Advanced/Invention);
(IPC 8-9); B65D47/08 B65D49/00 B65D51/18 B65D55/02 (Core/Invention)

International class B65D101/00 B65D47/08 B65D47/10 B65D49/12 B65D55/02 B65D55/06
(IPC 1-7);

CPC: B65D47/0804 B65D55/06

European class: B65D47/08B B65D55/06

US class: 215/237 215/253 220/259.1 222/541.5 222/541.6

[Classification Explorer](#)

Cited documents: WO0041943 A1, US6398067 BA, US4696408 A, JP4062645 U1, JP4035553 U1,
JP11011508 A2, DE29512523 U1, DE2951252 B, DE20116320 U1, DE2011632 B2,
DE19734874 A1,

Forward Citations: WO15128091, WO15023829, WO13023742, WO07109863, WO05113365, US9725208,
US9701451, US9650184, US9630753, US9546027, US9511906, US9090386,
US8925755, US8777030, US8490804, US8403159, US8043269, US7967167,
US7694845, US2015344196, US2014312038, US2013087523, US2012061413,
US2011209322, US2011006031, US2010264145, US2010180553, US2009152269,
US2009071927, US2007145001, US2006043052, KR101753676, JP2012136261,
JP2012096808, JP2006199318, JP2006151478, FR2870215, EP1789338,
DE102011110548, CN105636875, CN105059708, CN103958363, CN103708088,
CN103213744, AU2012341129, AU2012341129, AU2012341129,

Abstract:

Source: US2005279727A A swing-lid closure (30; 100; 200) for containers, having a closure body (32; 214) which, on its top side, has an annular shoulder (42; 108; 212) and a through-passage channel (38) which opens out in an outlet opening (50), having a swing lid (34; 114; 208) with a lid shell (48; 112; 216) of a hinge (56) can be pivoted between a closed position and an open position, having a radial depression (58; 118; 220) of the lid shell (48; 112; 216), which is provided on the front side of the swing lid (34; 114; 208) and extends over part of the circumference of the swing lid (34; 114; 208), having a tamperproof securing strip (60; 104; 204) which extends in the circumferential direction on the annular shoulder (42; 108; 212) of the closure body (32; 214) and has its bottom edge fastened on the annular shoulder (42; 108; 212) via predetermined breaking points (64) and, in the original closed position of the swing lid (34; 114; 208), projects up into the depression (58; 118; 220) of the lid shell (48; 112; 216) in an arcuate manner, and, for the purpose of forming a tear-off opening (66), the circumferential length of the depression (58; 118; 220) of the lid shell (48; 112; 216) is greater, at least in a circumferential direction of the lid shell (48; 112; 216), than the circumferential length of the tamperproof securing strip (60; 104; 204). In its position which indicates the intact state, the tamperproof securing strip (60; 104; 204) is secured by a device (68; 70; 72; 74; 76; 78; 80; 82; 106; 108; 110; 202; 206; 210) by means of which the tamperproof securing strip (60; 104; 204) is connected in a form-fitting and/or force-fitting manner to the swing lid (34; 114; 208). This results in the tamperproof securing strip being better safeguarded against manipulation.

16) Family number: 34457199 (US2007116386A)

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Title: PACKAGE CLOSURE AND METHOD
Priority: US20050732376P 20051101 US20060589449 20061030 WO2006US42528 20061031
Family:

Publication number	Publication date	Application number	Application date
CA2627802 AA	20080429	CA20062627802	20061031
CA2627802 C	20140715	CA20062627802	20061031
EP1943156 A1	20080716	EP20060827205	20061031
JP2009513309 T2	20090402	JP20080538974T	20061031
JP5085554 B2	20121128	JP20080538974T	20061031
US2007116386 AA	20070524	US20060589449	20061030
US7946003 BB	20110524	US20060589449	20061030
WO07053633 A1	20070510	WO2006US42528	20061031

Probable Assignee: REYNOLDS PRESTO PRODUCTS INC

Assignee(s):^(std): REYNOLDS CONSUMER PROD ; BOULANGER PETER J ; BOULANGER PETER JOHN ; SPRAGUE PAUL ADAM ; SPRAGUE PAUL A

Assignee(s): CREDIT SUISSE SYDNEY BRANCH ; REYNOLDS CONSUMER PRODUCTS INC ; REYNOLDS CONSUMER PRODUCTS INC6603 WEST BROAD STREETRICHMONDVA23230US ; REYNOLDS PRESTO PRODUCTS INC ; BANK OF NEW YORK MELLON

Inventor(s):^(std): BOULANGER PETER JOHN ; SPRAGUE PAUL ADAM ; SPRAGUE PAUL A ; BOULANGER PETER J

Inventor(s): SPRAGUE PAUL ; BOULANGER PETER ; SPRAGUE PAUL ADAMUS ; BOULANGER PETER JOHNUS

Agent(s): ROBIC; GERBINO ANGELO ET AL; ISONO MICHIZO; MERCHANT AND GOULD PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): [A44B19/00 A44B19/16 B65D33/16 B65D33/25](#) (Advanced/Invention);
[A44B19/00 A44B19/10 B65D33/16 B65D33/25](#) (Core/Invention)

CPC: [Y10T24/15 Y10T24/2532 Y10T24/2534 Y10T24/45168 B65D33/2591 A44B19/16 A44B19/267](#)

European class: [B65D33/25C K44B19/16 K44B19/26D](#)

US class: [24/30.50R 24/30.5R 24/399 24/399S 24/400 24/400S 24/585.12 24/585.120 24/585.120S 383/59 383/59S 383/61.2 383/61.200 383/61.200S 383/64 383/64P](#)

[Classification Explorer](#)

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Forward Citations: WO13019619, WO08137135, US9554628, US9505531, US9321560, US8196269, US2012099805, US2011311167, US2010296756, US2010175230, US2009142007, US2008307614, US2008273819,

Abstract:

Source: US2007116386A A reclosable tamper-evident package is opened and closed repeatedly by opening and

closing a first closure of a package, and when it is desired to close the package and provide an indication of further opening, a second closure is closed that cannot readily be opened. The tamper evident package has a closure assembly that includes a zipper closure arrangement with a slider device. In one embodiment, the slider device is movable between a first axial position and a second axial position. When the slider device is in the first axial position, moving the slider device laterally along the zipper closure arrangement in a first direction closes the first closure. When the slider device is in the second axial position, moving the slider device laterally along the zipper closure arrangement in a first direction closes both the first closure and the second closure. A method of using a package includes grasping a slider device and moving the slider device laterally in a first direction to close the first closure and to permanently close the second closure.

17) Family number: 33366293 (US2008067142A)

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Title: SEALING MEANS FOR A CLOSURE, CLOSURE AND PROCESS

Priority: EP20040051559 20050407 EP20050747178 20050408 EP20050792201 20050901
 EP20050857768 20050802 US20040606240 20040901 US20050574567 20050901
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 WO2005EP53777 20050802 WO2005EP50575 20050408 US20050655324P 20050223
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Family:

Publication number	Publication date	Application number	Application date
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<u>EP2065314 A3</u>	20090916	EP20080171115	20050408
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<u>ES2319554 T3</u>	20090508	ES20050747178T	20050408
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<u>HK1099893 A3</u>	20070824	HK20070107500	20070712
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<u>HK1101158 A3</u>	20071012	HK20070109312	20070827
<u>HK1101817 A1</u>	20090409	HK20070109862	20070911
<u>HK1101817 A3</u>	20071026	HK20070109862	20070911
<u>HK1120482 A3</u>	20090403	HK20090101274	20090211
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<u>IL181627 A1</u>	20101031	IL20050181627	20050802
<u>IN01352CN2007 A</u>	20070831	IN2007CN01352	20070402
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<u>JP4949250 B2</u>	20120606	JP20070528817	20050802
<u>KR101233851 B1</u>	20130215	KR20077007476	20050802
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<u>MA28917 B1</u>	20071001	MA20070029797	20070403
<u>MX2007002498 A1</u>	20071010	MX20070002498	20050802
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<u>PT1789336 T</u>	20081128	PT20050857768T	20050802
<u>PT1799573 T</u>	20090318	PT20050747178T	20050408
<u>PT1799574 T</u>	20080422	PT20050792201T	20050901
<u>TH40759 B</u>	20140708	TH20061000791	20060223
<u>TH41104 B</u>	20140814	TH20061000861	20060228
<u>TH44406 B</u>	20150527	TH20061000862	20060228
<u>TH81435 A</u>	20061123	TH20061000791	20060223
<u>TH81829 A</u>	20061214	TH20061001085	20060313
<u>TH82662 A</u>	20070125	TH20061000861	20060228
<u>TH83086 A</u>	20070215	TH20061000862	20060228
<u>UA87870 C2</u>	20090825	UA20070003322	20050802
<u>US2008067142 AA</u>	20080320	US20050574569	20050802
<u>US2008169261 AA</u>	20080717	US20050574567	20050901
<u>US2008272083 AA</u>	20081106	US20050886272	20050407
<u>US2008314000 AA</u>	20081225	US20050574565	20050408
<u>US7905820 BB</u>	20110315	US20050574565	20050408
<u>US8393483 BB</u>	20130312	US20050574569	20050802
<u>US8733566 BB</u>	20140527	US20050574567	20050901
<u>VN7860 A1</u>	20090825	VN20070000680	20050802
<u>WO06024550 A1</u>	20060309	WO2005EP51575	20050408
<u>WO06024656 A1</u>	20060309	WO2005EP54307	20050901
<u>WO06097151 A2</u>	20060921	WO2005EP51559	20050407
<u>WO06097151 A3</u>	20070607	WO2005EP51559	20050407
<u>WO06117024 A1</u>	20061109	WO2005EP53777	20050802
<u>ZA200702221 A</u>	20080925	ZA20070002221	20070316

Probable Assignee: CREANOVA UNIVERSAL CLOSURES

Assignee(s):^(std): CREANOVA UNIVERSAL CLOSURES CO LTD ; CREANOVA UNIVERSAL CLOSURES LT ; DRUITT RODNEY ; LAGLER LOUIS ; DRUITT ROD ; DRUITT RODNEY M ; CREANOVA UNIVERSAL CLOSURES LTD ; CREANOVA UNIVERSAL CLOSURE LTD ; CREANOVA UNIVERSAL CLOSURES

Assignee(s): CREANOVA UNIVERSAL CLOSURES CO

Inventor(s):^(std): DRUITT ROD ; DRUITT RODNEY ; LAGLER LOUIS ; ROD DRUITT ; RODNEY DRUITT ; LOUIS LAGLER ; LOUIS DRUITT RODNEY LAGLER ; DRUITT RODNEY M

Inventor(s): DRUITT RODNEY LAGLER LOUIS

Agent(s): DAVIES COLLISON CAVE PTY LTD; DAVIES COLLISON CAVE; GOUDREAU GAGE DUBUC; RENTSCH AND PARTNER; REINHOLD COHN AND PARTNERS; OSTROLENK FABER GERB AND SOFFEN; OSTROLENK FABER LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B29C45/14 B65B7/28 B65D39/08 B65D41/00 B65D41/04 B65D41/14 B65D41/32 B65D41/34 B65D41/38 B65D43/16 B65D47/08 B65D47/10 B65D47/36 B65D51/18 B65D53/00 B65D53/02 B65D53/04 B65D55/02 (Advanced/Invention); B65D41/04 B65D41/34 (Advanced/Non-invention); B29C45/14 B65B7/28 B65D41/00 B65D41/04 B65D41/32 B65D41/34 B65D47/00 B65D47/06 B65D47/08 B65D51/18 B65D53/00 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B65D41/04

CPC: B65D41/045 B65D41/3447 B65D41/0428 B65D47/0809 B65D2101/0023 B65D2215/02 B65D2251/1016 B65D2251/1066 B65D47/243 B65D2251/105 B65D41/04

European class: B65D41/04 B65D41/04B2 B65D41/04D2 B65D41/34D1 B65D47/08B1 B65D47/24A2 L65D101/00A3 L65D215/02 L65D251/10D L65D251/10D4 L65D251/10F

US class: 215/235 215/235S 215/237 215/252 215/253 215/253S 215/254 215/254S 215/324 215/329 215/329S 215/341 215/341S 215/343 215/344 215/345 215/354 220/259.1 220/259.100S 220/326 220/835 222/153.06 222/153.060S 222/541.5 222/541.500S 222/556 264/250 264/263 493/114 493/84 53/490 53/490P

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AU1545676 A1, AU1545676, AU1418083 A1, AU1418083,

Forward Citations: WO15128091, WO14193211, WO13129940, WO13007826, WO12095501, WO09053693, WO08068416, WO08068416, USD778160, USD775950, USD756776, USD756234, USD755251, USD741713, USD634200, USD634199, USD633386, US9828146, US9758281, US9533803, US9511906, US9439523, US9428292, US9415909, US9382045, US9169048, US9096359, US9090386, US8763830, US8672158, US8646634, US8596493, US8403159, US8292101, US8276777, US8231020, US7861873, US2016145032, US2015251820, US2015108167, US2015034644, US2014346172, US2014312038, US2013248479, US2013082056, US2013043206, US2012091134, US2011006031, US2011000137, US2010170910, US2008110933, KR101660932, KR101594711, JP2008308181, GB2467057, GB2467057, EP1985549, DE102014204831, CN105059708, CN105008236, CN105008236, CN103596850, CN103596850, CN103402884, CN103342190, CN103342190, CN103342190, CN103342189, CN103342189, CN103318519, CN103298705, CN103298705, CN103287231, CN102514806, AU2012206593,

Abstract:

Source: US2008067142A The present invention is directed to a sealing means for sealing of a neck of a container, especially a container for carbonated beverages. The sealing means comprises a radially deformable outer sealing means suitable to be engaged with an outer free surface of a neck of the container. The outer sealing means comprises an annular base which blends by a blend into a vertical top surface and at least one annular sealing ring arranged at a free end of the annular base, protruding radially inwardly above the inner surface of the base and forming in engaged position with the neck a first contact area with the outer free surface.

0) US2002033374A – TAMPER EVIDENCING CLOSURE

18) Family number: 28185285 (US2002033374A)

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Title: Tamper evidencing closure

Priority: EP20030770468 20030924 KR20007000005U 20000522 US19970904878 19970801
 US19990323571 19990601 US20000653679 20000901 US20050250249 20051011
 US20080203992 20080904 WO2000US12283 20000505 WO1998US15527 19980723
 WO2003US30350 20030924 US20020266091 20021004 US20010955844 20010918
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Family:

Publication number	Publication date	Application number	Application date
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AU199885938 A1	19990222	AU19980085938	19980723
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Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; ADAMS BRIAN M ; MA MIKE X ; MA MIKE XIAOLI

Assignee(s): MA XIAOLI ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL CORP ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; WAYZATA INVESTMENT PARTNERS LLC ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AS AGENT ; WELLS FARGO FOOTHILL LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS

Inventor(s):^(std): MIKE X MA ; MA XIAOLI ; MA MIKE XIAOLI ADAMS BRIAN M ; MA MIKE X ; ADAMS BRIAN M ; XIAOLI MA ; MA MIKE XIAOLI ; BRIAN M ADAMS

Inventor(s): THE DESIGNATION OF THE INVENTOR HAS NOT YET BEEN FILED ; MA MIKE ; ADAMS BRIAN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL; DAVID J BREZNER DORSEY AND WHITNEY LLP; ADAM K SACHAROFF MUCH SHELST FREED DENENBERG AMENT AND RUBENSTEIN PC; DORSEY AND WHITNEY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B28B13/06 B28B7/10 B29C41/42 B29C45/44 B65D1/00 B65D39/00 B65D41/00 B65D41/32 B65D41/34 B65D49/12 B65D50/00 B65D51/00 B65D51/16 B65D55/02 (Advanced/Invention); B65D41/34 (Advanced/Non-invention); B65D39/00 B65D41/34 B65D50/00 B65D55/02 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B28B13/06 B28B7/10 B29C41/42 B65D0/0000 B65D1/00 B65D39/00 B65D41/00 B65D41/34 B65D50/00 B65D55/02

CPC: B65D41/3428 B29C43/42 B29C43/50 B29C45/4407 B29L2031/565 B65D41/3409 B65D2101/0046

European class: B29C43/42 B29C43/50 B29C45/44B B65D41/34A1 B65D41/34C1 L29C43/50 L29L31/56B L65D101/00A3D

US class: 215/252 215/254 215/256 215/258 215/258S 215/307 215/307S 215/329 215/344 215/344S 215/43 215/44 264/328.1 264/328.100S 264/334 264/334S

[Classification Explorer](#)

Cited documents: WO0012402 A1, US7228979 BB, US6736280 BA, US6474491 BA, US6276543 BA, US6224802 BA, US6177041 BA, US6177041 B1, US6173853 BA, US6152316 A, US6119883 A, US6116442 A, US6112923 A, US6109464 A, US6105802 A, US6102226 A, US6053344 A, US6015054 A, US5913437 A, US5893474 A, US5868281 A, US5853095 A, US5779075 A, US5775527 A, US5749484 A, US5727705 A, US5715959 A, US5692628 A, US5685443 A, US5660288 A, US5657889 A, US5609262 A, US5570798 A, US5533633 A, US5480045 A, US5465876 A, US5456376 A, US5415306 A, US5400913 A, US5346082 A, US5307946 A, US5307945 A, US5295600 A, US5285912 A, US5246125 A, US5232125 A, US5190178 A, US5105961 A, US5105960 A, US5080246 A, US5078290 A, US5076453 A, US4981230 A, US4978016 A, US4875594 A, US4813561 A, US4801031 A, US4732289 A, US4664278 A, US4526282 A, US4511053 A, US4196818 A, US3338446 A, US3329296 A, US3329295 A, US2007108154 AA, US2005199573 AA, US2002001637 AA, US2001027957 AA, FR2421812 A1, EP0635434 A1, EP0489865 A1, EP0341992 A1, EP0049876 A1, DE3912137 A1,

Forward Citations:

WO15046889, WO13001454, WO13001454, WO11070326, WO09095297, WO08092716, WO08092716, WO07081656, WO07033722, WO04048220, WO03050033, WO03016161, WO03004369, USD763691, USD756776, USD756234, USD747201, USD746685, USD723919, USD664852, USD654362, USD619003, USD613162, USD606401, USD584619, USD584149, USD564879, USD553987, USD550084, USD538654, USD534802, USD531505, USD530205, USD529804, USD527631, USD525523, USD525125, USD518716, USD508204, USD507745, USD457433, USD449991, US9821934, US9738409, US9676129, US9617045, US9522759, US9409680, US9403310, US9290306, US9205946, US8931243, US8926590, US8845256, US8807360, US8650839, US8567619, US8544666, US8529501, US8517194, US8499950, US8443999, US8413830, US8408208, US8348576, US8251236, US8231018, US8206377, US8100277, US8066139, US8061543, US8016142, US7891511, US7875000, US7798359, US7780024, US7766178, US7735664, US7721510, US7644902, US7637384, US7451898, US7445130, US7422169, US7413097, US7293396, US7261226, US7198170, US7059553, US7032772, US6974046, US6968966, US6968965, US6948630, US6877624, US6702161, US6659297, US6622460, US6571994, US6557714, US6382443, US2017057139, US2015166225, US2014263475, US2014190968, US2013206718, US2013038992, US2012111822, US2012067892, US2012018401, US2011309048, US2011151980, US2011100947, US2011024423, US2010314391, US2010308050, US2010230374, US2010215548, US2010102021, US2010089863, US2010084364, US2010032402, US2009302037, US2009200259, US2009200258, US2009020530, US2009013642, US2008218362, US2008210745, US2008173612, US2007257002, US2007251950, US2007232893, US2007173756, US2007158295, US2007125785, US2007125783, US2007034590, US2007000932, US2006266727, US2006208115, US2006163192, US2006151423, US2006070972, US2005252878, US2005199574, US2005167879, US2005167389, US2005145629, US2005092750, US2005072751, US2005040176, US2005000931, US2004251276, US2004168999, US2004159727, US2004155006, US2004094501, US2004045925, US2003192854, US2003150833, US2003116522, TWI498258, KR200462672, JP4932710, JP2008508151, JP2007501169, ITMI20111912, GB2476089, FR2911584, ES2321471, EP2586721, EP2223656, EP2123569, EP2088090, EP1953091, EP1660379, EP1445207, EP1288133, DE102010039036, CN103857599, CN103857599, AU2003302391, AU2002333387,

Abstract:

Source: US2002033374A A container including a neck and an opening, in combination with a tamper-evidencing closure including a top, a depending annular skirt and a tamper-evidencing band frangibly connected to the annular skirt. The container includes a first securing structure on the neck spaced from the opening. The tamper-evidencing band includes an inwardly turned retaining rim that extends at least partially upwardly. The retaining rim has a free edge for engagement with the locking surface as the closure is removed from the neck. The retaining rim includes a plurality of outwardly directed flutes spaced circumferentially thereon and a second securing structure located on the retaining rim between the flutes.

19) Family number: 51895480 (US2012228164A)

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Title: CLOSURE FOR A PRODUCT RETAINING CONTAINER

Priority: AU20120224574 20120309 AU20130204623 20120309 US20110451192P 20110310
 US20110538242P 20110923 US20120416006 20120309 CN201280021750 20120309
 WO2012EP54084 20120309 US20140263473 20140428

Family:	Publication number	Publication date	Application number	Application date
	AR088776 AA	20140710	AR2012P100787	20120309
	AU2012224574 AA	20120913	AU20120224574	20120309
	AU2012224574 BB	20160922	AU20120224574	20120309
	AU2013204623 AA	20130509	AU20130204623	20130412
	AU2013204642 AA	20130509	AU20130204642	20130412
	AU2013204681 AA	20130509	AU20130204681	20130412
	CA2829257 AA	20130906	CA20122829257	20120309
	CL2013002585 A1	20140425	CL20130002585	20130909
	CL2015002424 A1	20160923	CL20150002424	20150828
	CN103502107 A	20140108	CN201280021750	20120309
	CN106043939 A	20161026	CN201610460301	20120309
	EP2683620 A1	20140115	EP20120708023	20120309
	NZ615220 A	20150529	NZ20120615220	20120309
	US2012228164 AA	20120913	US20120416006	20120309
	US2014231430 AA	20140821	US20140263473	20140428
	US9511912 BB	20161206	US20140263473	20140428
	WO12120109 A1	20120913	WO2012EP54084	20120309
	ZA201306765 A	20140625	ZA20130006765	20130909

Probable Assignee: NOMACORC LLC

Assignee(s):^(std): AAGAARD OLAV MARCUS ; CAMPBELL GLASGOW KATHERINE ; NOMACORC LLC ; THOMPSON MALCOLM JOSEPH ; KIRCH MARCO JOSEF OTTO ; GLASGOW KATHERINE CAMPBELL

Assignee(s): TRIANGLE CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; ANTARES CAPITAL LP SUCCESSOR AGENT AS

Inventor(s):^(std): AAGARD OLAV MARCUS ; CAMPELL GLASGOW KATHERINE ; THOMPSON MALCOLM JOSEPH ; KIRCH MARCO JOSEF OTTO ; GLASGOW KATHERINE CAMPBELL ; AAGAARD OLAV MARCUS ; OLAV MARCUS AAGAARD ; MARCO JOSEF OTTO KIRCH ; MALCOLM JOSEPH THOMPSON ; KATHERINE CAMPBELL GLASGOW ; CAMPBELL GLASGOW KATHERINE

Agent(s): FB RICE; FB RICE PTY LTD; RIDOUT AND MAYBEE LLP; ESTUDIO CAREY LTDA; ESTUDIO CAREY LIMITADA; COHAUSZ AND FLORACK; WITHROW AND TERRANOVA PLLC; COHAUSZ AND FLORACK 24

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
 (IPC 8-9): [B65B31/02](#) [B65B7/28](#) [B65D](#) [B65D1/02](#) [B65D25/00](#) [B65D39/00](#) [B65D51/00](#) [B65D51/28](#) [B65D81/00](#) [B65D81/20](#) [B65D81/24](#) [B65D81/32](#) [C12H](#) [C12H1/14](#) [C12H1/22](#) (Advanced/Invention); [C12H1/14](#) [C12H1/22](#) (Advanced/Non-invention)

CPC: [B65D51/2807](#) [B65D1/0207](#) [B65D1/0215](#) [B65D81/2076](#) [B65D81/2084](#) [B65D81/24](#) [B65D81/3222](#) [C12H1/14](#) [C12H1/22](#)

European class:

B65D1/02B B65D1/02B1 B65D51/28B B65D81/20F1 B65D81/20F2 B65D81/24
B65D81/32C1

US class: 206/205 220/212 220/694 53/403 53/471

Classification Explorer

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Forward Citations: WO13068473, USD740741, US9688040, US2011253666, AU2013204648,

Abstract:

Source: US2012228164A The disclosure relates to a closure for a container, such as, for example, a wine bottle. In one embodiment, the closure includes an oxidant releasing agent that is adapted to release oxygen into an interior portion of the container according to a predefined desired profile. In another embodiment, the closure comprises a gas containing reservoir, a membrane and a barrier layer, said membrane allowing an at least partial exchange of gas between the inside of said reservoir and the inside of said container, and said barrier layer at least partially preventing exchange of gas between the outside of said closure and the inside of said reservoir.

0) US2007284399A – A CLOSURE ASSEMBLY HAVING A SPOUT WITH A MEMORY...

20) Family number: 40902233 (US2007284399A)

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Title: A CLOSURE ASSEMBLY HAVING A SPOUT WITH A MEMORY BAND FOR SPOUT DIRECTING

Priority: CA20072590793 20070530 CN200710110025 20070612 US20090436984 20090507
US20060423630 20060612 US20090560767 20090916 EP20100250876 20100505
US20100754941 20100406

Family:

Publication number	Publication date	Application number	Application date
AT530458 E	20111115	AT20100250876T	20100505
AU2007202467 AA	20080103	AU20070202467	20070529
AU2007202467 BB	20121220	AU20070202467	20070529
AU2010201840 AA	20101125	AU20100201840	20100506
AU2010201840 BB	20131031	AU20100201840	20100506
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CA2590793 C	20131231	CA20072590793	20070530
CN101088881 A	20071219	CN200710110025	20070612
CN104609016 A	20150513	CN201410730898	20070612
CN104609016 B	20171103	CN201410730898	20070612
CO5990180 A1	20081231	CO20070059221	20070612
CZ20070382 A3	20100310	CZ20070000382	20070604
CZ303873 B6	20130605	CZ20070000382	20070604
DE602007002110 D1	20091008	DE200760002110T	20070604
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EP1867574 B1	20090826	EP20070252250	20070604
EP2248733 A1	20101110	EP20100250876	20100505
EP2248733 B1	20111026	EP20100250876	20100505
ES2331929 T3	20100120	ES20070252250T	20070604
ES2375613 T3	20120302	ES20100250876T	20100505
HK1150583 A1	20120518	HK20110104626	20110511
IN00817KO2007 A	20071221	IN2007KO00817	20070528
IN288478 B	20171020	IN2007KO00817	20070528
JP2007331841 A2	20071227	JP20070154723	20070612
JP5356659 B2	20131204	JP20070154723	20070612
MX2007006981 A1	20071211	MX20070006981	20070611
SG138554 A1	20080128	SG20070042906	20070612
US2007284399 AA	20071213	US20060423630	20060612
US2009212079 AA	20090827	US20090436984	20090507
US2010001000 AA	20100107	US20090560767	20090916
US2010187265 AA	20100729	US20100754941	20100406
US7614530 BB	20091110	US20060423630	20060612
US7717307 BB	20100518	US20090560767	20090916
US7789277 BB	20100907	US20090436984	20090507
US7798378 BB	20100921	US20100754941	20100406

Probable Assignee: RIEKE CORP

Assignee(s):^(std): BROOKS LYNN A ; RIEKE CORP ; RIEKECORPORATION ; BAUGHMAN GARY M

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Inventor(s):^(std): BAUGHMAN GARY M ; BROOKS LYNN A

Inventor(s): GARY M BAUGHMAN ; LYNN A BROOKS

Agent(s): SPRUSON AND FERGUSON; MACPHERSON AND KELLEY LAWYERS; SMART AND BIGGAR; LUZ CLEMENCIA DE PAEZ; HEYER VOLKER DIPL PHYS DRRERNAT; WILLIAMS MICHAEL IAN; FAULKNER THOMAS JOHN; TOMAS TESIFONTE ENRIQUE; ONO SHINJIRO; KOBAYASHI YASUSHI; TOMITA HIROYUKI; CHIBA AKIO; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP; WOODWARD EMHARDT MORIARTY MCNETT AND HENRY LLP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR YU

International class
(IPC 8-9): B65D1/02 B65D17/353 B65D25/40 B65D25/44 B65D41/28 B65D41/32 B65D41/50 B65D47/04 B65D47/06 B65D47/10 B65D47/12 B65D47/32 B65D50/00 B65D51/16 B65D55/02 B65D55/06 B67D3/00 (Advanced/Invention); B65D25/38 B65D39/00 B65D41/02 B65D41/32 B65D47/04 B65D47/06 B65D47/12 B65D50/00 B65D51/16 B65D55/02 B67D3/00 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B65D

CPC: B65D25/44 B65D47/063 B65D47/103 B65D47/123 B65D2101/0023 B65D47/06 B65D47/32

European class: B65D25/44 B65D47/06A1 B65D47/10A B65D47/12B1 L65D101/00A3

US class: 220/367.1 222/529 222/530 222/541.9 222/566

[Classification Explorer](#)

Cited documents: WO0249931 A1, WO0034133 A3, WO0034133 A2, US7717307 BB, US7614530 BB, US6712246 BB, US6641007 BB, US6193921 BA, US6135985 A, US5967376 A, US5957376 A, US5899364 A, US5788100 A, US5722570 A, US5641099 A, US5096079 A, US5088632 A, US5035341 A, US4981230 A, US4921147 A, US4877143 A, US4805791 A, US4801031 A, US4718553 A, US4699290 A, US4632282 A, US4618078 A, US4568006 A, US4555048 A, US4320861 A, US4294382 A, US4236629 A, US3613966 A, US3604740 A, US2561596 A, US2005274815 AA, JPS6228754 U, JP9290848 A2, JP9183455 A2, JP6228754 U, JP62028754 U1, JP62028754 U, JP6003854 U1, JP2002154570 A2, JP2002154570, JP0603854 U, GB2121374 A1, GB2055772 A1, GB1270086 A, FR2578819 A1, FR25788 E, FR02578819, EP2248733 A1, EP1867574 A1, EP0432059 B1, EP0221419 A2, EP0161746 B1, EP0161746 A2, DE3805648 A1,

Forward Citations: WO17156487, WO17112925, WO16081664, WO14184341, WO14124044, WO13155127, WO12160563, USD669788, USD655605, USD650286, USD641628, USD617188, US9796506, US9669972, US9550606, US9056699, US8857639, US8814004, US8770450, US8684205, US8602235, US8453889, US8292133, US7988007, US7798378, US2016101911, US2012237377, US2011186535, US2011114679, US2011095059, US2010282783, US2010187265, US2008296301, US2007278256, JP2011513145, JP2010235125, EP2566767, EP2566767, EP2248733, EP2248732, CZ303873, CN104443716, CN104443716, CN103781722, CN102887276, AU2009243533,

Abstract:

Source: US2007284399A A closure assembly for a container, the container including a raised outlet defining a dispensing opening, includes a closure body having a nestable and extendable spout formed with a generally cylindrical section, a frustoconical section, and an invertible fold between these two sections so as to enable the closure body to be either nested or extended. The generally cylindrical section defines an outlet opening and a threaded closing cap is assembled to the generally cylindrical section for closing off the outlet opening. A retainer is used for connecting the closure body to the raised outlet wall and the frustoconical section includes a thicker wall portion, described as a memory band portion, for enabling the closure body to maintain a selected orientation upon deflection into the selected orientation in order to provide directional discharge of the container contents.

0) US2007131641A – CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

21) Family number: 31517864 (US2007131641A)

© PatBase

Title: CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

Priority:

AU20030900141	20030114	AU20030900678	20030217	AU20030904044	20030804
AU20040261315	20040804	AU20040900141	20040114	AU20030904359	20030815
AU20030904196	20030808	AU20030904527	20030822	AU20040200617	20040217
AU20040902799	20040526	AU20040902799	20040526	AU20040902722	20040521
AU20040900744	20040216	AU20040900450	20040203	AU20040902794	20040526
AU20040900814	20040218	AU20040900245	20040121	AU20040902721	20040521
AU20040900657	20040212	AU20040902799	20040527	AU20040900879	20040223
AU20060203297	20060801	GB20070009820	20040804	GB20060004470	20040804
WO2004AU01035	20040804	AU20040903406	20040622	AU20040903775	20040709
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AU20040902928	20040601	AU20040903041	20040607	AU20040902931	20040602
AU20040903153	20040610				

Family:

Publication number	Publication date	Application number	Application date
<u>AU2003900141 A0</u>	20030130	AU20030900141	20030114
<u>AU2003900678 A0</u>	20030227	AU20030900678	20030217
<u>AU2003904044 A0</u>	20030814	AU20030904044	20030804
<u>AU2003904196 A0</u>	20030821	AU20030904196	20030808
<u>AU2003904359 A0</u>	20030828	AU20030904359	20030815
<u>AU2004200617 AA</u>	20040902	AU20040200617	20040217
<u>AU2004261315 AA</u>	20050210	AU20040261315	20040804
<u>AU2004261315 BB</u>	20060504	AU20040261315	20040804
<u>AU2004261315 CA</u>	20070802	AU20040261315	20040804
<u>AU2006203297 AA</u>	20060824	AU20060203297	20060801
<u>BRPI0412963 A</u>	20060926	BR2004PI12963	20040804
<u>CA2534758 AA</u>	20060203	CA20042534758	20040804
<u>CN1863710 A</u>	20061115	CN200480028971	20040804
<u>DE112004001435 T5</u>	20060727	DE200411001435	20040804
<u>EP1660379 A1</u>	20060531	EP20040737650	20040804
<u>EP1660379 A4</u>	20091230	EP20040737650	20040804
<u>GB200604470 A0</u>	20060412	GB20060004470	20040804
<u>GB200709820 A0</u>	20070704	GB20070009820	20040804
<u>GB2420114 A1</u>	20060517	GB20060004470	20040804
<u>GB2420114 B2</u>	20070718	GB20060004470	20040804
<u>GB2435038 A1</u>	20070815	GB20070009820	20040804
<u>GB2435038 B2</u>	20080521	GB20070009820	20040804
<u>JP2007501169 T2</u>	20070125	JP20060522180T	20040804
<u>KR20060042422 A</u>	20060512	KR20067002437	20040804
<u>KR20070033052 A</u>	20070323	KR20077005410	20040804
<u>NZ544867 A</u>	20080926	NZ20040544867	20040804
<u>US2007131641 AA</u>	20070614	US20040567195	20040804
<u>WO05012125 A1</u>	20050210	WO2004AU01035	20040804
<u>WO05077777 A1</u>	20050825	WO2005AU00222	20050218
<u>ZA200601839 A</u>	20070627	ZA20060001839	20060101

Probable Assignee: RBC TRUSTEES CI LTD

Assignee(s):^(std): ABACUS ; ABACUS C I LTD ; ABACUS C I LTD TRUSTEE OF T AS ; ABACUS C I LTD COMO FIDEI COMI ; ABACUS C I LTD TRUSTEE FOR AS ; ABACUS C I LTD AS TRUSTEE FOR ; ABACUS C I LTD AS TRUSTEE OF T ; CTECH EQUIPMENT PTY LTD ; WOOLFORD L ; RBC TRUSTEES CI LTD AS TRUSTEE ; HIGGINS CHRISTOPHER

LYNDON ; CTECH CLOSURES PTY LTD ; ABACUS C I COMO FIDEI COMISSARIO DO FIDE LTD

Assignee(s): ABACUS C I LIMITED ; ABACUS TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVI ; ABACUS TRUSTEE FOR BAYVIEW TRUST AS LTD ; ABACUS C I TRUSTEE OF BAYVIEW TR AS LTD ; RBC TRUSTEES LTD ; RBC TRUSTEES CI LTD ; RBC TRUSTEES CI LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS CI TRUSTEE OF BAYVIEW TRUST LTD AS ; ABACUS CI LTD ; RBC TRUSTEES (CI) LTD ; ABACUS CI LIMITED TRUSTEE FOR BAYVIEW TRUST AS ; ABACUS C I TRUSTEE FOR BAYVIEW T AS LTD ; ABACUS C I LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS C I LIMITED COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVIEW TRUST ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST JERSEY ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST ; ABACUS LTD ; ABACUS C I TRUSTEE FOR BAYVIEW TR AS LTD ; ABACUS (C I) LIMITED AS TRUSTEE FOR THE... ; ABACUS (C I) LIMITED COMO FIDEI COMISSARIO DO... ; ABACUS (CI) LTD

Inventor(s):^(std): PETER WILLIAM BROWN ; LYNDON HIGGINS CHRISTOPHER ; HIGGINS CHRISTOPHER LYNDON ; CHRISTOPHER LYNDON HIGGINS ; BROWN PETER WILLIAM ; HIGGINS CHRISTOPHER L

Inventor(s): HIGGINS CHRISTOPHER

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; BROOKS KUSHMAN PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D41/04 B65D41/32 B65D41/34 B65D47/06 B65D47/08 B65D47/20 B65D51/00 B65D51/28 B65D81/32 B65D83/00 (Advanced/Invention);
B65D41/32 B65D41/34 (Advanced/Non-invention);
B65D41/04 B65D41/32 B65D41/34 B65D47/04 B65D47/06 B65D47/08 B65D51/00 B65D51/24 (Core/Invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D101/00 B65D41/34 B65D47/20 B65D51/28

CPC: B65D51/2835 B65D47/06 B65D47/08 B65D41/3409 B65D51/2828 B65D41/0421 B65D41/0428 B65D41/3428 B65D47/0857 B65D51/2807 B65D2101/00

European class: B65D41/04B1A B65D41/04B2 B65D41/34 B65D41/34A1 B65D41/34C1 B65D47/06 B65D47/08 B65D47/08D B65D51/28B1B B65D51/28B1B1 L65D101/00

US class: 215/252

[Classification Explorer](#)

Cited documents: WO9840289 A1, WO9838104 A1, WO9743190 A1, WO05012125 A1, WO03010061 A2, WO03004369 A1, WO02062675 A1, WO0168469 A1, US6230884 BA, US6148996 A, US5950850 A, US5660288 A, US5346082 A, US5038951 A, US5020682 A, US4903865 A, US4813561 A, US4738370 A, US4458821 A, US4457438 A, US2003102280 AA, US2003015490 AA, JP8091402 A2, JP2003519602 T2, JP2003165555 A2, JP11100093 A2, JP11059791 A2, GB2222812 A1, EP1332977 A1, EP1316507 A2,

Forward Citations: WO16009192, WO15004352, WO12130916, WO09154666, WO09154666, WO08061766, WO07082322, WO06013443, WO06013443, WO05077777, US9828146, US9731869, US9382044, US9061801, US8851310, US8807360, US8684225, US8684204, US8356711, US7775386, US2013313287, US2012292321, US2011024423, RU2507137, KR100951526, FR3008393, EP1778555,

Abstract:

Source: US2007131641A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102), a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamper-evident band (110) frangibly connected to said skirt; the neck (10) of the container including a plurality of discretely spaced projections (18) extending outwardly from said neck and adapted to engage with tabs (122) on said tamper-evident band to facilitate breaking of the band (110) from the skirt of the closure.

0) US5258191A – VACUUM-SEALED FOOD CONTAINER HAVING PRESS-ON, P...

22) Family number: 8380493 (US5258191A)

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Title: Vacuum-sealed food container having press-on, pry-off closure

Priority: US19910694149 19910501 US19910694903 19910502 US19930015284 19930208
US19920819462 19920110 US19920820445 19920113 US19940256242 19940701
WO1991US03028 19910502 WO1993US00222 19930108 WO1991US03028 19920502

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199179019 A1</u>	19921221	AU19910079019	19910502
	<u>AU199335824 A1</u>	19930803	AU19930035824	19930108
	<u>AU660614 B2</u>	19950706	AU19910079019	19910502
	<u>BRPI9107304 A</u>	19940614	BR1991PI07304	19910502
	<u>CA2109097 AA</u>	19931022	CA19912109097	19910502
	<u>CA2127693 AA</u>	19940708	CA19932127693	19930108
	<u>EP0583240 A1</u>	19940223	EP19910910049	19910502
	<u>EP0583240 A4</u>	19941109	EP19910910049	19910502
	<u>HU67206 A2</u>	19950228	HU19930002978	19910502
	<u>HU9302978 A0</u>	19940128	HU19930002978	19910502
	<u>JP7500795 T2</u>	19950126	JP19910509396T	19910502
	<u>KR19947000264 A</u>	19940221	KR19937003297	19920502
	<u>RU93057880 A</u>	19960610	RU19930057880	19931029
	<u>US5258191 A</u>	19931102	US19920820445	19920113
	<u>US5341949 A</u>	19940830	US19930015284	19930208
	<u>US5443853 A</u>	19950822	US19940256242	19940701
	<u>WO9219506 A1</u>	19921112	WO1991US03028	19910502
	<u>WO9313990 A1</u>	19930722	WO1993US00222	19930108

Probable Assignee: ANCHOR HOCKING PACKAGING CO

Assignee(s):^(std): ANCHOR HOCKING CORP ; ANCHOR HOCKING PACKAGING

Assignee(s): ANCHOR HOCKING PACKAGING CO ; ANCHOR HOCKING PACKAGING CO US ;
CITICORP NORTH AMERICA INC ; CROWN CORK AND SEAL TECHNOLOGIES ;
DEUTSCHE BANK AG ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS ;
DEUTSCHE BANK NEW YORK BRANCH AGENT AG AS ; CHASE MANHATTAN BANK
COLLATERAL AGENT AS ; HAYES THOMAS H ; CROWN PACKAGING TECHNOLOGY
INC

Inventor(s):^(std): HAYES THOMAS H

Inventor(s): HAYES THOMAS H US ; THOMAS H HAYES

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; MACRAE AND CO

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CZ DE DK ES FI FR GA GB GN GR
HU IE IT JP KP KR LI LK LU MC MG ML MN MR MW NL NO NZ PL PT RO RU SD SE
SK SN SU TD TG UA US

International class
^{(IPC 8-9):} B65D41/34 B65D41/48 B65D41/52 B65D43/10 B65D51/14 B65D51/24
B65D81/34 (Advanced/Invention);
B65D41/32 B65D51/00 (Core/Invention)

International class
^{(IPC 1-7):} B65B41/00 B65B55/00 B65D41/16 B65D41/48 B65D41/52 B65D43/00 B65D43/10
B65D53/04 B65D81/34 B65D85/00 H05B6/00

CPC: B65D41/48 B65D51/145 B65D2101/0023 B65D41/3428 B65D51/24 B65D81/3453
B65D2101/0053 B65D2205/00

European class: B65D41/34C1 B65D41/48 B65D51/14B B65D51/24 B65D81/34M1 L65D101/00A3
L65D101/00A3E L65D205/00

US class:

Classification Explorer

Cited documents: US5078290 A, US5009324 A, US4993572 A, US4942277 A, US4813561 A, US4721218 A, US4694970 A, US4694969 A, US4509654 A, US4478349 A, US4473163 A, US4448345 A, US4390552 A, US4362253 A, US4171084 A, US4129226 A, US4024976 A, US4018353 A, US3940004 A, US3930589 A, US3913771 A, US3866782 A, US3850330 A, US3820678 A, US2517542 A, GB2021530 A1, EP0366617 A2, EP0323812 A2, EP0280065 A1, AU604029 B2, AU604029,

Forward Citations: WO9923007, WO9744262, WO9641751, WO9610522, WO9610522, WO16014825, WO15153952, WO14145569, WO14088781, WO11112285, WO06045196, WO05092730, WO04106174, WO04085257, WO02068285, USD668555, USD626790, USD592954, USD587115, USD584145, US9809360, US9795165, US9717272, US9676504, US9630762, US9611073, US9474397, US9469445, US9445631, US9359117, US9340332, US9334082, US9032698, US9022079, US8998030, US8991632, US8915395, US8910781, US8650839, US8556070, US8458996, US8418870, US8251236, US8210377, US8132600, US8100285, US8100277, US8071004, US7954521, US7886928, US7798359, US7798319, US7789254, US7784629, US7780024, US7766178, US7748525, US7644902, US7571829, US7454884, US7401452, US7231753, US7175039, US7134565, US7131250, US7076929, US7004341, US7003928, US6981601, US6974046, US6823651, US6702133, US6688081, US6375023, US6253940, US5992660, US5875906, US5785198, US5740914, US2016318686, US2014374446, US2014326735, US2013233845, US2011215097, US2011215023, US2011052768, US2011036839, US2010307113, US2010282706, US2010200588, US2010065557, US2009241477, US2009236353, US2009223986, US2009061044, US2009057318, US2007108155, US2007095781, US2007090111, US2006278601, US2006231519, US2006138141, US2006091100, US2006081625, US2005115964, US2004182047, US2004149676, US2004084333, US2003178385, US2003150833, JP5442850, JP5442850, JP2011513150, JP2011118551, JP2006526547, FR2897043, ES2187341, EP1857372, EP1732818, EP1633639, EP0949156, DE102005019291, DE102005019291, CN102448842,

Abstract:

Source: US5258191A Easily removable press-on, pry-off closures having movable insert disks in an outer shell are disclosed. Pressing the shell upward to remove it from a container first pries a protrusion inside the shell over a snap rib around the container, then moves the shell upward relative to the disk while the later remains seated on the container, until a disk-lifting projection inside the shell engages the edge of the disk and lifts the disk to break the seal. A tamper evidencing band, if included, is broken before either the shell is pried off or the disk is lifted. The invention can be used in both top load and bottom load embodiments. Also disclosed is a closure with a non-movable disk or integral top and a tamper-evidencing band which is broken by pry-off removal of the closure. Still further, food packages which automatically open when heated in microwave ovens are disclosed. Vacuum-packed food packages having effective head spaces for reducing the times required to retort such packages are also disclosed.

23) Family number: 8467917 (US5386918A)

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Title: Closure with tamper evidence structure**Priority:** CA19942121086 19940412 US19930052024 19930422

Family:	Publication number	Publication date	Application number	Application date
	AT172684 E	19981115	AT19940302854T	19940421
	AU199459315 A1	19941027	AU19940059315	19940406
	AU676007 B2	19970227	AU19940059315	19940406
	BRPI9401559 A	19941025	BR1994PI01559	19940420
	CA2121086 AA	19941023	CA19942121086	19940412
	CA2121086 C	20051004	CA19942121086	19940412
	CO4180571 A1	19950607	CO19940015910	19940420
	DE69414162 D1	19981203	DE19946014162	19940421
	DE69414162 T2	19990617	DE19946014162T	19940421
	DK0621199 T3	19990705	DK19940302854T	19940421
	EP0621199 A1	19941026	EP19940302854	19940421
	EP0621199 B1	19981028	EP19940302854	19940421
	NZ260261 A	19970324	NZ19940260261	19940407
	TH14096 B	20030110	TH19941000769	19940421
	TH21728 A	19961113	TH19941000769	19940421
	US5386918 A	19950207	US19930052024	19930422
	ZA9402476 A	19951011	ZA19940002476	19940411

Probable Assignee: COLGATE PALMOLIVE CO**Assignee(s):^(std):** COLGATE PALMOLIVE CO**Assignee(s):** COLGATE PALMOLIVE CO NEW YORK N Y US ; COLGATE PALMOLIVE COMPANY ; NEVERAS GEORGE J ; BLASIN CLAUDE**Inventor(s):^(std):** BLASIN CLAUDE ; NEVERAS GEORGE J**Inventor(s):** NEVERAS GEORGE J KENDALL NEW JERSEY US ; GEORGE J NEVERAS ; CLAUDE BLASIN ; BLASIN CLAUDE B 1020 BRUXELLES BE ; Claude ; George J.Blasin ; Neveras**Agent(s):** FB RICE; GRIFFITH HACK; SMART AND BIGGAR; RAMIRO CASTRO DUQUE**Designated states:** AT BE CH DE DK ES FR GB IE IT LI NL SE**International class**
(IPC 8-9): [B65D43/18](#) [B65D43/44](#) [B65D47/08](#) [B65D51/04](#) [B65D55/06](#) (Advanced/Invention);
[B65D47/08](#) [B65D51/00](#) (Core/Invention)**International class**
(IPC 1-7): [B65D](#) [B65D35/44](#) [B65D41/32](#) [B65D41/62](#) [B65D43/16](#) [B65D43/18](#) [B65D43/44](#) [B65D47/08](#) [B65D51/04](#) [B65D55/02](#) [B65D55/06](#)**CPC:** [B65D47/0838](#) [B65D2101/0038](#)**European class:** [B65D47/08B4C](#) [L65D101/00A3C](#)**US class:** [215/235](#) [215/237](#) [215/254](#) [220/254](#) [220/254.3](#) [220/266](#) [220/339](#) [222/556](#)[Classification Explorer](#)**Cited documents:** WO9300271 A1, WO9213774 A1, US5141138 A, US5094361 A, US5069367 A, US4911324 A, US4782964 A, US4759455 A, US4696408 A, US4638916 A, US4519517 A, US4487324 A, FR2565208 A1, EP0490792 A1, EP0309396 A1, EP0210138 B1, DE4127855 A1, DE2355818 A1, AU668695 B2,**Forward Citations:** WO9959886, WO15111017, WO11138137, WO11068487, WO07092866, WO05113365, WO03086891, WO03013971, WO0236454, USD739750, USD716142, USD714144, USD679181, USD440494, US9546027, US9475623, US9272824, US8955705, US8906187, US8899437, US8777030, US8733566, US8646633, US8383215,

US8292101, US8043269, US7861873, US7731042, US7717284, US7685676,
US7546931, US7510095, US7328820, US7303088, US7281638, US7134575,
US7128227, US7128227, US6971531, US6880736, US6848603, US6631820,
US6550626, US6405885, US6347716, US6321923, US6234334, US6116441,
US6063223, US6056142, US6045004, US6003728, US5996859, US5992668,
US5979706, US5927549, US5913435, US5853109, US5709318, US5702033,
US5489035, US2015217910, US2013087523, US2012080450, US2011220673,
US2010067969, US2010043910, US2009324864, US2009294457, US2009120899,
US2009101682, US2008257909, US2008169261, US2007221688, US2007199176,
US2007138123, US2006249474, US2006196909, US2006186079, US2006186078,
US2006071040, US2006024205, US2005067366, US2005061765, US2004200836,
US2004011829, US2003205549, JP4625077, JP2013151326, JP2007537943,
GB2406561, GB2406561, FR2870215, FR2733964, EP1799574, EP1789338,
EP1417136, DE102004045073, DE102004045073,

Abstract:

Source: US5386918A Disclosed is a closure for a container, the closure having a lid hinged to a base. The base of the closure has structure for locking the closure on a dispensing nozzle of the container. The closure has tamper evidence structure, to indicate whether the lid and base have been separated (that is, whether the closure has previously been opened). The tamper evidence structure includes a tear band; the closure cannot be opened without removal of the tear band. The closure is configured, and positioned relative to the dispensing nozzle, such that relatively little area of the closure contacts the material dispensed from the container as the material is dispensed, thereby reducing absorption of material components (e.g., flavors and/or oils of the material dispensed) by the closure. The top surface of the closure lid is configured such that the container and closure can be stably stood on end on the closure lid when the lid is in the closed position. The closure can be held at least two positions on the dispensing nozzle, a first position where the closure is locked on the dispensing nozzle and a second position where the closure is held on the dispensing nozzle but not locked thereon.

0) US2004232167A – CLOSURE SSEMBLY WITH VALVE

24) Family number: 15510485 (US2004232167A)

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Title: CLOSURE SSEMBLY WITH VALVE

Priority: GB20010016306 20010703 GB20010016861 20010710 WO2002GB03064 20020703

Family:

Publication number	Publication date	Application number	Application date
AU2002314361 AA	20030121	AU20020314361	20020703
AU2002314361 BB	20061012	AU20020314361	20020703
BRPI0210627 A	20040928	BR2002PI10627	20020703
CA2449986 AA	20031208	CA20022449986	20020703
CN100384698 C	20080430	CN20028013528	20020703
CN1524052 A	20040825	CN20028013528	20020703
DE60217677 D1	20070308	DE20026017677	20020703
DE60217677 T2	20071011	DE20026017677T	20020703
DK1401724 T3	20070521	DK20020740932T	20020703
EP1401724 A1	20040331	EP20020740932	20020703
EP1401724 B1	20070117	EP20020740932	20020703
ES2280551 T3	20070916	ES20020740932T	20020703
GB200116306 A0	20010829	GB20010016306	20010703
GB200116861 A0	20010905	GB20010016861	20010710
GB2378696 A1	20030219	GB20010016861	20010710
GB2378696 B2	20050309	GB20010016861	20010710
HK1062821 A1	20070713	HK20040105674	20040802
HK1062821 A3	20041126	HK20040105674	20040802
IL159441 A0	20040601	IL20020159441	20020703
IL159441 A1	20070819	IL20020159441	20020703
JP2004533376 T2	20041104	JP20030510355T	20020703
JP4160899 B2	20081008	JP20030510355	20020703
MXPA03011803 A1	20040402	MX2003PA11803	20020703
NO326038 B1	20080901	NO20030005812	20031223
PL200984 B1	20090227	PL20020367069	20020703
PL367069 A1	20050221	PL20020367069	20020703
PT1401724 T	20070430	PT20020740932T	20020703
RU2004102906 A	20041027	RU20040102906	20020703
RU2299844 C2	20070527	RU20040102906	20020703
US2004232167 AA	20041125	US20040482726	20040604
US7331491 BB	20080219	US20020482726	20020703
WO03004373 A1	20030116	WO2002GB03064	20020703

Probable Assignee: BEESON AND SONS LTD

Assignee(s):^(std): BEESON AND SONS LTD ; BISAN EHND SANZ LTD ; KING ROGER MILNER

Assignee(s): BISAN EHND SANZ LIMITED

Inventor(s):^(std): KING MILNER ; KING RODZHER MILNER ; KING ROGER MILNER ; MILNER KING ROGER ; ROGER MILNER KING

Agent(s): FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; GOWLING LAFLEUR HENDERSON LLP; LUZZATTO AND LUZZATTO; HARTER SECREST AND EMERY LLP; SALAI STEPHEN B; CIMINELLO DOMINIC P; STEPHEN B; DOMINIC P

Designated states:

AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO
CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW
HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG
MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN
SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class B65D41/04 B65D41/06 B65D41/34 B65D47/20 B65D47/24 B65D51/24 (Advanced/Invention);
(IPC 8-9); B65D41/04 B65D41/34 B65D47/04 B65D51/24 (Core/Invention);
B65D (Subclass/Invention)

International class B65D41/04 B65D41/06 B65D41/34 B65D47/24 B65D51/24 B67D3/00
(IPC 1-7);

CPC: B65D47/242

European class: B65D47/24A1

US class: 222/153.14 222/52 222/520 222/521 222/541.1 222/541.9

[Classification Explorer](#)

Cited documents: WO9505322 A1, WO9411267 A2, WO9322212 A1, WO9301098 A2, WO9118799 A2,
WO9000142 A1, WO0224541 A2, WO0064774 A1, US6334555 BA, US6062441 A,
US4892209 A, US4836416 A, GB2369114 A1, GB2280896 A1, GB2264110 A1,
GB1191537 A, FR2716170 A3, FR1370761 A, EP0527532 A1, DE4328582 A1,

Forward Citations: US8141793, US7942287, US2011011947, US2009084752, JP2015214360,
JP2007514619, EP1746040, DE102010006656, DE102010006656, CN104401580,
CN104386350,

Abstract:

Source: US2004232167A A container closure assembly includes: a container neck having a first thread on an outer surface thereof; a closure for the neck, the closure having an opening therein, a skirt extending downwardly, and a second thread on an internal surface of the skirt for engaging the first thread on the container neck; and complementary valve elements on the neck and the closure, wherein the valve elements engage to provide a fluid-tight seal over the neck when the closure is fully secured on the neck, but the valve elements allow fluid from the neck to flow out through the opening when the closure is at an intermediate position at which the closure is still retained on the neck, and wherein the closure is moveable from the fully secured position to the intermediate position by relative rotation of the closure and the neck. The assembly is especially useful on containers for carbonated or non-carbonated sports drinks.

0) US4448317A – TAMPER EVIDENT CLOSURES AND PACKAGES

25) Family number: 28673962 (US4448317A)

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Title: TAMPER EVIDENT CLOSURES AND PACKAGES

Priority: CA19840447712 19840217 EP19840101269 19840208 US19880292661 19881230
WO1984US00206 19840213 US19830467791 19830218

Family:

Publication number	Publication date	Application number	Application date
<u>AT39459 E</u>	19890115	AT19840101269T	19840208
<u>AU198426538 A1</u>	19840910	AU19840026538	19840213
<u>AU561982 B2</u>	19870521	AU19840026538	19840213
<u>CA1253116 A1</u>	19890425	CA19840447712	19840217
<u>DE3475769 D1</u>	19890202	DE19843475769	19840208
<u>EP0116892 A2</u>	19840829	EP19840101269	19840208
<u>EP0116892 A3</u>	19850911	EP19840101269	19840208
<u>EP0116892 B1</u>	19881228	EP19840101269	19840208
<u>ES290070 U</u>	19861116	ES19840290070U	19840217
<u>ES290070 Y</u>	19870716	ES19840290070U	19840217
<u>ES290070 Y1</u>	19870814	ES19840290070U	19840217
<u>IE55522 B</u>	19901010	IE19840000379	19840217
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<u>IL70843 A1</u>	19870831	IL19840070843	19840201
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<u>JP1772225 C3</u>	19930714	JP19840501094	19840213
<u>JP4064941 B4</u>	19921016	JP19840501094	19840213
<u>JP60500524 T2</u>	19850418	JP19840501094T	19840213
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<u>NZ207189 A</u>	19870630	NZ19840207189	19840217
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<u>US4489841 A</u>	19841225	US19830467794	19830218
<u>US4905851 A</u>	19900306	US19880292661	19881230
<u>WO8403270 A1</u>	19840830	WO1984US00206	19840213
<u>ZA8400458 A</u>	19850227	ZA19840000458	19840120

Probable Assignee: ZAPATA INNOVATIVE CLOSURES INC

Assignee(s):^(std): TRI TECH SYST ; TRI TECH SYSTEMS INT INC ; TRI TECH SYSTEMS INTERNATIONAL INC ; TRI TECH SYSTEMS INTERNAT INC

Assignee(s): TRI TECH SYSTEMS INT ; YODER J SCOTT ; ZAPATA INNOVATIVE CLOSURES INC ; TORAI TEKU SHISUTEMUZU INTERN INC ; TRI TECH SYSTEMS INTERNATIONAL INC ; FIRST FEDERAL SAVING AND LOAN ASSOCIATION OF TOLED ; FIRST FEDERAL SAVING AND LOAN ASSOCIATION OF TOLEDO 701 FIRST FEDERAL PLAZA TOLEDO OH 43624 ; INNOVATIVE CLOSURES INC ; MID AMERICAN BANK AND TRUST CO ; MID AMERICAN NATIONAL BANK AND TRUST CO ; SCHEICH RICHARD A ; MID AMERICAN NATIONAL BANK AND TRUST COMAPNY ; S D TECHNOLOGIES INC ; MID AMERICAN NATIONAL BANK AND TRUST CO 222 SOUTH ; S D TECHNOLOGIES INC FL CORP ; THOMPSON MORTIMER S ; MID AMERICAN NATIONAL BANK AND TRUST CO 222 SOUTH MAIN STREET BOWLING GREEN OHIO 43402

Inventor(s):^(std): ASHER ELI ; ELI ASHER ; MORTIMER S THOMPSON ; STAFFORD THOMPSON MORTIMER ; THOMPSON M S ; THOMPSON MORTIMER S ; THOMPSON MORTIMER STAFFORD ; THOMPSON MS

Inventor(s): TONPUSON MOOTEIMAA SUTATSUFUOODO

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SIM AND MCBURNEY; REINHOLD COHN AND PARTNERS

Designated states: AT AU BE BR CF CG CH CM DE DK FI FR GA GB HU IT JP LI LU MC MR NL NO RO SE SN SU TD TG

International class
(IPC 8-9): B65D41/18 B65D41/34 B65D55/02 (Advanced/Invention);
B65D41/34 (Advanced/Non-invention);
B65D41/02 B65D41/34 B65D55/02 (Core/Invention)

International class
(IPC 1-7): B65D41/04 B65D41/18 B65D41/28 B65D41/34 B65D55/02 B67B1/00 B67B3/00

CPC: Y10S206/807 B65D55/026

European class: B65D55/02G

US class: 206/459.1 206/807 215/203 215/230 215/365

[Classification Explorer](#)

Cited documents: US4678083 A, US4666052 A, US4603785 A, US4591063 A, US4579240 A, US4489841 A, US4461389 A, US4456139 A, US4436213 A, US4432462 A, US4424911 A, US4423822 A, US3984005 A, US3935960 A, US3923198 A, US3923198, US3899295 A, US3896965 A, US3887734 A, US3887734, US3468744 A, US3433152 A, US2939597 A, US2414420 A, US2201205 A, JP59209542,

Forward Citations: WO9205083, WO9106486, WO9106486, WO9128640, WO9128640, WO9047702, WO05021400, US9815593, US9708105, US9637271, US9409686, US9409682, US9334084, US8800471, US8322555, US8286812, US7913870, US7704589, US7682696, US6968968, US6929136, US6478175, US6108475, US6102224, US6029807, US5566846, US5477972, US5284694, US5257705, US5240131, US5236101, US5156720, US5152412, US5145079, US5104704, US5103979, US5064664, US5062928, US5055150, US5022545, US5015318, US4994314, US4927036, US4905851, US4837061, US4801028, US4793500, US4771923, US4736857, US4718553, US2016137381, US2016068311, US2015176818, US2011232560, US2010089922, US2009255897, US2007289935, US2006246802, US2006068168, US2006054526, US2005056645, KR100982879, GB2345067, GB2283735, EP1660383, EP0303400, EP0269317, EP0269317, EP0243545, EP0243545, EP0233077, EA007707, DE4002967, CN105189301, AU597572,

Abstract:

Source: US4448317A A tamper evident closure and package having a container (10), a resealable, substantially rigid closure (12) for closing, opening and reclosing the container (10), color changing means (32a in Figures 1-6) which effect a color change upon stretching, and coacting mechanical means (24, 36, 44 and 46 in Figures 1-6) for uncapping and recapping the closure 10 and for stretching the color changing means (32a) which clearly and unequivocally indicate the condition of the package, e.g., open or closed. Where legends, or other well defined indicia, indicating opening is desired, the color changes can be localized in the skirt by providing thin sections (32a) which stretch preferentially and adjacent thicker sections (38) which remain substantially unstretched. The thin sections (32a) for example can be a legend, or alternatively the thick sections (38) can be the legend while the thin sections (32a) provide a suitable background. The colour changes employed by the invention can be accomplished by such phenomena as stress whitening inherent in various plastic materials. Alternatively, the color changes can be accomplished by mechanisms such as the use of encapsulated staining or coloring agents incorporated in a suitable matrix.

0) US2007205175A – PLASTIC CONTAINER

26) Family number: 36000183 (US2007205175A)

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Title: PLASTIC CONTAINER

Priority: EP20070749157 20070125 EP20080755571 20080515 US20070749501 20070516
 US20060368860 20060306 US20140511848 20141010 US20150688734 20150416
 WO2007US01880 20070125 WO2008US63744 20080515 US20150803505 20150720
 US20160220731 20160727 US20160383179 20161219 US20170404731 20170112
 US20170495084 20170424

Family:

Publication number	Publication date	Application number	Application date
AR059769 AA	20080430	AR2007P100934	20070307
AU2007222101 AA	20070913	AU20070222101	20070125
AU2007222101 BB	20110922	AU20070222101	20070125
BRPI0707082 A2	20110419	BR2007PI07082	20070125
CA2644081 AA	20080828	CA20072644081	20070125
CA2644081 C	20120327	CA20072644081	20070125
CA2686284 AA	20081127	CA20082686284	20080515
CA2686284 C	20160510	CA20082686284	20080515
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PL1993917 T3	20170131	PL20070749157T	20070125
TR201614092 T4	20161121	TR20160014092T	20070125
US2007205175 AA	20070906	US20060368860	20060306
US2007210026 AA	20070913	US20070749501	20070516
US2015027975 AA	20150129	US20140511848	20141010
US2015225108 AA	20150813	US20150688734	20150416
US2015321411 AA	20151112	US20150803505	20150720
US2016332766 AA	20161117	US20160220731	20160727
US2017101210 AA	20170413	US20160383179	20161219
US2017121048 AA	20170504	US20170404731	20170112
US2017225820 AA	20170810	US20170495084	20170424
US7708159 BB	20100504	US20060368860	20060306
US8857637 BB	20141014	US20070749501	20070516
US9033168 BB	20150519	US20140511848	20141010
US9139326 BB	20150922	US20150688734	20150416
US9403310 BB	20160802	US20150803505	20150720
US9522759 BB	20161220	US20160220731	20160727
US9738409 BB	20170822	US20170404731	20170112
WO07102950 A2	20070913	WO2007US01880	20070125
WO07102950 A3	20080110	WO2007US01880	20070125
WO08144417 A1	20081127	WO2008US63744	20080515

Probable Assignee: PLASTIPAK PACKAGING INC
Assignee(s):^(std): DARR RICHARD C ; MORGAN EDWARD V ; PLASTIPAK PACKAGING INC
Assignee(s): PLASTIPARK PACKAGING INC ; WELLS FARGO BANK NA ADMINISTRATIVE AGENT AS ; PLASTIPACK PACKAGING INC
Inventor(s):^(std): DARR RICHARD ; DARR RICHARD C ; MORGAN EDWARD ; MORGAN EDWARD V
Inventor(s): RICHARD C DARR ; EDWARD V MORGAN
Agent(s): LORD AND CO; OGILVY RENAULT LLP SENCRL SRL; NORTON ROSE CANADA SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; WEISS PETER; PATENTANWALTE U RECHTSANWALT WEISS ARAT AND PARTNER MBB; ARPE MANUEL; LEVENT GUENDUEZ; LEVENT GUENDUEZ KAZIM OEZALP MAH RABAT SOK NO 14 1 CANKAYA ANKARA; ROBERT H BACHMAN; DYKEMA GOSSETT PLLC; FISHMAN STEWART PLLC; GUENTHER JOHN P

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): B29B11/08 B29B11/14 B29C47/00 B29C49/00 B29C49/06 B29C49/08 B65B7/28 B65D1/00 B65D1/02 B65D1/40 B65D1/44 B65D1/46 B65D43/02 (Advanced/Invention); B29B11/08 B29C49/46 B29K105/00 B29K105/26 B29K67/00 B29L31/00 B65D90/02 (Advanced/Non-invention); B29B11/14 B29C49/00 B65B7/28 B65D1/00 B65D1/02 (Core/Invention); B65D90/02 (Core/Non-invention)

International class
(IPC 1-7): B65D1/02

CPC: B29C47/0073 B29B11/14 B29B2911/14326 B29B2911/14333 B29B2911/1444 B29B2911/14446 B29B2911/14466 B29B2911/146 B29B2911/14626 B29B2911/14666 B29B2911/14686 B29B2911/14726 B29B2911/14746 B29B2911/1498 B29K2067/00 B29K2105/258 B29K2105/26 B29L2031/7158 B65D1/44 B65D1/46 B65D43/0235 B29C49/0073 Y10T428/1352 B29C49/06 B29C49/08 B65D1/40 B29B2911/1466 B29K2067/003 B29B11/08 Y10T428/1397 B29C49/0078 B65D1/0284 B65D1/0207 B65D1/0246 B65D1/023 B29C49/46 B29B2911/14713 B29C2049/4664

European class: B29B11/14 B29C49/00G B65D1/02D1 B65D1/02D1B L29B11/08 L29B911/14D10D4D2 L29B911/14D10D4D2B L29B911/14D10D4F L29B911/14D2 L29B911/14D4 L29B911/14F2B L29B911/14F2J L29B911/14F4D L29B911/14F4J L29B911/14F6D L29B911/14F6J L29B911/14H8 L29K105/25C6 L29K105/26 L29K67/00 L29L31/7158

US class: 1/1 215/379 215/384 215/40 215/42 215/44 215/44P 220/269 220/640 220/641 220/645 220/657 220/659 264/328.1 264/532 428/35.7 428/36.92

[Classification Explorer](#)

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DE202005017075 U1

DE202005017075 U,

Forward Citations: WO17074942, WO13188560, WO13188560, WO09099832, WO09099832, USD798722, USD784821, USD784820, USD774914, USD753503, USD753502, USD746145, USD742748, USD740677, USD740125, USD730736, USD729632, USD729631, USD727160, USD726545, USD726544, USD726543, USD602361, USD567659, US9533788, US9359099, US9233772, US8308005, US2016193750, US2012305516, US2010314348, US2010303971, US2009188888, EP2240371,

Abstract:

Source: US2007205175A A plastic container having a lower supporting base portion, a sidewall portion extending upwardly from the base portion, a neck portion extending upwardly from the sidewall portion and an opening at the top of the neck portion. The container is characterized by a lowered center of gravity which provides increased stability.

27) Family number: 28688909 (US2003116522A)

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Title: SELF-DRAINING CONTAINER NECK AND CLOSURE**Priority:** US20010026161 20011221 US20020277072 20021021 WO2002US40993 20021220
US20030628599 20030728 US20070668211 20070129

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2002364200 AA</u>	20030715	AU20020364200	20021220
	<u>US2003116522 AA</u>	20030626	US20020277072	20021021
	<u>US2003116524 AA</u>	20030626	US20010026161	20011221
	<u>US2004055992 AA</u>	20040325	US20030628599	20030728
	<u>US2007125785 AA</u>	20070607	US20070668211	20070129
	<u>US6948630 BB</u>	20050927	US20020277072	20021021
	<u>US7168581 BB</u>	20070130	US20030628599	20030728
	<u>US7431168 BB</u>	20081007	US20010026161	20011221
	<u>US7766178 BB</u>	20100803	US20070668211	20070129
	<u>WO03055763 A1</u>	20030710	WO2002US40993	20021220

Probable Assignee: BERRY PLASTICS CORP**Assignee(s):^(std):** JULIAN RANDALL K ; MONTGOMERY GARY V ; REXAM MEDICAL PACKAGING INC ; ROBINSON CLAYTON L ; WILLIAMS DOUGLAS M**Assignee(s):** REXAM MEDICAL PACKAGING INC A DELAWARE CORP ; REXAM MEDICAL PACKAGING INC A CORP OF DELAWARE ; REXAM CLOSURES AND CONTAINERS INC ; REXAM CLOSURES LLC ; BERRY PLASTICS CORP**Inventor(s):^(std):** CLAYTON L ROBINSON ; DOUGLAS M WILLIAMS ; GARY V MONTGOMERY ; JULIAN RANDALL K ; MONTGOMERY GARY V ; RANDALL K JULIAN ; ROBINSON CLAYTON L ; WILLIAMS DOUGLAS M**Inventor(s):** ROBINSON CLAYTON ; MONTGOMERY GARY**Agent(s):** MIDDLETON AND REUTLINGER; MIDDLETON REUTLINGER; JAMES E; SALAZAR JOHN F; BRUGGEMAN CHAD D; JOHN F; CHAD D**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
(IPC 8-9): B65D1/02 B65D41/04 B65D41/34 B65D43/20 B65D51/00 B65D51/20 B65D53/00 B65D53/04 (Advanced/Invention);
B65D39/00 B65D41/34 B65D51/16 B65D77/20 (Advanced/Non-invention);
B65D1/02 B65D41/34 B65D51/18 (Core/Invention);
B65D77/10 (Core/Non-invention)**International class**
(IPC 1-7): B65D1/02 B65D23/00 B65D39/00 B65D41/00 B65D41/02 B65D41/34 B65D47/00 B65D51/00 B65D53/00**CPC:** B65D1/023 B65D1/0246 B65D41/3428 B65D51/20 B65D2251/0015 B65D2251/0093 B65D2577/205 B65D41/045**European class:** B65D1/02D1 B65D1/02D1B B65D41/04D2 B65D41/34C1 B65D51/20 L65D251/00Y2D L65D251/00Y6M L65D577/20M1**US class:** 215/232 215/252 215/329 215/347 215/349 215/35 215/350 215/43 215/44 215/44S 220/351[Classification Explorer](#)**Cited documents:** WO9099335, WO9009935 A1, WO07042205, WO06002922, US7217454 BB, US7175039 BB, US7168581 BB, US7021478 BA, US7004340 BB, US6948630 BB, US6913157 BB, US6902075 BB, US6893672 BB, US6874647 BB, US6854614 BB, US6848590 BB, US6659297 BB, US6502710 BA, US6488165 BA, US6477823 BA, US6419101 BA, US6382445 BA, US6382443 BA, US6315140 BA, US6302321 BA, US6277478 BA,

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Forward Citations: WO16176672, WO14022229, WO12095191, WO10088940, WO10011624, WO10011624, WO05032964, WO05032964, USD795064, USD769713, USD758789, USD752234, USD750490, USD747649, USD747199, USD724233, USD691046, USD688129, USD688128, US9738409, US9693577, US9604769, US9522759, US9521859, US9505527, US9403310, US9386679, US9338872, US9315306, US9313871, US9242782, US9241508, US9233052, US9145251, US9139326, US9051098, US9033168, US8931243, US8916217, US8910811, US8857644, US8857637, US8851310, US8807360, US8796333, US8785496, US8785495, US8778994, US8778993, US8778992, US8770428, US8756902, US8746489, US8739991, US8708182, US8673242, US8671655, US8652423, US8650839, US8631977, US8609725, US8596477, US8584876, US8460771, US8413830, US8393484, US8308005, US8292102, US8251236, US8217077, US8113367, US8100277, US7960007, US7798359, US7780024, US7766178, US7694835, US7644902, US7637082, US7562510, US7163117, US7159374, US6948630, US2016376076, US2016123496, US2015353247, US2015034611, US2014203048, US2013058845, US2013058844, US2012292321, US2011253666, US2011225934, US2011214897, US2011204016, US2011132926, US2011127268, US2011120998, US2011089134, US2011024423, US2011017739, US2010176134, US2010140271, US2010140208, US2010102021, US2010009042, US2010006532, US2009291174, US2009255929,

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Abstract:

Source: US2003116522A A self-draining container neck and closure comprising a container neck having an upper sidewall portion and a lower sidewall portion, the upper sidewall portion being inset from the lower sidewall portion. The container neck also includes a tamper indicating bead having at least one draining notch therein. The instant invention also includes a closure having a plurality of drainage slots disposed in a spaced configuration. The closure is threadably connected to the container neck, the closure and container threads rotatably engage and provide a drainage path there between.

0) US5934496A – ONE-PIECE MOLDED FLIP CAP CLOSURE

28) Family number: 15213868 (US5934496A)

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Title: ONE-PIECE MOLDED FLIP CAP CLOSURE

Priority: KR19980705086 19980701 US19960030312P 19961101 US19970958996 19971028
 US19990321394 19990527 US19990320764 19990527 US19970958995 19971028
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 WO1997US19421 19971028 WO1997US19421 19971028

Family:

Publication number	Publication date	Application number	Application date
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WO9819920 A1	19980514	WO1997US19420	19971028	

Probable Assignee: TETRA LAVAL HOLDINGS AND FINANCE

Assignee(s):^(std): MOGARD JENS ; RICKARDSSON GOTE ELOF ; TETRA LAVAL HOLDINGS AND FINANCE ; LUNDH KARL ERIK ; TETRA LAVAL HOLDINGS AND FINANCE S A ; TETRA LAVAL HOLDINGS AND FINANCE S ; TETRA LAVAL HOLDINGS AND FINANCE SA ; TETRA LAVAL KHOLDINGZ EHND FAJNEHNS S A ; TETRA PAK RES AND DEV AB ; TETRA PAK LAVAL HOLDINGS AND FINANCES SA

Assignee(s): TETRA LAVAL KHOLDINGZ EHND FAJNEHNS SA ; TETRA PAK RESEARCH AND DEVELOPMENT AB ; TETRA LAVAL HOLDINGS AND FINANCE S A PULLY ; TETRA LAVAL' KHOLDINGZ EHND FAJNEHNS, S.A. ; RICKARDSSON GOTE ; M S TETRA LAVAL HOLDINGS AND FINANCE SA ; TETRA LAVAL HOLDINGS AND FINANCE AVENUE GENERAL GU

Inventor(s):^(std): LUNDKH KARL EHRIK ; LUNDH K E ; KARDSSON COLE ; RICKARDSSON GOTE ELOF ; LUNDH KARL ERIK ; RICKARDSSON GOTE ; RICKARDSSON ; RICHARDSSON G E ; KARL ERIK LUNDH ; K E LUNDH ; JENS MOGARD ; J MOGARD ; GOTE ELOF RICKARDSSON ; G E RICKARDSSON ; G E RICHARDSSON ; ELOF GOTE ; RIKKARDSSON GOTE EHLOF ; RICKARDSSON G E ; MOGARD JERIS ; MOGARD JENS ; MOGARD J

Inventor(s): LUNDKH KARL-EHRIK ; RIKKARDSSON GOTE-EHLOF

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; MARKS AND CLERK

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CZ DE DK EE ES FI FR GA GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TG TJ TM TR TT UA UG US UZ VN YU ZW

International class
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International class
(IPC 1-7): [B29C45/03](#) [B29C53/00](#) [B65B7/00](#) [B65D41/00](#) [B65D41/48](#) [B65D41/50](#) [B65D43/14](#) [B65D47/00](#) [B65D47/08](#) [B65D47/10](#) [B65D47/14](#) [B65D47/36](#) [B65D49/12](#) [B65D5/74](#) [B65D51/18](#) [B65D51/24](#) [B65D55/08](#)

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US class: [215/235](#) [215/250](#) [220/257](#) [220/258](#) [220/258.2](#) [220/258.3](#) [220/259.1](#) [220/259.5](#) [220/266](#) [220/831](#) [220/837](#) [222/541.5](#) [222/541.9](#) [222/556](#) [229/125.15](#) [264/328.1](#) [264/334](#) [53/410](#)

[Classification Explorer](#)

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Forward Citations: WO10118319, WO09070669, WO07117897, WO07015648, WO07015648, WO04002847, WO03086881, WO03086880, WO03010061, WO03010061, WO0198168, WO0075026, USD747201, USD624404, USD613599, USD598752, USD584925, USD584569, USD567086, USD531024, USD516859, USD512278, USD507155, USD506106, USD505840, USD505839, USD505835, USD502061, USD502060, USD475618, USD450582, USD426772, US9829362, US9827729, US9761858, US9759594, US9334097, US9093700, US8978548, US8918981, US8770450, US8746476, US8720726, US8672165, US8622281, US8616406, US8590723, US8474651, US8413832, US8292101, US8276777, US8220650, US8156862, US8113374, US8080118, US7870980, US7861873, US7611025, US7556162, US7510095, US7281638, US7168149, US7051894, US7048883, US7044317, US6988642, US6923017, US6868980, US6866164, US6848603, US6821239, US6789393, US6631820, US6545594, US6478175, US6474491, US6460726, US6409034, US6405885, US6257449, US6253937, US6216905, US6185906, US6179147, US6158197, US2014027457, US2012315532, US2012228339, US2012031285, US2011095059, US2011062159, US2010258616, US2010219197, US2010199864, US2010116410, US2009277861, US2009134188, US2009057386, US2008283485, US2008237178, US2008078775, US2006214334, US2006186078, US2005233036, US2005202445, US2005196761, US2005173368, US2005173367, US2005116382, US2005115968, US2005082305, US2004251257, US2004244145, US2004217083, US2004214310, US2004200836, US2004135288, US2004089627, US2004082058, US2004079765, US2004052891, US2004035867, US2004011829, US2003205549, US2003062368, TWI396651, RU2600433, KR200447717, JP2006151458, JP2003535781, JP2003501318, ES2525192, EP1955963, EP1292508, EP1167216, EP1160172, EP1027851, CN106144192, CN105947385, CN104742295, CN103569460, CN102941964, CN102941964, CN102615787, CN102615787, CN102387971, CN102387971, AU751597, AU2003238560, AU2003238560, AU2001273593,

Abstract:

Source: US5934496A A closure for a container and a method of producing the same is set forth. The closure is a single integrally-molded spout, cap and hinge assembly joining the spout and the cap. The closure may also have a membrane and pull-ring, also integrally molded as one piece. The cap may have at least one prop for preventing interference from the cap with the pouring of the contents of the container. Additionally, the spout may have a step for assisting in the prevention of interference from the cap during pouring, and for providing a predetermined sound every time that the cap is opened. Further, the closure may have a tamper-evident member to indicate that the closure has been opened. Still further, the closure may have an orienting peg for properly orienting the closure on a container.

29) Family number: 29768667 (US6550626B)

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Title: Closure lid and resealable closure system with tamper-evident features**Priority:** US20000678361 20001003 WO2001US29722 20010921**Family:**

Publication number	Publication date	Application number	Application date
AR032635 AA	20031119	AR2001P104649	20011002
AU2001294641 AA	20020415	AU20010294641	20010921
AU2001294641 BB	20051201	AU20010294641	20010921
AU200194641 A1	20020415	AU20010094641	20010921
AU200194641 A5	20020415	AU20010094641D	20010921
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CZ20030922 A3	20040512	CZ20030000922	20010921
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EP1330396 A4	20050105	EP20010975303	20010921
HK1062166 A1	20060407	HK20040104761	20040702
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MXP03001334 A1	20030606	MX2003PA01334	20010921
PL365706 A1	20050110	PL20010365706	20010921
RU2003112689 A	20041127	RU20030112689	20010921
RU2278808 C2	20060627	RU20030112689	20010921
US6550626 BA	20030422	US20000678361	20001003
WO0228735 A1	20020411	WO2001US29722	20010921

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC**Assignee(s):**^(std): SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC**Assignee(s):** RANDALL JEFFREY T**Inventor(s):**^(std): RANDALL JEFFREY T ; REHNDALL DZHEFFRI T**Inventor(s):** JEFFREY T RANDALL**Agent(s):** SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO**Designated states:** AT AU BE BR CA CH CN CY CZ DE DK ES FI FR GB GR IE IN IT JP LU MC MX NL PL PT RU SE TR**International class**
^{(IPC 8-9):} [B65D41/32](#) [B65D41/34](#) [B65D41/46](#) [B65D47/08](#) [B65D47/10](#) [B65D47/14](#) ^(Advanced/Invention);
[B65D41/32](#) [B65D41/34](#) [B65D47/06](#) [B65D47/08](#) [B65D47/12](#) ^(Core/Invention)**International class**
^{(IPC 1-7):} [B65D](#) [B65D041/32](#) [B65D041/46](#) [B65D41/32](#) [B65D41/36](#) [B65D41/46](#) [B65D47/00](#)
[B65D47/08](#) [B65D47/10](#) [B65D55/02](#)**CPC:** [B65D41/3442](#) [B65D47/0838](#) [B65D47/148](#) [B65D2101/0023](#)**European class:** [B65D41/34D](#) [B65D47/08B4C](#) [B65D47/14D1](#) [L65D101/00A3](#)**US class:** [215/253](#) [215/254](#) [220/259.1](#) [220/259.2](#) [222/541.5](#) [222/541.6](#) [222/556](#)[Classification Explorer](#)**Cited documents:** WO9856675 A1, WO0076875 A1, US6116441 A, US5875942 A, US5810212 A, US5662245 A, US5386918 A, US5207783 A, US5090583 A, US4919286 A, US4860907 A, US4795044 A, US4592480 A, US4519517 A, US4462504 A, US4436212 A,

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Abstract:

Source: US6550626B A tamper-evident structure for use in a resealable dispensing closure system includes a lid and a flexible, frangible tamper-evident member extending from the lid to a drop ring. The drop ring is adapted to engage a bottom end of a closure body in the closure system. Preferably, the lid, frangible tamper-evident member, and drop ring are provided as a unitary, integrally molded structure. In a preferred embodiment, the closure body can also be molded as a unitary part of the structure. The lid, frangible tamper-evident member and drop ring are assembled on the closure body by first installing the lid in a closed position on the closure body. The drop ring is then pivoted downward relative to the lid, thereby causing the frangible tamper-evident member to become disposed adjacent the closure body skirt. The drop ring is located at the bottom of the closure body. The system can then be installed on a container so that the drop ring locks under a bead or lip on the container. If the closure body is subsequently removed from the container, a part of the frangible tamper-evident member is severed because the drop ring is prohibited from moving upward as the closure body is removed. Moreover, if the lid is moved away from its closed position relative to the closure body when the closure body is still on the container, then another part of the frangible tamper-evident member is severed because the drop ring, and therefore the frangible tamper-evident member, are prohibited from moving upward. Thus, the single tamper-evident feature in the form of the frangible tamper-evident member provides evidence of tampering with 1) the closure body relative to the container, and 2) the lid relative to the closure body.

0) US2007275133A – TAMPER EVIDENT RESEALABLE CLOSURE

30) Family number: 40844422 (US2007275133A)

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Title: TAMPER EVIDENT RESEALABLE CLOSURE

Priority: AU20070202197 20070516 AU20070203582 20070801 US20060438705 20060523
 US20110108582 20110516 CA20072595659 20070801 US20060500497 20060808
 US20120668425 20121105 US20140244399 20140403 US20140539429 20141112

Family:

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Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL PL PT RO RS SE SI SK TR YU

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(IPC 8-9): B32B33/00 B32B7/10 B65B5/00 B65D B65D17/28 B65D33/00 B65D33/14 B65D33/34 B65D41/32 B65D47/36 B65D50/00 B65D51/18 B65D51/20 B65D53/04 B65D55/02 B65D55/06 B65D65/26 B65D75/28 B65D75/30 B65D75/52 B65D75/58 B65D75/60 B65D75/62 B65D75/64 B65D77/02 B65D77/10 B65D77/20 B65D77/22 B65D77/30 B65D83/00 B65D83/08 B65D85/36 B65D85/60 (Advanced/Invention); B65D65/26 B65D75/28 B65D75/58 B65D83/00 B65D83/08 (Advanced/Non-invention); B32B33/00 B32B7/10 B65B5/00 B65D17/28 B65D33/00 B65D33/14 B65D33/34 B65D47/00 B65D50/00 B65D51/18 B65D53/00 B65D55/02 B65D65/22 B65D75/28 B65D75/52 B65D77/00 B65D77/10 B65D77/22 B65D83/00 B65D83/08 B65D85/30 B65D85/60 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B65B55/00 B65D17/28 B65D51/22 B65D55/02 B65D55/06 B65D75/00 B65D75/28 B65D75/58

CPC: B65D75/44 B65D75/5855 B65D2101/00 B65D2575/586 B65D75/5838 B65D77/206 B65D77/2096 B65D2577/2033 B65D2577/205 B65D2577/2066 B65D2577/2091 B65D75/522 B65D2101/003 B65D50/00 Y10T428/14 Y10T428/1495

European class: B65D75/44 B65D75/58E1A B65D75/58F B65D77/20E1B3B2A B65D77/20E2D L65D101/00 L65D575/58R L65D577/20L1 L65D577/20M1 L65D577/20N L65D577/20P2

US class: 206/459.1 220/256.1 220/258.3 220/266 220/359.3 229/80.5 229/87.05 229/87.050S 383/203 383/203P 383/203S 383/204 383/207 383/211 383/5 383/5S 426/122 426/122P 428/40.1 428/40.100S 428/42.3

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Forward Citations: WO16061127, WO16044381, WO15073566, WO13005205, WO13005205, USD788582, USD787319, USD784127, USD781702, USD778719, USD777026, USD772069, USD768479, USD766082, USD764914, USD761651, USD756801, USD756800, USD756219, USD754534, USD753996, USD753995, USD750477, USD748471, USD747646, USD747202, USD747195, USD747189, USD746673, USD740114, USD739232, USD734144, USD733549, USD730725, USD726535, USD725467, USD715643, USD661201, USD619018, US9745104, US9718585, US9708104, US9688442, US9676532, US9663686, US9663282, US9662867, US9656783, US9650194, US9650180, US9649471, US9636895, US9630761, US9550616, US9481484, US9434513, US9394085, US9296510, US9248469, US9221590, US9205967, US9187228, US9162786, US9150342, US9108770, US8951591, US8889205, US8746483, US8722122, US8602244, US8602242, US8551588, US8459455, US8408792, US8354132, US8308363, US8256636, US8114451, US7963413, US7913870, US7744517, US7681732, US2017057728, US2016318683, US2016130041, US2016083162, US2015151885, US2015117797, US2014335235, US2014307985, US2014217163, US2014161936, US2014158690, US2014079343, US2013206768, US2013105347, US2013064934, US2012175370, US2012048857, US2011204054, US2011180553, US2011179753, US2011127319, US2011056852, US2010278454, US2010224630, US2010172604, US2010018974, US2010002963, US2009304874, US2009178945, US2008240627, US2008214376, US2008156861, US2007275133, KR101104533, GB2462150, GB2462150, EP2644224, EP2644224, EP2508445, EP1975081, EP1939107, EP1886934, DE102008040046, CN105438660, CN105189306, CN105189306, CN105035532, CN103231856, CN103003156, CN103003156, CN102917962, CN102917962, CN102365212, AU2008201279,

Abstract:

Source: US2007275133A A container for a food product including a tamper-evident closure which forms an opening of a container. The closure comprises a sealing layer, adhesively sealed to the top of the container around the opening. The sealing layer is releasable from the container by pulling back on the sealing layer and resealable against the top layer to seal the opening when the sealing layer is moved back against the top. The tamper-evident feature comprises a portion of the top adjacent the opening and covered by the sealing layer, which extends from a position spaced from, and extends towards and terminates at the opening of the container. A portion of the tamper-evident feature falls into the container after the sealing layer has been pulled back for a first time to thereby indicate that the container has been previously opened.

0) US2002034339A – BAG HAVING CURSOR–ACTUATED COMPLEMENTARY CLOSUR...

31) Family number: 30726170 (US2002034339A)

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Title: BAG HAVING CURSOR–ACTUATED COMPLEMENTARY CLOSURE STRIPS

Priority: FR19980007658 19980617 FR19980008019 19980624 US19990462101 19990617
FR19980008525 19980703 FR19980013732 19981102 US20000462101 20000113
US20010948550 20010910 US20010949082 20010910 US20010948548 20010910
US20050146272 20050607 US20010948551 20010910 US20010949081 20010910
WO1999FR01455 19990617 US20030340421 20030110

Family:

Publication number	Publication date	Application number	Application date
<u>AT216567 E</u>	20020515	AT19990925120T	19990617
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<u>AU760238 B2</u>	20030508	AU19990041516	19990617
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<u>DK1003395 T3</u>	20020819	DK19990925120T	19990617
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<u>EP1003395 B1</u>	20020424	EP19990925120	19990617
<u>ES2174612 T3</u>	20021101	ES19990925120T	19990617
<u>FR2780036 A1</u>	19991224	FR19980007658	19980617
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<u>US2002034344 AA</u>	20020321	US20010948551	20010910
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<u>US2006120630 A9</u>	20060608	US20030340421	20030110
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<u>US6733178 BB</u>	20040511	US20010949082	20010910
<u>US6755569 BB</u>	20040629	US20010948549	20010910
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<u>US6902321 BB</u>	20050607	US20010948551	20010910
<u>US7140772 BB</u>	20061128	US20010949081	20010910
<u>US7517150 BB</u>	20090414	US20050146272	20050607

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Inventor(s): PLOURDE ERIC

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International class
(IPC 8-9): [A44B19/16](#) [A44B19/26](#) [B65D33/02](#) [B65D33/14](#) [B65D33/16](#) [B65D33/25](#) (Advanced/Invention); [B31B1/90](#) (Advanced/Non-Invention); [A44B19/10](#) [A44B19/24](#) [B65D33/16](#) [B65D33/25](#) (Core/Invention)

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(IPC 1-7): [A44B19/00](#) [A44B19/16](#) [A44B19/26](#) [A44B19/42](#) [B65D30/00](#) [B65D30/10](#) [B65D33/16](#) [B65D33/24](#) [B65D33/25](#) [B65D50/00](#) [B65D53/00](#)

CPC: [Y10T24/2532](#) [Y10T24/2534](#) [Y10T24/44291](#) [B65D33/02](#) [A44B19/16](#) [A44B19/267](#) [B65D33/2591](#)

European class: [B65D33/02](#) [B65D33/25C](#) [K44B19/16](#) [K44B19/26D](#)

US class: [24/399](#) [24/400](#) [24/489](#) [383/5](#) [383/59](#) [383/59P](#) [383/59S](#) [383/61](#) [383/61.2](#) [383/61.200P](#) [383/61.3](#) [383/63](#) [383/63S](#) [383/64](#) [383/64P](#) [383/64S](#) [493/213](#) [493/214](#) [495/213](#) [495/214](#)

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 EP1905584, EP1873074, EP1857270, EP1775122, EP1690802, EP1477080,
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Abstract:

Source: US2002034339A The present invention provides a bag comprising two generally parallel sheets (16, 18) forming the main walls of the bag, complementary closure strips (20, 22) fixed to respective ones of the sheets, and a cursor (50) for actuating the strips (20, 22) for closing and opening purposes, the bag being characterized in that it further comprises, parallel to the closure strips (20, 22), between said sheets (16, 18), and level with the mouth (12) of the bag, additional means in relief (100) disposed on the insides of the closure strips (20, 22), designed to provide sealing by forming a barrier between the sheets (16, 18) in the closed position of the bag, said additional means in relief (100) being placed facing the flanks (52, 54) of the cursor (50) to be urged towards their sealing position by the cursor (50) when the cursor is moved towards the sealing position.

32) Family number: 32022007 (US2002006353A)

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Title: METHOD AND APPARATUS FOR MANIPULATING PRE-STERILIZED COMPONENTS IN AN ACTIVE STERILE FIELD

Priority: AU20000010906 19990907 AU20030204048 20030506 AU20030204050 20030506
 AU20030226002 20030326 CA19992309730 19990907 CA19992646408 19990907
 EP19990954596 19990907 CA20002365557 20000412 EP20040075268 19990907
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 WO2003US09190 20030326 WO2000US09751 20000412

Family:

Publication number	Publication date	Application number	Application date
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AR039128 AA	20050209	AR2003P101029	20030325
AT283091 E	20041215	AT19990954596T	19990907
AT424799 E	20090315	AT19990075268T	19990907
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AT475397 E	20100815	AT19990075046T	19990907
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<u>DE69922147 T2</u>	20051110	DE19996022147T	19990907
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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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Abstract:

Source: US2002006353A The connection, assembly, or fill of two or more pre-sterilized components having at least one terminal end each for attachment to another component, and an apparatus for performing such a connection, while maintaining the sterility of the components is disclosed. The resulting connection is made permanent by bonding the contacting components together using either a solvent bonding technique, a radio frequency sealer, a heat sealer, or any other suitable process. The connection is preferably made within an active sterile field. Using a low-voltage electron beam instrument, such as the MIN-EB(TM), a suitable sterile field sphere can be created. The terminal ends of the multiple components remain within the sterile field sphere until the possibility of contamination within the sealed components is significantly reduced to industry acceptable standards.

33) Family number: 12867081 (US6024255A)

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Title: TAMPER EVIDENT CLOSURE WITH PUSH–PULL POUR SPOUT

Priority: US19960603148 19960215 US19960749488 19961115 WO1997US20837 19971117
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Family:	Publication number	Publication date	Application number	Application date
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Inventor(s): CHARLES JLONG JR ; CHARLES J LONG JR ; LONG CHARLES J

Agent(s): BORDEN LADNER GERVAIS LLP

Designated states: AT BE BR CA CH CN DE DK ES FI FR GB GR IE IT LI LU MC MX NL PT SE

International class
(IPC 8–9): [B65D41/48 B65D47/24](#) (Advanced/Invention);
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European class: [B65D41/48 B65D41/48B B65D47/24A2](#)

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Forward Citations: WO11039400, WO08048406, WO08034065, WO08034065, WO03062083, WO03026999, WO03004361, WO03004361, WO0230778, USD739500, USD537714, US9815598, US9428308, US9221578, US8464749, US8141578, US7743952, US7681587, US7228979, US7152760, US6874656, US6682678, US6439429, US6286733, US2014197126, US2008302836, US2008232927, US2008093396, US2007133909, US2004251228, US2004245260, US2004166208, FR2917070, EP3027525, EP2000416, EP1332859, CZ300734, AU2002312153, AU2002312153,

Abstract:

Source: US6024255A The present invention relates to a substantially leak proof tamper-evident container closure that combines a reusable, push-pull spout with a snap-on tamper evident closure which is substantially tamper proof. The closure has first and second locking members characterized by the first locking member having an inward flange with an upturned locking edge forming an annular groove in the flange. The push pull resealable pour spout with an opening therein which is partially closed by a second top having a secondary opening therein and a plug space thereabove with upwardly angled legs formed integral with the closure. Integrated into the periphery of the secondary opening is at least one and preferably two annular flanges. The annular flanges engage and create a sealing contact with the annular surface of the plug to provide a seal which is leak proof after many uses. The lower edge of the push-pull pour spout contains a tamper evident band to indicate if the push-pull pour spout has been "tampered" with even in situations where the container closure has not been disturbed. The present invention also optionally provides a dust cover which encloses the push-pull pour spout closure when inserted on the container. The dust cover may be optionally provided with a tamper-evident sealing band which remains intact upon initial installation of the dust cover onto the container and which is broken when the dust cover is initially disturbed. When the dust cover is provided with a tamper-evident sealing band, the use of a band on the lower edge of the pour spout closure for providing tamper-evidency may be eliminated.

34) Family number: 33148806 (US2006163189A)

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Title: TAMPER–EVIDENT LOCKING BAND FOR A CONTAINER CLOSURE**Priority:** CA20052529968 20051213 US20050038868 20050119

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2529968 AA</u>	20060719	CA20052529968	20051213
	<u>CA2529968 C</u>	20121106	CA20052529968	20051213
	<u>EP1683732 A1</u>	20060726	EP20050257498	20051206
	<u>MXPA05012958 A1</u>	20060718	MX2005PA12958	20051130
	<u>US2006163189 AA</u>	20060727	US20050038868	20050119
	<u>US7575123 BB</u>	20090818	US20050038868	20050119

Probable Assignee: RIEKE CORP**Assignee(s):**^(std): LAVEAULT RICHARD A ; JAHAN ROWSHAN ; RIEKE CORP

Assignee(s): NORRIS IND INC ; PLASTIC FORM INC ; REESE PRODUCTS INC ; RESKA SPLINE PRODUCTS INC ; RICHARDS MICRO TOOL INC ; RIEKE LEASING CO INC ; RIEKE OF INDIANA INC ; RIEKE OF MEXICO INC ; TOWING HOLDING LLC ; TRIMAS CO LLC ; TRIMAS CORP ; TRIMAS INT HOLDINGS LLC ; WESBAR CORP ; ARROW ENGINE CO ; BANK OF NEW YORK MELLON TRUST CO NA SECOND LIEN AG ; BANK OF NEW YORK MELLON TRUST CO NA SECOND LIEN AGENT AS ; BEAUMONT BOLT AND GASKET INC ; CEQUENT CONSUMER PRODUCTS INC ; CEQUENT PERFORMANCE PRODUCTS INC ; CEQUENT TOWING PRODUCTS INC ; COMPAC CORP ; CONSUMER PRODUCTS INC ; CUYAM CORP ; DEW TECHNOLOGIES INC ; DI RITE CO ; DRAW TITE INC ; ENTEGRA FASTENER CORP ; FULTON PERFORMANCE PRODUCTS INC ; JPMORGAN CHASE BANK NA ; JPMORGAN CHASE BANK NA COLLATERAL AGENT AS ; HAMMERBLOW ACQUISITION CORP ; HAMMERBLOW CO LLC ; HI VOL PRODUCTS LLC ; INDUSTRIAL BOLT AND GASKET INC ; KEO CUTTERS INC ; LAKE ERIE PRODUCTS CORP ; LAMONS GASKET CO ; LAMONS METAL GASKET CO ; LOUISIANA HOSE AND RUBBER CO ; MONOGRAM AEROSPACE FASTENERS INC ; NETCONG INVESTMENTS INC ; NI IND INC ; NI WEST INC ; NORRIS CYLINDER CO ; NORRIS ENVIRONMENTAL SERVICES INC ; GARCEAU DENIS

Inventor(s):^(std): RICHARD A LAVEAULT ; LAVEAULT RICHARD A ; JAHAN ROWSHAN**Inventor(s):** GARCEAU DENIS ; LAVEAULT RICHARD**Agent(s):** SMART AND BIGGAR; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP**Designated states:** AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

International class
^{(IPC 8-9):} A47G19/22 B65D39/00 B65D41/00 B65D41/34 B65D43/00 B65D50/00 B65D51/00 B65D53/00 B65D55/02 B65D55/06 ^{(Advanced/Invention);}
B65D47/00 ^{(Advanced/Non-invention);}
A47G19/22 B65D39/00 B65D41/00 B65D41/34 B65D43/00 B65D50/00 B65D51/00 B65D53/00 B65D55/02 ^{(Core/Invention);}
B65D47/00 ^(Core/Non-invention)

International class
^{(IPC 1-7):} B65D50/00

CPC: B65D41/3428**European class:** B65D41/34C1**US class:** 215/252 215/343 215/349 215/388 220/214 220/714[Classification Explorer](#)

Cited documents: WO9222464 A1, US6769559 BB, US6557714 BB, US6382445 BA, US6325225 BA, US6202872 BA, US6126027 A, US6123212 A, US6085921 A, US5891380 A, US5676269 A, US5547092 A, US5501349 A, US5423444 A, US5356020 A, US5205426 A, US5167335 A, US5131550 A, US5050753 A, US4997097 A, US4984701 A, US4938370 A, US4913300 A, US4904435 A, US4878589 A, US2004232100 AA, US2002096485 AA,

US2002030031 AA, EP0856474 A1, EP0854095 A1, EP0650444 B2, EP0508396 A1, EP0381118 A1,

Forward Citations: USD580264, US9187217, US8561857, US8528757, US8328037, US2012285960, US2012018431, US2009223963,

Abstract:

Source: US2006163189A A container and closure combination according to one embodiment of the present invention includes, as part of the closure, a tamper-evident band. The container includes a neck portion defining a dispensing opening and including an A diameter stop. The tamper-evident closure includes a closure body and the tamper-evident band is connected to the closure body by a plurality of frangible elements. A plurality of locking tabs are included as part of the tamper-evident band and are constructed and arranged to abut up against the A diameter stop upon retrograde rotation of the closure body from the container neck. The tamper-evident band further includes a radially inwardly extending ridge that is constructed and arranged to prevent repositioning of a plurality of the locking tabs to an orientation wherein the plurality of locking tabs would avoid abutment with the A diameter stop.

0) US2005116382A – CLOSURE DEVICE COMPRISING A HINGED CAP MOULDED ...

35) Family number: 30201011 (US2005116382A)

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Title: CLOSURE DEVICE COMPRISING A HINGED CAP MOULDED IN THE CLOSED POSITION

Priority: EM20040274170F 20041217 FR20020008849 20020712 FR20020008850F 20020712
FR20020008849F 20020712 FR20030002061F 20030702 FR20020008850 20020712
US20050032250 20050110 US20050032255 20050110 US20050232310F 20050616
US20050032292F 20050110 FR20030302061F 20030702 US20050232315F 20050616
WO2003FR02061 20030702 US20050032292 20050110 WO2032US29205 20050110

Family:

Publication number	Publication date	Application number	Application date
AT407891 E	20080915	AT20030750790T	20030702
AU2003269010 AA	20040202	AU20030269010	20030702
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BRPI0312623 B1	20120904	BR2003PI12623	20030702
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DE60323493 D1	20081023	DE20036023493	20030702
EP1521710 A1	20050413	EP20030750790	20030702
EP1521710 B1	20080910	EP20030750790	20030702
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FR2842177 B1	20041203	FR20020008850	20020712
MXPA05001733 A1	20050527	MX2005PA01733	20030702
RU2005102590 A	20050910	RU20050102590	20030702
RU2295483 C2	20070320	RU20050102590	20030702
US2005116382 AA	20050602	US20050032250	20050110
US2005173367 AA	20050811	US20050032255	20050110
US2005173368 AA	20050811	US20050032292	20050110
US7611025 BB	20091103	US20050032292	20050110
USD530611 S1	20061024	US20050232310F	20050616
USD556575 S1	20071204	US20050232315F	20050616
WO04007313 A1	20040122	WO2003FR02061	20030702

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; YANNICK CELERIER ; SELER ER JANNIK

Inventor(s): SELER'ER JANNIK

Agent(s): ALLENS ARTHUR ROBINSON PATENT AND TRADE MARKS ATTORNEYS; ALLENS
PATENT AND TRADE MARK ATTORNEYS; SMART AND BIGGAR; SAYETTAT JULIEN
CHRISTIAN; HARNESS DICKEY AND PIERCE PLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO
CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW
HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG
MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL

SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D39/00 B65D41/00 B65D41/32 B65D43/00 B65D43/16 B65D47/00 B65D47/08
B65D47/14 B65D47/20 B65D51/00 B65D55/02 (Advanced/Invention);
B65D39/00 B65D41/00 B65D41/32 B65D43/00 B65D43/16 B65D47/00 B65D47/04
B65D47/08 B65D47/12 B65D51/00 B65D55/02 (Core/Invention)

International class
(IPC 1-7): B29C45/00 B29D22/00 B65D39/00 B65D41/00 B65D41/38 B65D43/00 B65D43/16
B65D47/00 B65D47/08 B65D47/14 B65D50/00 B65D51/00

CPC: B65D47/0838 B65D47/0842 B65D47/0847 B65D55/024 B65D2101/0023 B65D47/0828
B65D47/2081 B65D2101/003 B65D47/148

European class: B65D47/08B3 B65D47/08B4C B65D47/08B4C1 B65D47/08B4F B65D47/14D1
B65D47/20E4B B65D55/02F L65D101/00A3 L65D101/00A3B

US class: 215/235 215/237 215/253 220/254.3 222/556 264/242 264/328.1 D9/446 D9/449 D9/453

Locarno class: 09/07 09/01

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Abstract:

Source: US2005116382A The invention concerns a closure comprising a base portion and a cap forming portion including a top articulated to a ring through a hinge. The strap enables the cap forming portion to be moulded in closing position of the top, tamperproof means being provided between the ring and the top. When the cover is closed, the sensitive zones of the cap are either located in a sealed closed space, or capable of being in contact with a liquid (in solution or spray) and capable of being treated so as to eliminate said liquid, so as to sanitize the closure. Furthermore, the tamperproof means are deformed and ruptured when the top is first opened such that the resulting free ends are sufficiently spaced apart from each other, thus easily revealing to a user whether it has

been tampered with.

0) US2003116523A – CLOSURE WITH EXTENDED SEAL MEMBER

36) Family number: 19065928 (US2003116523A)

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Title: CLOSURE WITH EXTENDED SEAL MEMBER

Priority: AU1997PO07885 19970714 AU19980080944 19980703 US20030359064 20030206
US20000462781 20000615 WO1998AU00510 19980703

Family:

Publication number	Publication date	Application number	Application date
<u>AU19980944 A1</u>	19990210	AU19980080944	19980703
<u>AU731374 B2</u>	20010329	AU19980080944	19980703
<u>AU788597 A0</u>	19970807	AU1997PO07885	19970714
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<u>CZ20000147 A3</u>	20010912	CZ20000000147	19980703
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<u>NO316716 B1</u>	20040413	NO20000000155	20000112
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<u>PL338040 A1</u>	20000925	PL19980338040	19980703
<u>RU2000103272 A</u>	20011220	RU20000103272	19980703
<u>RU2203204 C2</u>	20030427	RU20000103272	19980703
<u>TH38379 A</u>	20000529	TH19981002643	19980713
<u>TR200000100 T2</u>	20010723	TR20000000100T	19980703
<u>US2003116523 AA</u>	20030626	US20030359064	20030206
<u>US6527132 BA</u>	20030304	US20000462781	20000615
<u>US6991123 BB</u>	20060131	US20030359064	20030206
<u>WO9903746 A1</u>	19990128	WO1998AU00510	19980703

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EHND PEHKEDZHING SERV

Assignee(s): CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT GUERNSEY
CHANNEL ISLANDS ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT
GUERNSEY ; SEALING SERVICE CO ; KLOZHERS EHND PEHKEDZHING SERVISIZ

LIMITED ; FURLONG MICHAEL PATRICK ; KLOZHERS EHND PEHKEDZHING
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PACKAGING SERVICE LIMITED ; CLOSURES AND PACKAGING SERVICE LTD

Inventor(s):^(std): RODNEY MALCOLM DRUITT ; RODNEY M DRUITT ; R M DRUITT ; MICHAEL PATRICK
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FORLONG PATRICK MICHAEL ; FERLONG MAJKL PATRIK ; DRUTT RODNI MALKOL
M ; DRUITT RODNEY MALCOM ; DERUYET L M ; FRANT M P ; FRAN M P ; DRUITT R
M ; DRUITT RODNEY M ; DRUITT RODNEY MALCOLM ; FURLONG MICHAEL P ;
FURLONG MICHAEL PATRICK ; FURLONG PATRICK MICHAEL ; FURNONG PATRICK
M

Inventor(s): PATRICK MICHAEL FURLONG ; DRUTT RODNI MALKOL'M

Agent(s): FB RICE; FB RICE PTY LTD; KIRBY EADES GALE BAKER; MCDERMOTT WILL AND
EMERY LLP

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE
DK EE ES FI FR GA GB GE GH GM GN GR GW HR HU ID IE IL IS IT JP KE KG KP KR
KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT
RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

International class
^{(IPC 8-9):} B65D41/02 B65D41/04 B65D41/32 B65D53/00 (Advanced/Invention);
B65D41/02 (Advanced/Non-invention);
B65D41/02 B65D41/32 (Core/Invention)

International class
^{(IPC 1-7):} B65D41/02 B65D41/04 B65D41/32 B65D45/14 B65D53/00

CPC: Y10S215/01 B65D41/0428

European class: B65D41/04B2

US class: 215/341 215/343 215/344 215/DIG.1

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SE215091, SE215091, PLRU37844, PLRU37413, PL8006293, PL37844, PL37844,
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Forward Citations: WO12095501, WO07132254, WO0056615, US9750398, US8844770, US8807360, US8668097, US8596477, US8393484, US8393483, US8231025, US7975864, US7882977, US7503468, US7434703, US6991123, US6772894, US2012273452, US2012091092, US2011155758, US2011024423, US2010213159, US2010140271, US2009159555, US2008296309, US2007187352, US2007181578, US2006191933, US2006163192, US2005284837, US2003178792, US2003116523, JP2004501841, EP1985549, EP1789336, DE10297200,

Abstract:

Source: US2003116523A A closure (10) having a scaling rib (14) projecting downwardly from the underside of its top portion (11). The first portion (15) of the scaling rib (14) increases in thickness as it extends away from the top portion (11). In another aspect, the invention relates to a closure (10) in which the sealing rib (14) has a third portion (18) that is substantially no thicker than the second portion (17) of the rib (14) and has a length longer, and preferably substantially longer, than its thickness. In the second aspect, the third portion (18) of the rib (14) is connected to the second portion (17) at or adjacent its free edge and extends generally in a direction away from the top portion (11). Upon attachment of the closure (10) with the neck (22) of a container, the third portion (18) will be displaced to lie between the end portion (23) of the neck (22) of the container and the top portion (11) of the closure (10).

37) Family number: 31713120 (US2005040168A)

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Title: TAMPER EVIDENT MULTIPLE DOOR CLOSURE

Priority: CA20042475279 20040720 CA20062554950 20060801 CA20072601661 20070913
 US20070752069 20070522 US20060542456 20061002 US20060342901 20060130
 US20030643408 20030819 US20060347158 20060203

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2475279 AA</u>	20050219	CA20042475279	20040720
	<u>CA2475279 C</u>	20081125	CA20042475279	20040720
	<u>CA2554950 AA</u>	20070730	CA20062554950	20060801
	<u>CA2554950 C</u>	20140401	CA20062554950	20060801
	<u>CA2601661 AA</u>	20080402	CA20072601661	20070913
	<u>CA2601661 C</u>	20150428	CA20072601661	20070913
	<u>IN00800CH2004 A</u>	20060623	IN2004CH00800	20040813
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	<u>MX2007011536 A1</u>	20090205	MX20070011536	20070919
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	<u>US2005040168 AA</u>	20050224	US20030643408	20030819
	<u>US2006118556 AA</u>	20060608	US20060342901	20060130
	<u>US2006144874 AA</u>	20060706	US20060347158	20060203
	<u>US2007056972 AA</u>	20070315	US20060542456	20061002
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	<u>US8113377 BB</u>	20120214	US20060542456	20061002
	<u>US8317054 BB</u>	20121127	US20070752069	20070522

Probable Assignee: CLARK J L INC**Assignee(s):^(std):** CLARK J L INC ; JL CLARK INC ; SOLOWIEJKO GEORGE**Assignee(s):** J L CLARK INC**Inventor(s):^(std):** SOLOWIEJKO GEORGE**Inventor(s):** GEORGE SOLOWIEJKO**Agent(s):** MARKS AND CLERK; RICHES MCKENZIE AND HERBERT LLP; LEYDIG VOIT AND
MAYER LTD; REINHART BOERNER VAN DEUREN PC; LEYDIG VOIT AND MAYER

International class
 (IPC 8-9): A47G19/24 B65D17/34 B65D21/02 B65D21/036 B65D43/03 B65D43/14 B65D43/16
B65D47/08 B65D47/10 B65D47/36 B65D51/18 B65D53/08 B65D55/02 B65D55/06
B65D83/06 B67D3/00 B67D5/32 B67D7/32 (Advanced/Invention);
B29C45/00 B29C65/02 B29C65/08 (Advanced/Non-invention);
A47G19/00 B65D17/28 B65D21/02 B65D21/032 B65D43/02 B65D43/16 B65D47/00
B65D47/06 B65D47/08 B65D51/00 B65D51/18 B65D53/00 B65D55/02 B65D83/06
B67D3/00 B67D7/32 (Core/Invention);
B29C45/00 B29C65/02 B29C65/08 (Core/Non-invention)

International class
 (IPC 1-7): B65D17/34 B65D43/16 B65D47/10 B65D51/18 B65D55/02 B65D83/06

CPC: B65D83/06 B65D47/0804 B65D47/0842 B65D2101/0023 B29C66/542 B65D21/022
B29C45/0017 B29C65/02 B29C65/08 B29C66/21 B29C66/30221 B29L2031/712
B65D47/0847 B65D2101/0007 B65D2101/003 B65D2543/00101 B65D2543/00194
B65D2543/00296 B65D2543/00379 B65D2543/00481 B65D2543/00537 B65D2543/00555
B65D2547/06

European class:

B65D21/02E7B B65D47/08B B65D47/08B4C1 B65D47/08B4F B65D83/06 L29C45/00F
L29C65/02 L29C65/02T20+A4 L29C65/08 L29C65/08+A4 L29C66/21 L29C66/30221
L29C66/534 L29L31/712 L65D101/00A1 L65D101/00A3

US class: 206/503 206/508 220/214 220/214P 220/254.2 220/254.200P 220/254.200S 220/254.3
220/254.300S 220/265 220/266 220/266S 220/270 220/359.2 220/380 220/835
222/153.06 222/153.060S 222/480 222/541.5 222/541.500S 222/541.6 222/565 222/565S

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Forward Citations: WO11106887, WO10124067, WO10124067, WO09052482, WO08156921, WO07035944, USD7422222, USD717161, USD695109, USD694617, USD615862, USD604161, USD599203, USD585748, USD539647, USD538664, US9706886, US9010560, US8851315, US8833589, US8793968, US8627977, US8464886, US8464869, US8459485, US8360262, US8317054, US8308031, US8292111, US8286817, US8276777, US8251242, US8146766, US8127961, US8123064, US8113377, US8083089, US8028851, US7909195, US7845519, US7743951, US7438198, US7261217, US2016096663, US2015368002, US2015282681, US2014065276, US2014027458, US2011239597, US2011139783, US2011056976, US2011042401, US2010326988, US2010276461, US2010270301, US2010181323, US2010084399, US2009101674, US2009101647, US2009101645, US2008308557, US2007235452, US2007215619, US2007138180, US2007068891, US2007062831, US2007056972, US2006201947, US2006144874, US2006090671, US2006027581, EP2197759, AU2006292050,

Abstract:

Source: US2005040168A A server lid for a container with an integral tear strip tamper evident feature. A tear strip for the tamper evident feature is molded as an adjunct to a base member which forms the closure. The tear strip is joined to the base by at least one frangible web, and hinges about the frangible web to overlie front edges of one or more flaps formed in the server lid. Ultrasonic welds connect the overlying tear strip to the flaps or adjacent the flaps for providing a tamper evident feature.

0) US2012091134A – TAMPER-EVIDENT CLOSURE AND PACKAGE

38) Family number: 50933437 (US2012091134A)

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Title: TAMPER-EVIDENT CLOSURE AND PACKAGE

Priority: JP20130533864T 20110920 US20100393438P 20101015 US20110037061 20110228
US20110037087 20110228 US20120539692 20120702 WO2011US52320 20110920
WO2011US52326 20110920

Family:

Publication number	Publication date	Application number	Application date
<u>AU2011314171 AA</u>	20120419	AU20110314171	20110920
<u>AU2011314171 BB</u>	20151029	AU20110314171	20110920
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<u>RU2586473 C2</u>	20160610	RU20130122126	20110920
<u>US2012091134 AA</u>	20120419	US20110037061	20110228
<u>US2012091138 AA</u>	20120419	US20110037087	20110228
<u>US2012267372 AA</u>	20121025	US20120539692	20120702
<u>US8763830 BB</u>	20140701	US20110037061	20110228
<u>US9085395 BB</u>	20150721	US20120539692	20120702
<u>US9790005 BB</u>	20171017	US20110037087	20110228
<u>WO12050759 A1</u>	20120419	WO2011US52320	20110920
<u>WO12050760 A1</u>	20120419	WO2011US52326	20110920

Probable Assignee: CLOSURE SYSTEMS INT INC

Assignee(s):^(std): BASHYAM NAVANEETH ; BHATT PRANAV ; CLOSURE SYSTEM INT INC ; CLOSURE SYSTEM INTERNATIONAL INC ; CLOSURE SYSTEMS INT INC ; CLOSURE SYSTEMS INTERNATIONAL INC ; MOLL WILLIAM ; EDIE JOHN ; GEVERS DAVID E ; SADIQ SOHAIL ; TARTOCK RUSS ; TARTOCK RUSSELL ; KLOUZHER SISTEMZ INTERNESHNL INK

Inventor(s):^(std): DAVID E GEVERS ; JOHN EDIE ; NAVANEETH BASHYAM ; PRANAV BHATT ; RUSS TARTOCK ; SOHAIL SADIQ ; WILLIAM MOLL ; TARTOK RASS ; TARTOCK RUSS ; SADIQ SOHAIL ; MOLL WILLIAM ; MOLL UILLYAM ; GEVERS DAVID E ; EDIE JOHN ; BKHATT PRANAV ; BHATT PRANAV ; BASHYAM NAVANEETH ; BASHIAM NAVANIT ; TARTOCK RUSSELL ; SADIK SOKHAIL ; MOLL UILLJAM ; IDAJ DZHON ; DZHEVERS DEVID E

Agent(s): SPRUSON AND FERGUSON; JOHANSSON AND LANGLOIS LTDA; ALGEMEEN OCTROOI EN MERKENBUREAU; BAETEN ERNEST; WOOD PHILLIPS KATZ CLARK AND MORTIMER; NIXON PEABODY LLP; GEIMER STEPHEN D ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): B65D41/00 B65D41/04 B65D41/32 B65D41/34 B65D51/16 B65D55/02 (Advanced/Invention)

CPC: B65D41/325 B65D41/3428 B65D2101/003 B65D41/04 B65D51/1661

European class: B65D41/32B B65D41/34C1 L65D101/00A3B

US class: 1/1 215/252 215/253 215/256 215/901 220/214 220/268 220/276 220/288 220/303

[Classification Explorer](#)

Cited documents: WO09073137 A1, WO03016161 A1, WO03016161, USD578889 S1, US8393483 BB, US8365934 BB, US8066133 BB, US7905820 BB, US7867425 BB, US7857154 BB, US7802690 BB, US7735664 BA, US7703642 BB, US7694835 BA, US7694835, US7651004 BB, US7645414 BB, US7607547 BB, US7581652 BB, US7575121 BB, US7527159 BB, US7503468 BB, US7451898 BB, US7264131 BB, US7243807 BB, US7014055 BB, US6779672 BB, US6769575 BA, US6557714 BB, US6332550 BA, US6325226 BA, US6253939 BA, US6213321 BA, US6213321, US6050436 A, US6039196 A, US6029834 A, US6006930 A, US5913436 A, US5891380 A, US5862953 A, US5813563 A, US5806707 A, US5769263 A, US5749484 A, US5725115 A, US5720402 A, US5715959 A, US5711443 A, US5678714 A, US5638972 A, US5573128 A, US5564582 A, US5547092 A, US5533633 A, US5465876 A, US5456375 A, US5411157 A, US5242068 A, US5207783 A, US5197620 A, US5076453 A, US4981230 A, US4966780 A, US4966780, US4938370 A, US4856665 A, US4801030 A, US4801030, US4798303 A, US4674643 A, US4667839 A, US4667838 A, US4664278 A, US4657153 A, US4643321 A, US4613052 A, US4595110 A, US4593830 A, US4562931 A, US4550844 A, US4546892 A, US4540100 A, US4534479 A, US4493427 A, US4485934 A, US4478343 A, US4470513 A, US4458821 A, US4402418 A, US4402418, US4394918 A, US4382521 A, US4346811 A, US4326639 A, US4305516 A, US4270664 A, US4166552 A, US4090631 A, US3901403 A, US2010276387 AA, US2010230443 AA, US2010228 A, US2009261057 AA, US2009159555 AA, US2009045158 AA, US2008314000 AA, US2008093363 AA, US2008087625 AA, US2008067142 AA, US2008035602 AA, US2007181525 AA, US2007090080 AA, US2007034590 AA, US2007023380 AA, US2006255003 AA, US2006255002 AA, US2006151418 AA, US2006138073 AA, US2006138071 AA, US2006032831 AA, US2005263476 AA, US2005252878 AA, US2005211659 AA, US2005173367 AA, US2005077264 AA, US2004238478 AA, US2004155006 AA, US2004060893 AA, US2002166834 AA, US2001027957 AA, US2001002661 AA, US2001002661, RU2176974, JP9226790 A2, JP9226790, JP8034458 A2, JP8034458, JP6016249 U, JP6016249 U, JP59500667 T2, JP59500667, JP58113633 U1, JP58113633 U, JP58113633 U, JP4071649 U, JP4071649 U, JP2009107704 A2, JP2009107704, JP2008007130 A2, JP2008007130, JP2007145341 A2, JP2007145341, JP10324353 A2, JP10324353, JP10316155 A2, JP10316155, EP1048585 A2, CN86101672 A, CN1361741 A,

Forward Citations: WO17055574, WO14015342, USD722689, US8471161, US2015027976, US2014021157, US2012193195, EP2874895, EP2874895, EP2784985, CN106255649, CN104797504, CN104470817,

Abstract:

Source: US2012091134A A tamper-indicating plastic closure, and tamper-evident package are disclosed,

wherein the closure includes a pilfer band having a substantially continuous tamper-ring. The tamper-ring extends generally angularly upwardly and inwardly of the closure in a tamper-indicating orientation of the tamper-ring for engagement with a relatively enlarged annular locking ring of the associated container. Notably, the tamper-ring includes a plurality of circumferentially spaced, projections, which preferably comprise relatively thick regions or shoulders, which desirably act to limit lateral movement of the pilfer band with respect to the container by engagement of at least one shoulder with the associated container generally beneath the container locking ring.

39) Family number: 24157224 (US4928837A)

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Title: Tamper evident closure
Priority: CA19902027682 19901015 US19890347363 19890504 US19900529342 19900525
Family:

Publication number	Publication date	Application number	Application date
AU199065622 A1	19911128	AU19900065622	19901030
AU638290 B2	19930624	AU19900065622	19901030
CA2027682 AA	19911126	CA19902027682	19901015
EP0457961 A2	19911127	EP19900121597	19901112
EP0457961 A3	19920708	EP19900121597	19901112
FI905787 A	19911126	FI19900005787	19901123
FI905787 A0	19901123	FI19900005787	19901123
JP4031255 A2	19920203	JP19900341230	19901130
NO905171 A	19911126	NO19900005171	19901129
NO905171 A0	19901129	NO19900005171	19901129
NZ235919 A	19930927	NZ19900235919	19901031
US4928837 A	19900529	US19890347363	19890504
US4998989 A	19910312	US19900529342	19900525

Probable Assignee: OPSEC SECURITY GROUP INC

Assignee(s):^(std): TSL INC ; TEII ESU ERU INC

Assignee(s): ROYAL BANK OF SCOTLAND PLC AGENT FOR NATIONAL W AS ; ORCA HOLDINGS LTD ; ROYAL BANK OF SCOTLAND PLC AGENT FOR NATIONAL WEST ; OPTICAL SECURITY GROUP INC WAS TSL INCORPORATED.. ; ROYAL BANK OF SCOTLAND PLC AGENT FOR NATIONAL WESTMINSTER BANK PLC AS ; OPTICAL SECURITY GROUP INC WAS TSL INC ; OPTICAL SECURITY GROUP INC ; OPSEC SECURITY GROUP INC ; APPLIED OPSEC INC ; APPLIED OPTICAL TECHNOLOGIES HOLDINGS INC ; BARD RICHARD H ; CURIEL YORAM ; HUNT CAPITAL GROUP LLC

Inventor(s):^(std): YORAMU KURIERU ; CURIEL YORAM

Inventor(s): YORAM CURIEL ; NAME NOT GIVEN

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; SMART AND BIGGAR

Designated states: AT BE CH DE DK ES FR GB IT LI NL SE

International class [B65D41/58](#) [B65D43/02](#) [B65D43/16](#) [B65D47/08](#) [B65D55/02](#) ^(Advanced/Invention);
^(IPC 8-9) [B65D43/16](#) ^(Advanced/Non-invention)

International class [A61J](#) [B65D41/18](#) [B65D41/58](#) [B65D43/16](#) [B65D47/08](#) [B65D47/12](#) [B65D50/00](#) [B65D51/00](#)
^(IPC 1-7) [B65D53/06](#) [B65D55/02](#) [B65D55/06](#)

CPC: [B65D43/0212](#) [B65D47/0838](#) [B65D55/02](#) [B65D55/026](#) [B65D2101/00](#) [B65D2543/00092](#)
[B65D2543/00231](#) [B65D2543/00296](#) [B65D2543/00527](#) [B65D2543/00537](#) [B65D2543/00629](#)
[B65D2543/00685](#) [B65D2543/0074](#) [B65D2543/00842](#)

European class: [B65D43/02S3E](#) [B65D47/08B4C](#) [B65D55/02](#) [B65D55/02G](#) [L65D101/00](#) [L65D543/00Y10B2](#)
[L65D543/00Y1F2C](#) [L65D543/00Y1H](#) [L65D543/00Y1M6](#) [L65D543/00Y8D1N](#)
[L65D543/00Y8D3](#) [L65D543/00Y8S1B4](#) [L65D543/00Y8S1D2](#) [L65D543/00Y8S3B4](#)

US class: [215/230](#) [215/250](#)

[Classification Explorer](#)

Cited documents: US4980763 A, US4928837 A, US4763801 A, US4759445 A, US4749084 A, US4747499 A, US4718553 A, US4576297 A, US4566627 A, US4546881 A, US4516679 A, US4505399 A, US4502605 A, US4479585 A, US4451523 A, US4449632 A, US4436203 A, US4424252 A, US4181223 A, US4106672 A, US4098577 A, US4012553 A, US3984005 A, US3935960 A, US3786777 A, US3783089 A, US3662915 A, US3415402 A, US3182851 A, US2131774 A, US2127548 A, US2074490 A, US1670450 A, US1664635 A, GB2141415 A1, AU4690189 A1,

Forward Citations: WO0037329, USD668962, US9607462, US7051772, US7048137, US6382440, US5762215, US5690241, US5667085, US5325721, US5072844, US4998989, US2014270467, US2010200535, US2010072163, US2005115966, US2005000589, US2004064983, JP4578286, JP2006256620, EP1140647, AU664156, AU638290, AU638290,

Abstract:

Source: US4928837A The tamper evident closure is a resilient closure which is snap fit onto a container. The resilient closure has an end wall with a plurality of transverse grooves. A resin is deposited on the top surface of the end wall and into the grooves. If the closure is moved away from the container, the top layer of resin and a portion of the resin in the grooves will fracture, thus indicating to the consumer that tampering with the container has occurred. A portion of the resin will remain in the grooves to indicate that the resin was applied when the closure was initially sealed. In another embodiment, the closure comprises a rotatable portion and a fixed portion. The rotatable and fixed portion have grooves which contain a resin. When the rotatable portion is pivoted away from the fixed portion to open the container, a portion of the resin fractures, thus indicating tampering with the container. A portion of the resin also remains in the grooves.

40) Family number: 18992158 (US4343408A)

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Title: Tamper-evident plastic closure**Priority:** CA19810375474 19810414 JP19810501664 19810410 US19800142429 19800421
WO1981US00480 19810410**Family:**

Publication number	Publication date	Application number	Application date
<u>AU198171709 A1</u>	19811110	AU19810071709	19810410
<u>BR8108447 A</u>	19820309	BR19810008447	19810410
<u>CA1163233 A1</u>	19840306	CA19810375474	19810414
<u>DE3144407 A1</u>	19820701	DE19813144407	19810410
<u>DE3144407 C2</u>	19910529	DE19813144407	19810410
<u>DE3144407 T</u>	19820701	DE19813144407T	19810410
<u>EP0050647 A1</u>	19820505	EP19810901238	19810410
<u>EP0050647 A4</u>	19830209	EP19810901238	19810410
<u>EP0050647 B1</u>	19850911	EP19810901238	19810410
<u>ES266008 U</u>	19830216	ES19810266008U	19810420
<u>ES266008 Y</u>	19840701	ES19810266008U	19810420
<u>GB2085416 A1</u>	19820428	GB19810037551	19810410
<u>GB2085416 B2</u>	19850123	GB19810037551	19810410
<u>JP57500972 T2</u>	19820603	JP19810501664	19810410
<u>JP60182349 U1</u>	19851203	JP19850064148U	19850426
<u>MX151989 A</u>	19850523	MX19810186927	19810420
<u>US4343408 A</u>	19820810	US19800142429	19800421
<u>WO8103006 A1</u>	19811029	WO1981US00480	19810410

Probable Assignee: GEN KAP PR CORP**Assignee(s):^(std):** GEN KAP PR CORP**Assignee(s):** GENERAL KAP CHIMNEY ROCK ROAD BLDG 4W BOUND BROOK ; GENERAL KAP CORP ; GENERAL KAP P R CORP ; GENERAL KAP P R CORP SAN JUAN PUERTO RICO US ; GENERAL KAP PR CORP ; GENERAL KAP PR A CORP OF PUERTO RICO CORP ; CSASZAR ERNEST J**Inventor(s):^(std):** CSASZAR E ; CSASZAR E J ; CSASZAR ERNEST J ; CSASZAR ERNEST JULIUS**Inventor(s):** CSASZAR ERNEST JULIUS MOUNTAINSIDE N J ; E J CSASZAR ; ERNEST JULIUS CSASZAR ; EJ CSASZAR**Agent(s):** BORDEN LADNER GERVAIS LLP**Designated states:** AT AU BR CH DE DK FI FR GB JP LU NL NO SE**International class** B65D17/28 B65D17/32 B65D41/34 (Advanced/Invention) ;
B65D17/28 (Core/Invention)**International class** B65D17/32 B65D17/50 B65D39/08 B65D41/32 B65D41/34 B65D49/12
(IPC 1-7) :**CPC:** B65D41/3442 B65D41/3452**European class:** B65D41/34D B65D41/34D1A**US class:** 215/252 215/258[Classification Explorer](#)**Cited documents:** US4210251 A, US4196818 A, US4033472 A, US3955716 A, US3904062 A, US3784041 A, US3414151 A, US3360149 A, US3329295 A, US3160303 A, US2914206 A, JP54083588 A2, GB1303436 A, FR2320870 A1, FR1536459 A, DE7908673 U, DE3100424 A1, DE2349265 A1, DE1859147 U,

Forward Citations: WO9923002, WO0155000, US8596477, US8453859, US7735666, US7228979, US6991123, US6926162, US6793082, US6705479, US6640988, US6626310, US6527132, US6491175, US6325225, US6237791, US6126886, US6089390, US6062408, US5967351, US5950849, US5891380, US5853097, US5755346, US5575967, US5100009, US4925617, US4886947, US4872304, US4856667, US4823967, US4811857, US4806301, US4726483, US4669623, US4555039, US4545496, US4529096, US4526282, US4506795, US4494664, US4485934, US4479586, US4461390, US4452364, US4436212, US4417666, US4380299, US2008093394, US2007187352, US2007108154, US2005284837, US2005189355, KR101298855, JP5022142, JP4949161, JP2009051526, JP2009029483, GB2121392, FR2584050, FR2527558, EP0239176, DE19953660, DE19953660,

Abstract:

Source: US4343408A Tamper-evident closures which are useful in conjunction with various bottles and containers are disclosed. The closures are intended to be used in connection with containers having threaded necks above an annular collar, and they comprise one-piece closures including an end wall, an internally threaded upper portion and a depending lower skirt portion which includes an inwardly projecting bead adapted to engage the annular collar on the container. The depending lower skirt portion has a substantially uniform thickness throughout its entire area intended to contact the annular collar on the container, and the closure includes an area of weakness which is designed to fracture in a substantially horizontal plane across the closure or, in another embodiment, in a plane which neither passes through nor is tangential to the annular collar on the container. Fracture thus occurs when the closure is unthreaded from the container, thereby leaving the lower skirt portion engaged to the annular collar on the container after the end wall and internally threaded upper portion of the closure have been removed.

41) Family number: 11106169 (US5631068A)

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Title: SELF-CONTAINING TAMPER EVIDENT TAPE AND LABEL

Priority: CA19952196606 19950802 CA19952461583 19950802 US19960760137 19961203
 NZ19950291083 19950802 US19940285639 19940802 US19950388136 19950213
 WO1995US09803 19950802

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199532106 A1</u>	19960304	AU19950032106	19950802
	<u>AU697919 B2</u>	19981022	AU19950032106	19950802
	<u>CA2196606 AA</u>	19970131	CA19952196606	19950802
	<u>CA2196606 C</u>	20040601	CA19952196606	19950802
	<u>CA2461583 AA</u>	19960215	CA19952461583	19950802
	<u>CA2461583 C</u>	20050412	CA19952461583	19950802
	<u>DE69513291 D1</u>	19991216	DE19956013291	19950802
	<u>DE69513291 T2</u>	20000531	DE19956013291T	19950802
	<u>EP0773889 A2</u>	19970521	EP19950928278	19950802
	<u>EP0773889 B1</u>	19991110	EP19950928278	19950802
	<u>NZ291083 A</u>	19990429	NZ19950291083	19950802
	<u>NZ334361 A</u>	20000728	NZ19950334361	19950802
	<u>TH24465 A</u>	19970325	TH19951001886	19950802
	<u>TW323263 B</u>	19971221	TW19960100118	19960106
	<u>US5631068 A</u>	19970520	US19950388136	19950213
	<u>US5798169 A</u>	19980825	US19960760137	19961203
	<u>WO9604177 A2</u>	19960215	WO1995US09803	19950802
	<u>WO9604177 A3</u>	19960509	WO1995US09803	19950802
	<u>ZA9506452 A</u>	19960314	ZA19950006452	19950802

Probable Assignee: AMPAC TRIGON LLC**Assignee(s):^(std):** SEALED AIR CORP ; SMITH CHRISTOPHER A ; SEALED AIR CORP SUBSTITUTED UN ; TRIGON PACKAGING CORP**Assignee(s):** SEALED AIR CORP SUBSTITUTED UNDER SECTION 24 1 FROM TRIGON PACKAGING CORP ; SEALED AIR CORP SADDLE BROOK ; SEALED AIR CORP SUBSTITUTED UNDER SECTION 24 1 F ; AMPAC HOLDINGS LLC ; AMPAC TRIGON LLC ; CUIQIN PACKAGING CO ; JPMORGAN CHASE BANK NA COLLATERAL AGENT AS**Inventor(s):^(std):** SMITH CHRISTOPHER ; SMITH CHRISTOPHER A**Inventor(s):** CHRISTOPHER A SMITH ; Christopher A ; Smith**Agent(s):** FB RICE; FB RICE PTY LTD; BORDEN LADNER GERVAIS LLP**Designated states:** AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LK LR LT LU LV MC MD MG ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TM TT UA UG US UZ VN

International class B32B27/32 B32B7/12 B65D33/34 B65D55/02 G09F3/02 (Advanced/Invention);
^{(IPC 8-9):} B32B27/32 B32B7/12 B65D33/34 B65D55/02 G09F3/02 (Core/Invention)

International class B32B27/32 B32B3/00 B32B7/00 B32B7/12 B65B B65C B65D33/34 B65D55/02
^{(IPC 1-7):}

CPC: Y10S206/807 Y10S428/913 G09F3/0292 B65D33/34 B65D55/026 B65D2101/00
Y10T428/1334 Y10T428/1352 Y10T428/1467 Y10T428/1476 Y10T428/1486
Y10T428/24628 Y10T428/24802 Y10T428/24851 Y10T428/24876 Y10T428/24901
Y10T428/24942 Y10T428/2839 Y10T428/2843 Y10T428/31504 Y10T428/31938

European class: B65D33/34 B65D55/02G G09F3/02D2 L65D101/00

US class: 206/807 383/5 427/207.1 427/258 427/322 427/412.1 428/174 428/195 428/195.1 428/201 428/204 428/207 428/212 428/35.2 428/35.7 428/352 428/353 428/357 428/41.6 428/41.8 428/411.1 428/416 428/418 428/42.1 428/421 428/488.4 428/488.41 428/523 428/913

[Classification Explorer](#)

Cited documents: WO9300269 A1, WO9118377 A2, WO9104199 A1, US5631068 A, US5582887 A, US5325721 A, US5077001 A, US5064664 A, US5060848 A, US4980222 A, US4941196 A, US4937040 A, US4931327 A, US4911302 A, US4876123 A, US4859521 A, US4838708 A, US4834552 A, US4826213 A, US4816305 A, US4810745 A, US4763931 A, US4718553 A, US4709396 A, US4566627 A, US4509196 A, US3935960 A, US3923198 A, US3896965 A, US3631617 A, GB2243825 A1, GB2202823 A1, GB2123791 A1, GB2003449 A1, FR2597405 A1, FR2317178 A1, EP0396428 A1, EP0349160 A2,

Forward Citations: WO16089988, WO15001426, WO10068645, WO08008641, WO06123952, WO0104014, USD712245, US9650194, US9623622, US9033185, US8561378, US8348511, US8266868, US8157444, US8002941, US7913870, US7887907, US7740923, US7563027, US7530740, US7506487, US7351467, US7322921, US7254873, US7244496, US7223015, US7112362, US7090397, US6994471, US6974406, US6966812, US6938757, US6632403, US6494464, US6471058, US6447015, US6270256, US6267505, US6264033, US6167679, US6096387, US6033762, US5989707, US5798169, US2015342315, US2015225128, US2014003743, US2012097706, US2010278462, US2010183247, US2010178394, US2009232422, US2008295455, US2008293323, US2008181537, US2008118685, US2008019619, US2007187946, US2007123836, US2007066470, US2007065051, US2007065048, US2006257599, US2006228055, US2005275213, US2005171812, US2005157956, US2005053776, US2005036716, US2005003155, US2004264813, US2004136616, US2003161972, US2003074334, US2002195413, ITVA20100039, GB2480925, GB2480925, GB2386093, GB2386093, GB2327933, GB2327933, FR3028249, FR2908745, EP3020647, EP2392627, EP2377687, EP1995178, EP1296306, EP1167230, EP1126970, EP1126970, EP0805018, DE102015106447, DE102013011227, DE102013009628, DE102007023493, AU765656,

Abstract:

Source: US5631068A A tape or label for sealing a container that provides visual evidence if the seal is forced open or cooled below a breakdown temperature. The tape includes a plastic strip, a layer of ink printed on a surface of the plastic strip, and a layer of pressure-sensitive adhesive. The tape can be incorporated into a bag for sealing the bag closed. The tape includes an ink layer that is sandwiched between the plastic strip and the adhesive layer. The adhesive can be secured to portions of a bag to seal it closed. If the seal is forced open, the ink layer visibly delaminates from the plastic strip. The adhesive layer and the plastic strip are chosen to have different rates of shrinking when cooled, so that when the tape is cooled below its breakdown temperature, the ink layer delaminates. In an alternative embodiment of the tape, two layers of ink are printed onto the plastic strip. The first layer of ink is clear and is printed onto the untreated plastic strip in a pattern. The second layer of ink is opaque and is printed uniformly over the plastic strip and the clear ink after the plastic strip is treated.

42) Family number: 29367095 (US5662233A)

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Title: Wine bottle closure

Priority: US19950421492 19950412 US19970908908 19970808 WO1996US04972 19960410

Family:

Publication number	Publication date	Application number	Application date
AT260825 E	20040315	AT19960912672T	19960410
AU199655402 A1	19961030	AU19960055402	19960410
AU715994 B2	20000217	AU19960055402	19960410
CA2218036 AA	19971010	CA19962218036	19960410
CA2218036 C	20070807	CA19962218036	19960410
DE69631756 D1	20040408	DE19966031756	19960410
DE69631756 T2	20050224	DE19966031756T	19960410
EP0815029 A1	19980107	EP19960912672	19960410
EP0815029 A4	20000329	EP19960912672	19960410
EP0815029 B1	20040303	EP19960912672	19960410
NZ306759 A	19990830	NZ19960306759	19960410
US5662233 A	19970902	US19950421492	19950412
US5975322 A	19991102	US19970908908	19970808
WO9632337 A1	19961017	WO1996US04972	19960410

Probable Assignee: INNOVATIVE MOLDING

Assignee(s):^(std): INNOVATIVE MOLDING ; INNOVATIVE MOLDING INC

Assignee(s): INNOVATIVE MOLDING INC A CORP OF CA ; JPMORGAN CHASE BANK NA
COLLATERAL AGENT AS ; REID GRAHAME W ; TRIMAS CORP ; BANK OF NEW
YORK MELLON TRUST CO NA

Inventor(s):^(std): REID GRAHAME W ; REID W ; GRAHAME W REID

Agent(s): PATENT ATTORNEY SERVICES; FINLAYSON AND SINGLEHURST

Designated states: AT AU BE CA CH DE DK ES FI FR GB GR HU IE IT LI LU MC NL NO NZ PT RU SE

International class
(IPC 8-9): [B65D1/02](#) [B65D39/08](#) [B65D41/04](#) [B65D41/58](#) [B65D41/62](#) [B67B7/06](#) (Advanced/Invention);
[B65D1/02](#) [B65D39/00](#) [B65D41/00](#) [B65D41/04](#) [B65D41/32](#) [B67B7/00](#) (Core/Invention)

International class
(IPC 1-7): [B65D1/02](#) [B65D39/08](#) [B65D41/04](#) [B65D41/58](#) [B65D41/62](#) [B65D45/00](#)

CPC: [B65D41/0471](#) [B65D41/58](#) [B65D41/62](#) [B65D2101/0023](#) [B67B7/06](#)

European class: [B65D41/04E](#) [B65D41/58](#) [B65D41/62](#) [B67B7/06](#) [L65D101/00A3](#)

US class: [215/217](#) [215/247](#) [215/273](#) [215/277](#)

[Classification Explorer](#)

Cited documents: US5662233 A, US5480915 A, US5455180 A, US5431305 A, US5269429 A, US5096083 A, US5080245 A, US5071017 A, US5012942 A, US4948000 A, US4844273 A, US4834251 A, US4830970 A, US4812408 A, US4809858 A, US4771923 A, US4767016 A, US4733787 A, US4664276 A, US4605135 A, US4493427 A, US4436401 A, US4373641 A, US4084717 A, US3946891 A, US3831796 A, US3736899 A, US3695475 A, US3612325 A, US3589983 A, US3499568 A, US3339772 A, US2987175 A, US2742170 A, US1942810 A, FR2444081 A1, FR1237031 A, DE3123902 A1, DE2541318 A1,

Forward Citations: WO16044544, WO16015115, WO15169415, WO08046416, WO08046416, WO03099671, WO03068622, USD795693, USD606400, US9821930, US9763853, US9637269, US9382049, US9272819, US9022079, US8807363, US8714383, US8596477, US8573424, US8479952, US8356722, US8322573, US8307982, US8132600, US8056751, US8011535, US8011531, US7954521, US7426999, US7207454, US6929137, US6913157, US6832634, US6793972, US6763961, US6651834, US6588614, US6568549, US6510957, US6454126, US6341706, US5975322,

US2014014612, US2013076019, US2013075356, US2013043215, US2011253666, US2011052768, US2010252524, US2010242414, US2010176129, US2009145908, US2009032488, US2008142469, US2008107785, US2008105681, US2007194047, US2005284839, US2005233109, US2005167390, US2005092707, US2005056612, US2004238479, US2004232102, US2004232101, US2004232099, US2004206721, US2004169001, US2004164084, US2004105954, US2004031770, US2003160020, JP6143342, JP2014234184, FR2792617, EP1925561, EP1494934, EP1486428, EP0908393, CN103662300, CN103662300, AU769322, AU2003203053,

Abstract:

Source: US5662233A A wine closure replaces the traditional cork and foil and includes a gasket/stopper which engages into the neck of the bottle. Encasing the finish and upper neck of the bottle is a plastic outer closure cap, generally cylindrical, with a top center disc which is adhered to the top of the stopper. A circle of frangible elements at the periphery of the disc provide for breakage of the disc away from the sleeve, causing it to remain with the stopper when the plastic cap is opened. Coarse, short-length threads are formed on the outside of the container neck, spaced appreciably below the finish, to be engaged by internal thread lugs of the plastic cap. On initial unscrewing of the cap, the disc breaks away from the remainder of the cap. A small vertical clearance is provided in the engagement between the internal cap structure and the gasket/stopper, so that the cap does not begin to lift the gasket/stopper until static friction against the elastomeric gasket/stopper has been overcome.

Title: TAMPER-EVIDENT DEVICE**Priority:** GB20010012726 20010525 WO2002GB02404 20020522**Family:**

Publication number	Publication date	Application number	Application date
AT305420 E	20051015	AT20020735580T	20020522
BRPI0210018 A	20040810	BR2002PI10018	20020522
BRPI0210018 B1	20131224	BR2002PI10018	20020522
CN1270941 C	20060823	CN20028010611	20020522
CN1524053 A	20040825	CN20028010611	20020522
DE60206374 C5	20141030	DE20026006374	20020522
DE60206374 D1	20060209	DE20026006374	20020522
DE60206374 T2	20060713	DE20026006374T	20020522
EA005536 B1	20050428	EA20030001298	20020522
EA200301298 A1	20040624	EA20030001298	20020522
EP1392575 A1	20040303	EP20020735580	20020522
EP1392575 B1	20050928	EP20020735580	20020522
ES2249582 T3	20060401	ES20020735580T	20020522
GB200112726 A0	20010718	GB20010012726	20010525
GB200211569 A0	20020626	GB20020011569	20020521
GB2377699 A1	20030122	GB20020011569	20020521
GB2377699 B2	20050105	GB20020011569	20020521
IN01917DN2003 A	20051216	IN2003DN01917	20031114
IN257060 B	20130830	IN2003DN01917	20031114
MXPA03010696 A1	20050307	MX2003PA10696	20020522
PL199890 B1	20081128	PL20020367335	20020522
PL367335 A1	20050221	PL20020367335	20020522
US2004129729 AA	20040708	US20030719232	20031120
US6908013 BB	20050621	US20030719232	20031120
WO02096771 A1	20021205	WO2002GB02404	20020522

Probable Assignee: GUALA CLOSURES PATENTS BV**Assignee(s):^(std):** DANIEL MONTGOMERY AND AMP ; DANIEL MONTGOMERY AND SON LTD ; GUALA CLOSURES PATENTS BV ; MONTGOMERY DANIEL AND SON LTD ; THOMSON DAVID WILLIAM ; MEZZADRA EGIDIO ; SON LTD ; GUALA CLOSURES U K LTD**Assignee(s):** DANIEL MONTGOMERY AND ; GUALA CLOSURES UK LTD ; GUALA CLOSURES U K LTD KIRKINTILLOCH ; DANIEL MONTGOMERY AND SON LTD KIRKINTILLOCH ; GUALA CLOSURES INT BV**Inventor(s):^(std):** EGIDIO MEZZADRA ; EGIDIO THOMSON DAVID WILLIAM M ; MEZZADRA EGIDIO ; MEZZADRA EGIDIO GLOBAL CAP ; THOMPSON DAVID WILLIAM ; THOMSON DAVID ; THOMSON DAVID WILLIAM ; THOMSON DAVID WILLIAM MEZZADRA EGIDIO ; THOMSON WILLIAM ; MEZZADRA EGIDIO G**Inventor(s):** DAVID WILLIAM THOMSON**Agent(s):** NOTARO AND MICHALOS PC**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class B65D41/62 B65D49/04 B65D55/08 (Advanced/Invention);
(IPC 8-9): B65D41/00 B65D49/00 B65D55/02 (Core/Invention)

International class B65D49/02 B65D49/04 B65D55/08 B67B5/00 B67D5/32
(IPC 1-7):

CPC: B65D41/62 B65D49/04

European class: B65D41/62 B65D49/04

US class: 215/251 215/253 215/28 220/268 220/276 222/153.06 222/153.1 222/495 222/546

[Classification Explorer](#)

Cited documents: WO0075033 A1, US6619492 BB, US5711443 A, US5484084 A, US4848614 A, US4540100 A, US4000834 A, US4000824 A, US3335889 A, US2361449 A, GB2366287 A1, GB2355287 A1, GB2302867 A1, GB2285623 A1, GB2158424 A1, GB1262743 A, EP0847930 A1, EP0627359 A1,

Forward Citations: WO17081045, WO14170286, WO13171719, WO13113435, WO13079545, WO13068750, WO11157978, WO09106172, WO09095851, WO08127137, WO08110917, WO08089778, WO08049951, WO06117505, WO06114106, WO06079351, WO06022573, WO05049443, WO04054890, WO03104100, USD630093, US9242768, US9102448, US9038841, US9033169, US9010554, US8944292, US8522991, US8490804, US8453856, US8439213, US8413830, US8181803, US7830263, US7398890, US7219820, US2016347520, US2016229601, US2014183195, US2014054288, US2014048537, US2012223103, US2011259844, US2010170898, US2008105644, US2006289569, TWI331118, ITMI20120858, GB2390086, ES2333569, EP2769927, EP2765090, EP2006212, EP1950144, EP1950144, EP1867576, EP1694576, EP1659073, EP1585684, EP1574450, EA9265, EA019762, EA018520, EA013177, EA009265, EA008429, CN105246791, CN103958361, CN103906689, CN103906689, CN102658910, CN102320427, AU2003288277, AU2003288277,

Abstract:

Source: US2004129729A There is disclosed a tamper-evident device for a closure assembly adapted to be applied to a mouth of a container, for example, a neck of a bottle. There has been identified a need for an improved tamper-evident device which does not have any parts which are removed upon initial opening and which are liable to be reattached by counterfeits or the like. Accordingly the present invention provides a tamper-evident device comprising a sleeve member which comprises a first portion associated with a second portion by means of a frangible portion therebetween, and wherein said first portion is adapted to be applied to a mouth and neck portion of a container, and said second portion is associated with a container closure member, and wherein an initial container opening operation causes said frangible portion to fracture or break such that when the container is reclosed said first and second portions are located in a spaced apart relationship to one another.

44) Family number: 28144587 (US2001052531A)

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Title: Fitment and resealable dispensing closure assembly for high–pressure sealing and bi–modal dispensing

Priority: US20000579323 20000525 US20010811098 20010316 WO2001US15977 20010517

Family:	Publication number	Publication date	Application number	Application date
	<u>AR028930 AA</u>	20030528	AR2001P102518	20010524
	<u>AU2001264648 AA</u>	20011203	AU20010264648	20010517
	<u>AU2001264648 BB</u>	20050224	AU20010264648	20010517
	<u>AU200164648 A1</u>	20011203	AU20010064648	20010517
	<u>AU200164648 A5</u>	20011203	AU20010064648	20010517
	<u>BRPI0111064 A</u>	20040113	BR2001PI11064	20010517
	<u>CA2406252 AA</u>	20021016	CA20012406252	20010517
	<u>CN1280175 C</u>	20061018	CN20018010089	20010517
	<u>CN1438967 A</u>	20030827	CN20018010089	20010517
	<u>CZ20023847 A3</u>	20030416	CZ20020003847	20010517
	<u>CZ302284 B6</u>	20110202	CZ20020003847	20010517
	<u>EP1322542 A1</u>	20030702	EP20010939091	20010517
	<u>EP1322542 A4</u>	20060215	EP20010939091	20010517
	<u>MXPA02011589 A1</u>	20030327	MX2002PA11589	20010517
	<u>PL198315 B1</u>	20080630	PL20010364527	20010517
	<u>PL364527 A1</u>	20041213	PL20010364527	20010517
	<u>RU2002134907 A</u>	20040420	RU20020134907	20010517
	<u>RU2266852 C2</u>	20051227	RU20020134907	20010517
	<u>US2001052531 AA</u>	20011220	US20010811098	20010316
	<u>US6334555 BA</u>	20020101	US20010811098	20010316
	<u>WO0189983 A1</u>	20011129	WO2001US15977	20010517

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s):^(std) SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC

Assignee(s): SMITH KELLY A ; BLOMDAHL CORINNE M ; RANDALL JEFFREY T

Inventor(s):^(std) CM BLOMDAHL ; BLOMDAHL C M ; BLOMDAHL J T RANDALL K A SMITH ; JT RANDALL ; SMITH KELLY A ; REHNDAHL DZHEFFRI T ; RANDALL JEFFREY T ; BLOMDAL KORINN M ; BLOMDAHL CORINNE M ; RANDALL J T ; SMITH K A ; SMITH KELLY A ; KA SMITH

Inventor(s): KELLY A SMITH ; SMITH KELLY ; JT RANDALL KA SMITH CM BLOMDAHL ; K A SMITH ; C M BLOMDAHL ; CORINNE M BLOMDAHL ; J T RANDALL ; J T RANDALL K A SMITH C M BLOMDAHL ; JEFFREY T RANDALL

Agent(s): SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO

Designated states: AT AU BE BR CA CH CN CY CZ DE DK ES FI FR GB GR IE IT LU MC MX NL PL PT RU SE TR

International class
(IPC 8–9): [B65D41/34 B65D47/04 B65D47/08 B65D47/24 B67D5/32 B67D7/32 B67D7/34 F17C13/06](#) (Advanced/Invention)

International class
(IPC 1–7): [B65D47/00 B65D47/04 B67D3/00 B67D5/32](#)

CPC: [B65D47/0809 B65D47/242](#)

European class: [B65D47/08B1 B65D47/24A1](#)

US class: [222/521 222/545 222/545S 222/546 222/546S](#)

Cited documents: US6095382 A, US6065648 A, US6062441 A, US6059132 A, US6039218 A, US6024256 A, US5938086 A, US5810185 A, US5772076 A, US5743444 A, US5692651 A, US5680969 A, US5562220 A, US5456374 A, US5431305 A, US5421487 A, US5377873 A, US5325999 A, US5295597 A, US5267673 A, US5145094 A, US5145083 A, US5125539 A, US5111977 A, US5111949 A, US5104008 A, US4941598 A, US4867354 A, US4805807 A, US4785978 A, US4690304 A, US4569456 A, US4561570 A, US4506809 A, US4358031 A, US3901410 A, US3887116 A, US3297212 A, US3273754 A, US3194453 A, US3123259 A, US3010619 A, US2808169 A, US2759643 A, FR2716170 A3, EP0759876 A1, EP0467554 A1, EP0439109 A2, DE4328582 A1,

Forward Citations: WO15073256, WO13003474, WO13003474, WO07091209, WO06083994, WO04101384, USD499793, USD484061, US9828146, US8613378, US8544685, US8459502, US8403159, US8205762, US7967160, US7900789, US7510095, US7331491, US7182230, US6786363, US6672487, US2016016706, US2012160882, US2011155688, US2011056982, US2011006031, US2009308832, US2009095700, US2008296251, US2008210712, US2008029557, US2007215627, US2007199914, US2007108153, US2006273095, US2006102654, US2004232167, US2004178231, JP2008162597, ITMI20102372, ES2244281, EP2468657, EP1816084, EP1619135, EP1619135, EP1582475, EP1582475, CN102616453,

Abstract:

Source: US2001052531A A fitment is provided for incorporation into a closure assembly to provide at least one high-pressure seal suitable for maintaining high-positive pressures in a container having pressurized contents, such as carbonated beverages. The fitment and closure assembly also provide for bi-modal dispensing operations, because the fitment it can be removed from the closure assembly to provide alternative flow characteristics from the container through the closure assembly. The fitment may also be provided with one or more projections adapted to engage a thread on the closure body such that rotation of the closure body relative to the container results in removal of the fitment from the container. The fitment may also be provided with one or more projections for engaging the closure body to limit its movement relative to the container, thereby defining a fully open dispensing position of the closure body. The projection(s) preferably take the form of a plurality of radially extending ratchet shaped projections or the form of a single, helical flange extending around a peripheral surface of the fitment. A closure assembly incorporating the fitment also may include a plurality of seals formed between various features on the fitment and the closure body, which may include a hinged lid, to enhance the sealing characteristics of the closure assembly.

45) Family number: 51892750 (US2012279966A)

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Title: CLOSURE WITH TAMPER-EVIDENT FEATURE**Priority:** EP20110859840 20110303 US20110262911 20110303 WO2011US26950 20110303**Family:**

Publication number	Publication date	Application number	Application date
AR085601 AA	20131016	AR2012P100683	20120302
AU2011360977 AA	20120907	AU20110360977	20110303
BR112013021835 A2	20161025	BR20131121835	20110303
CA2828540 AA	20130828	CA20112828540	20110303
CA2828540 C	20140610	CA20112828540	20110303
CN103402884 A	20131120	CN201180068931	20110303
DE602011007120 D1	20140626	DE201160007120T	20110303
EP2588384 A1	20130508	EP20110859840	20110303
EP2588384 A4	20130508	EP20110859840	20110303
EP2588384 B1	20140514	EP20110859840	20110303
ES2484366 T3	20140811	ES20110859840T	20110303
IN06176CN2013 A	20140926	IN2013CN06176	20130731
MX2013009400 A1	20130926	MX20130009400	20110303
RU2524876 C1	20140810	RU20130144387	20110303
US2012279966 AA	20121108	US20110262911	20110303
US8413832 BB	20130409	US20110262911	20110303
WO12118502 A1	20120907	WO2011US26950	20110303

Probable Assignee: APTARGROUP INC**Assignee(s):^(std):** APTARGROUP INC ; MAZURKIEWICZ TIMOTHY M ; BAILEY ALBERT D JR ; ROBERTS CHARLES E ; BAILEY JR ALBERT D ; APTARGROUP INC ; WISNIEWSKI JOHN ; SMITH KELLY A**Assignee(s):** APTARGROUP INC CRYSTAL LAKE ; BAILEY ALBERT D**Inventor(s):^(std):** BAILEY ALBERT D ; BAILEY ALBERT D JR ; BAILEY JR ALBERT D ; BEJLI ALBERT D ML ; MAZURKEVICH TIMOTI M ; MAZURKIEWICZ TIMOTHY M ; ROBERTS CHARL Z E ; ROBERTS CHARLES E ; SMITH KELLY A ; SMITH KELLY A ; VISNEVSKI DZHON ; WISNIEWSKI JOHN**Inventor(s):** ALBERT D BAILEY JR ; TIMOTHY M MAZURKIEWICZ ; CHARLES E ROBERTS ; JOHN WISNIEWSKI ; KELLY A SMITH**Agent(s):** SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO; BOEHMERT AND BOEHMERT ANWALTSPARTNERSCHAFT MBB PATENTANWALTE RECHTSANWALTE; APPELT CHRISTIAN W; VALLEJO JUAN PEDRO; WOOD PHILLIPS KATZ CLARK AND MORTIMER; ODELL PAUL M ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [B65D41/32](#) [B65D47/08](#) [B65D51/04](#) [B65D51/18](#) [B65D55/02](#) (Advanced/Invention)
(IPC 8-9):**CPC:** [B65D47/0804](#) [B65D55/024](#) [B65D2101/0023](#)**European class:** [B65D47/08B](#) [B65D55/02F](#) [L65D101/00A3](#)**US class:** [215/235](#) [215/253](#) [215/305](#) [220/254.3](#) [220/257.1](#) [220/259.1](#) [220/266](#) [222/153.06](#) [222/556](#)[Classification Explorer](#)

Cited documents: WO04094239 A2, WO0146032 A2, US7044317 BB, US6269986 BA, US6170710 BA, US6170710 B1, US6003712 A, US5875907 A, US5860543 A, US5579957 A, US4444326 A, US2009159552 AA, US2004089627 AA, US2002175137 AA, DE20009203 U1, DE19962716, DE10025265 A1, CN101044066 A,

Forward Citations: WO15128071, WO15023829, USD737679, USD736634, USD727730, US9764879, US9701451, US9650185, US9382045, US2016130047, US2016081391, US2015108167, US2014131394, RU172526, CN106240984, CN106029513,

Abstract:

Source: US2012279966A A tamper-evident closure (40) is provided for a container. In one particular embodiment, the closure (40) has a body (42) and a hinged lid (44), and has the following additional features as next described. A tamper-indicating tab (120) is connected to the lid (44) by a frangible junction (130). A pressing member (150) is connected to the closure body (42) for movement from an initial unactuated configuration and to an inwardly deformed, actuated configuration. A post (170) is provided on either the pressing member (150) or tab (120), and a slot (140) is defined in the other of the pressing member (150) and tab (120), wherein the slot (140) non-releasably receives the post (170) when the lid (44) is first closed. The closure body (42) also has an inwardly located retention wall (160) defining an aperture (164). When the pressing member (150) is pressed inwardly, the frangible junction (130) is broken to allow the lid (44) to be lifted, and an end portion of the post (170) is non-releasably received in the retention wall aperture (164).

46) Family number: 28284453 (US2002133119A)

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Title: Tamper evident syringe barrel

Priority: US20010759565 20010112 US20010759656 20010112 US20040008723 20041209
 US20040774852 20040209 US20020265986 20021007 US20050174785 20050705
 WO2001US48052 20011210

Family:	Publication number	Publication date	Application number	Application date
	AU2002229016 AA	20020724	AU20020229016	20011210
	US2002133119 AA	20020919	US20010759565	20010112
	US2003032923 AA	20030213	US20020265986	20021007
	US2004159564 AA	20040819	US20040774852	20040209
	US2005113752 AA	20050526	US20040008723	20041209
	US2005283116 AA	20051222	US20050174785	20050705
	US6485460 BB	20021126	US20010759565	20010112
	US6726652 BB	20040427	US20020265986	20021007
	US6846303 BB	20050125	US20040774852	20040209
	US6942643 BB	20050913	US20040008723	20041209
	WO02055140 A1	20020718	WO2001US48052	20011210

Probable Assignee: BRACCO DIAGNOSTICS INC**Assignee(s):**^(std): BRACCO DIAGNOSTICS INC ; SCHRAMM ERNST**Assignee(s):** BALESTRACCI ERNEST ; EAKINS MICHAEL N ; NIEDOSPIAL JOHN J ; NIEDOSPIAL JR JOHN J**Inventor(s):**^(std): NIEDOSPIAL JOHN JR ; NIEDOSPIAL JR JOHN J ; SCHRAMM ERNST ; NIEDOSPIAL JOHN J JR ; EAKINS MICHAEL N ; BALESTRACCI ERNEST ; NIEDOSPIAL JOHN J**Inventor(s):** NIEDOSPIAL JOHN ; EAKINS MICHAEL ; JR JOHN J ; NIEDOSPIAL ; NIEDOSPIAL JOHN JJR**Agent(s):** BRACCO RESEARCH USA INC; CARAGH; BRYAN; NOONE M CARAGH; M CARAGH

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO
 CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW
 HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK
 ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG
 TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

International class
(IPC 8-9): [A61M5/00](#) [A61M5/31](#) [A61M5/32](#) [A61M5/50](#) (Advanced/Invention)**International class**
(IPC 1-7): [A61M5/00](#) [A61M5/31](#) [A61M5/315](#) [B65D83/10](#)**CPC:** [A61M5/3134](#) [A61M5/3202](#) [A61M5/5086](#) [A61M2005/3118](#) [A61M2005/312](#)**European class:** [A61M5/31C2](#) [A61M5/32B](#) [A61M5/50H](#) [K61M5/31A6B](#) [K61M5/31A6B2](#) [K61M5/31C2](#)
[K61M5/50H](#)**US class:** [206/364](#) [206/365](#) [206/365S](#) [222/541.6](#) [604/111](#) [604/111P](#) [604/182](#) [604/182S](#) [604/187](#)
[604/192](#) [604/197](#) [604/197S](#) [604/199](#) [604/218](#) [604/218S](#) [604/256](#) [604/263](#)[Classification Explorer](#)

Cited documents: WO9613289 A2, WO9413338 A1, WO0038615 A1, US6485460 BB, US6193688 BA,
 US6126640 A, US6027482 A, US5887633 A, US5785691 A, US5647849 A, US5624402
 A, US5615772 A, US5328474 A, US5322511 A, US5320603 A, US5158550 A,
 US5135496 A, US5057088 A, US4886497 A, US4832695 A, US4671408 A, US4187848
 A, US4106622 A, US3828775 A, US3272322 A, US2003163093 AA, US2003141477 AA,
 US2003140477 AA, US2003040720 AA, US2003032940 AA, US2002143293 AA,
 US2002128612 AA, US2002069616 AA, US2001003150 AA, GB2202747 A1, EP1002551
 A2, DE279468 A, CH279468 A, CH279468,

Forward Citations: WO14023771, WO13109706, WO12156286, WO10091522, WO10091522, WO10084006, WO10034356, WO09030056, WO08021954, WO08021954, WO07083034, WO07083034, WO05032627, WO05025483, USD661389, USD653336, USD649632, USD641078, US9821152, US9770558, US9757520, US9731080, US9726672, US9694945, US9682194, US9675758, US9675757, US9656016, US9649441, US9522238, US9480801, US9463310, US9402967, US9377458, US9358346, US9333305, US9316641, US9311592, US9205198, US9199749, US9186465, US9095667, US9072833, US9028453, US9028451, US8994382, US8968236, US8939958, US8864708, US8864707, US8845594, US8834419, US8784377, US8777910, US8771238, US8752722, US8672883, US8657793, US8638108, US8608079, US8579866, US8398575, US8366669, US8353869, US8348904, US8348895, US8343110, US8317751, US8313465, US8313464, US8313463, US8277414, US8235930, US8197449, US8118788, US8049519, US7922096, US7901377, US7815610, US7785292, US7762988, US7713243, US7670289, US7632244, US7621456, US7614545, US7537141, US7188750, US6958055, US2014276568, US2013237911, US2013079726, US2011184747, US2011178469, US2011098670, US2011098657, US2011098656, US2011098655, US2011098647, US2011092954, US2011092952, US2011046550, US2010298779, US2010286714, US2010016794, US2009234298, US2009234297, US2009171296, US2009149817, US2009149816, US2009088688, US2009082732, US2009054849, US2009054847, US2009054838, US2008312606, US2008312602, US2008312592, US2008312591, US2008312590, US2008258408, US2008210890, US2008097310, US2008027382, US2007156101, US2007113861, US2007102850, US2007102446, US2007095856, US2007095855, US2006243804, US2005283116, US2005075611, US2005051572, US2004225258, US2004210183, US2003236501, JP2015524327, JP2009523522, FR2896168, EP3024502, EP1466639, CN104507520,

Abstract:

Source: US2002133119A A prefilled syringe of cartridge barrel having a tamper evident closure. Tamper evidence is provided by: a frangible tip seal which is integral with the tapered tip of the barrel; a frangible tip cap covering the tip, the tip seal and a portion of the distal end of the barrel; and an overwrap covering the frangible tip cap and the distal end of the barrel sealed to the distal end of the barrel by a tamper evident seal. The tapered tip is optionally equipped with a luer collar to receive an external luer connector. Alternatively, the tapered tip can be provided with a bore therethrough which can be closed with an elastomeric plug and the external connector can be a tubing conduit.

Title: TAMPER EVIDENT CLOSURE**Priority:** EP20080843972 20081030 GB20070021330 20071031 WO2008GB03666 20081030**Family:**

Publication number	Publication date	Application number	Application date
AT517040 E	20110815	AT20080843972T	20081030
DE602008008424 D1	20110915	DE200860008424T	20081030
EP2207729 A1	20100721	EP20080843972	20081030
EP2207729 B1	20110720	EP20080843972	20081030
EP2207729 B2	20151216	EP20080843972	20081030
ES2369958 T3	20111209	ES20080843972T	20081030
GB200721330 A0	20071212	GB20070021330	20071031
PT2207729 T	20111020	PT20080843972T	20081030
US2010264145 AA	20101021	US20080740939	20081030
US8490804 BB	20130723	US20080740939	20081030
WO09056829 A1	20090507	WO2008GB03666	20081030

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):**^(std): BARDET PHILIPPE ; BENOIT GONIN CLAUDE ; COGHLAN JUDITH ELIZABETH KENSY ; OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):**^(std): BARDET PHILIPPE ; BENOIT GONIN CLAUDE**Inventor(s):** PHILIPPE BARDET ; CLAUDE BENOIT GONIN**Agent(s):** MITSCHERLICH PATENT U RECHTSANWAELTE PARTMBB; COGHLAN JUDITH ELIZABETH KENSY; GREENWOOD MATTHEW DAVID; LACKENBACH SIEGEL LLP; ALLEMAN HALL MCCOY RUSSELL AND TUTTLE LLP; LEPPARD ANDREW ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
^(IPC 8-9): [B65D41/32](#) [B65D41/46](#) [B65D55/02](#) [B65D55/06](#) (Advanced/Invention); [B65D55/02](#) (Core/Invention)**CPC:** [B65D47/0838](#) [B65D55/024](#) [B65D2101/003](#)**European class:** [B65D47/08B4C](#) [B65D55/02F](#) [L65D101/00A3B](#)**US class:** [215/216](#) [215/225](#) [215/237](#) [215/251](#) [215/253](#) [215/255](#) [215/305](#) [215/322](#) [215/901](#) [220/265](#)[Classification Explorer](#)**Cited documents:** WO9957031 A1, WO9407470 A1, WO09056829 A1, WO07125292 A2, WO07045054 A1, WO06117505, WO06020059 A2, WO06008285, WO06003168 A1, WO06000532 A1, WO05053085 A1, WO05049443 A1, WO05024745 A2, WO04011347, WO03016165 A1, WO03016162 A1, WO0244047 A1, WO02096771 A1, WO02085730, WO0183668 A1, WO0136290 A1, WO0066451 A1, WO0026878 A1, US7735665 BB, US7731049 BB, US7438198 BB, US7374053 BB, US7204383 BB, US7159733 BB, US7156247 BB, US7125828 BB, US7121419 BB, US7077294 BB, US7044317 BB, US6976607 BB, US6880729 BB, US6877631 BA, US6866164 BB, US6866162 BB, US6848603 BB, US6727215 BB, US6688501 BB, US6685046 BB, US6683038 BB, US6644487 BB, US6631820 BB, US6484879 BB, US6405885 BA, US6328355 BA, US6318585 BA, US6269986 BA, US6095375 A, US6036036 A, US6000568 A, US5979681 A, US5960979 A, US5875942 A, US5875907 A, US5819965 A, US5683016 A, US5603422 A, US5588545 A, US5538154 A, US5445824 A, US5427260 A, US5348185 A, US5332113 A, US5234124 A, US5105959 A, US5004126 A, US4966302 A, US4942970 A, US4941592 A, US4905861 A, US4838441 A, US4790442 A, US4774480 A, US4752014

A, US4744480 A, US4697719 A, US4687112 A, US4637519 A, US4569464 A, US4531649 A, US4310105 A, US4303171 A, US4119239 A, US4091949 A, US3892351 A, US3871545 A, US3820683 A, US3810556 A, US3603470 A, US3455479 A, US3425578 A, US3412890 A, US3348718 A, US2858054 A, US2073707 A, US2013605 A, US2008277613 AA, US2008237236 AA, US2006770621 AA, US2006201947 AA, US2006186078 AA, US2006186077 AA, US2006124646 AA, US2006077062 AA, US2006043052 AA, US2006011631 AA, US2006011573 AA, US2006006130 AA, US2005279727 AA, US2005205607 AA, US2005173368 AA, US2005133475 AA, US2005035158 AA, US2004188374 AA, US2004143505 AA, US2004069806 AA, US2004050849 AA, US2004026420 AA, US2003062369 AA, US2003034323 AA, US2002125249 AA, US2002079282 AA, US1798151 A, JP2003160162 A2, JP2000229651, JP10338251 A2, GB2432153 A1, GB2430667 A1, GB2415426 A1, GB2375516 A1, GB2356842 A1, GB2355269 A1, GB2311283 A1, GB2264110 B2, GB2222821 A1, GB2172803 A1, GB2158424 A1, GB2148235 A1, GB2136782 A1, GB2123392 A1, GB1484517 A, GB1473482 A, GB1298084 A, FR2591571 A1, FR2567106 A1, FR2439139 A1, EP2005053085, EP1786698 B1, EP1694576 B1, EP1663809 B1, EP1283175 A2, EP1266839 A2, EP1174359 A2, EP1174359 A1, EP1161382 B1, EP1101707 A1, EP0688723 A1, EP0619243 A1, EP0593952 A1, EP042539171, EP0425391 A1, EP0414462 A2, EP0337568 A2, EP0306670 A2, EP0236136 A2, EP0179498 A1, EP0132792 A1, EP0127943 A1, DE861666 A, DE8535205 U, DE809896 A, DE3605963 A1, DE20019797 U1,

Forward Citations: USD737679, USD736634, USD727730, USD686075, USD630093, US9828146, US9546027, US9382045, US9242768, US9102448, US8522991, US8490804, US8453856, US7830263, US2015175318, US2015108167, US2013087523,

Abstract:

Source: US2010264145A Tamper-evident closures are known in which the tamper-evidence remains attached to the closures after initial opening. However, the tamper-evidence is not always that clear and therefore it is desirable to produce a closure which more clearly shows it has been initially opened. This may be achieved by having a tamper-evident closure comprising a base, a lid, and a tamper-evident member irreversibly moveable between a first position in which part of the member is visible prior to initial opening of the closure and a second position in which the said part is masked by the lid so as to be partly hidden from view, the tamper-evident member being moved from the first position to the second position upon initial opening of the closure.

48) Family number: 30001062 (US2001005971A)

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Title: METHOD AND APPARATUS FOR PLACING A PRODUCT IN A FLEXIBLE
RECLOSEABLE CONTAINER

Priority: US19970965722 19971107 US19970965722 19971111 US20000493718 20000128
US19990370053 19990806 US19990148495P 19990812 US20010022451 20011217
US20020290109 20021107 US20020098186 20020312 US20020325483 20021219
US20020325596 20021219 US20020232844 20020830 US20010794592 20010227
US20020209769 20020801 US20010796262 20010228 US20040772574 20040205
US20050177226 20050708 WO1998US23400 19981103 US20030405052 20030401
US20050177243 20050708

Family:

Publication number	Publication date	Application number	Application date
AU199913018 A1	19990531	AU19990013018	19981103
CA2309432 AA	20000505	CA19982309432	19981103
CA2309432 C	20090505	CA19982309432	19981103
DE69837561 D1	20070524	DE19986037561	19981103
DE69837561 T2	20080103	DE19986037561T	19981103
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PL201185 B1	20090331	PL19980340428	19981103
PL340428 A1	20010212	PL19980340428	19981103
PT1051329 I	20070531	PT19980956512T	19981103
SK200000666 A5	20001107	SK20000000666	19981103
US2001005971 AA	20010705	US20010796262	20010228
US2002017078 AA	20020214	US20010794592	20010227
US2002040563 AA	20020411	US20010022451	20011217
US2002134050 AA	20020926	US20020098186	20020312
US2002194818 AA	20021226	US20020209769	20020801
US2003074861 AA	20030424	US20020232844	20020830
US2003220179 AA	20031127	US20020325483	20021219
US2003220180 AA	20031127	US20020325596	20021219
US2004000124 AA	20040101	US20020290109	20021107
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US2005003940 AA	20050106	US20040772574	20040205
US2006096245 AA	20060511	US20050177243	20050708
US2006112664 AA	20060601	US20050177226	20050708
US5956924 A	19990928	US19970965722	19971107
US6209287 BA	20010403	US19990370053	19990806
US6216423 BA	20010417	US20000493718	20000128

<u>US6363692 BB</u>	20020402	US20010796262	20010228	
<u>US6438926 BA</u>	20020827	US20010022451	20011217	
<u>US6499272 BB</u>	20021231	US20010794592	20010227	
<u>US6907713 BB</u>	20050621	US20020325596	20021219	
<u>US6918230 BB</u>	20050719	US20020325483	20021219	
<u>US6925779 BB</u>	20050809	US20020209769	20020801	
<u>US6962034 BB</u>	20051108	US20020232844	20020830	
<u>US7320662 BB</u>	20080122	US20040772574	20040205	
<u>US7383675 BB</u>	20080610	US20020290109	20021107	
<u>US7540662 BB</u>	20090602	US20030405052	20030401	
<u>US7552573 BB</u>	20090630	US20050177243	20050708	
<u>US8127517 BB</u>	20120306	US20050177226	20050708	
<u>WO9924325 A1</u>	19990520	WO1998US23400	19981103	

Probable Assignee: ILLINOIS TOOL WORKS

Assignee(s):^(std): HUNTSMAN KCL CORP ; KCL CORP ; ILLINOIS TOOL WORKS ; THIEMAN RONALD G ; PLIANT CORP

Assignee(s): GENERAL ELECTRIC CAPITAL COLLATERAL AGENT SUCCESSO ; WILMINGTON TRUST CO COLLATERAL AGENT AS ; ILLINOIS TOOL WORKS INC ; PLIANT SOLUTIONS CORP ; WILMINGTON TRUST CO ; GENERAL ELECTRIC CAPITAL COLLATERAL AGENT SUCCESSOR TO DEUTSCHE BANK TRUST CO CORP AS ; GENERAL ELECTRIC CAPITAL COLLATERAL AGENT SUCCESSOR TO DEUTSCHE BANK TRUST CO AMERICAS CORP AS ; GENERAL ELECTRIC CAPITAL COLLATERAL AGENT SUCCESSOR TO DEUTSCHE BANK TRUST CO AMERICAS AS CORP ; GENERAL ELECTRIC CAPITAL COLLATERAL AGENT SUCCESSOR TO DEUTSCHE BANK TRUST CO AS CORP ; RCL CORP ; BANKERS TRUST CO ; DEUTSCHE BANK TRUST CO ; GENERAL ELECTRIC CAPITAL AS COLLATERAL AGENT SUCCE ; GENERAL ELECTRIC CAPITAL COLLATERAL AGENT SUCCE AS ; HUNTSMAN PACKAGING CORP

Inventor(s):^(std): THIEMAN RONALD G

Inventor(s): RONALD G THIEMAN ; THIEMAN RONALD

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; SMART AND BIGGAR; KANDA FUJIHIRO; TOMITA HIROYUKI; ONO SHINJIRO; SHAMOTO ICHIO; KOBAYASHI YASUSHI; CHIBA AKIO; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP; JOHN V DANILUCK BINGHAM MCHALE LLP; MCGINLEY ESQ BRIAN R; BRIAN R; PILARSKI JOHN H; CROLL MARK W; JOHN H; MARK W; BINGHAM MCHALE LLP; DANILUCK JOHN V; JOHN V; DANILUCK ESQ JOHN V; BINGHAM GREENEBAUM DOLL LLP

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

International class
(IPC 8-9): B31B1/84 B31B19/90 B65B61/18 B65B9/06 B65B9/073 B65B9/08 B65B9/093 B65B9/20 B65B9/207 B65B9/213 B65D33/16 B65D33/25 B65D61/20 (Advanced/Invention); B31B1/90 B65B61/14 B65B61/18 B65B61/20 B65D33/25 (Advanced/Non-invention)

International class
(IPC 1-7): A44B19/16 B31B1/60 B31B1/84 B65B61/18 B65B61/20 B65B9/06 B65B9/08 B65B9/20 B65D33/16 B65D33/25 B65D61/20

CPC: Y10S493/927 B65D33/2591 Y10T24/2532 B65B9/207 B65B9/06 B65B9/073 B65B9/093 B65B9/20 B65B9/213 B65B25/005 B65B25/068 B65B61/02 B65B61/188 B31B70/8132

European class: B31B19/90 B65B25/00D B65B25/06E B65B61/02 B65B61/18E B65B9/06 B65B9/073 B65B9/093 B65B9/20 B65B9/207 B65B9/213 B65D33/25C L31B219/90C1A

US class: 24/399 24/399P 383/5 383/61.2 383/64 383/64S 493/114 493/114P 493/212 493/213 493/213P 493/214 493/214S 493/927 53/133.4 53/133.400S 53/139.2 53/139.200S 53/412 53/412P 53/412S 53/45 53/450 53/450S 53/451 53/451S 53/550 53/550S 53/551 53/551S

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Cited documents: WO9965353 A1, WO9965353, WO9956947 A1, WO9956947, WO9936325 A1, WO9936325, WO9924325 A1, WO9903672, WO9857863 A1, WO9805567, WO0002722

A1, WO0002722, USRE34905 E, USRE34554 E, USRE31487 E, USRE27174 E, US7415810 BB, US6871473 BA, US6834474 BB, US6713152 BB, US6686005 BB, US6622353 BB, US6611996 BB, US6599227 BA, US6581358 BB, US6499878 BA, US6499272 BB, US6470551 BA, US6431754 BA, US6412254 BA, US6376035 BA, US6364530 BA, US6360513 BA, US6343455 BB, US6339911 BB, US6334709 BA, US6327754 BA, US6305844 BA, US6293896 BA, US6292986 BA, US6292966 BA, US6290393 BA, US6289561 BA, US6286999 BA, US6286189 BA, US6279298 BA, US6273607 BA, US6261000 BA, US6257763 BA, US6244021 BA, US6216423 BA, US6213640 BA, US6212857 BA, US6209287 BA, US6199256 BA, US6178722 BA, US6178722 B1, US6161271 A, US6138439 A, US6138436 A, US6131374 A, US6131370 A, US6131369 A, US6117060 A, US6115892 A, US6110990 A, US6110586 A, US6110090 A, US6088887 A, US6085491 A, US6071011 A, US6032438 A, US6032437 A, US6012264 A, US6003582 A, US6000197 A, US5973 A, US5964532 A, US5956924 A, US5956815 A, US5953796 A, US5951453 A, US5950285 A, US5938337 A, US5924173 A, US5906438 A, US5896627 A, US5884452 A, US5871281 A, US5867875 A, US5857310 A, US5851070 A, US5836056 A, US5833791 A, US5826401 A, US5823933 A, US5816018 A, US5809621 A, US5788378 A, US5782733 A, US5775812 A, US5772128 A, US5769772 A, US5749134 A, US5745960 A, US5725312 A, US5722128 A, US5713669 A, US5713110 A, US5711751 A, US5711571 A, US5682730 A, US5669715 A, US5664299 A, US5664296 A, US5647671 A, US5638586 A, US5628566 A, US5622431 A, US5613934 A, US5592802 A, US5582853 A, US5573614 A, US5564259 A, US5561996 A, US5561966 A, US5558613 A, US5557907 A, US5552202 A, US5551208 A, US5551127 A, US5542902 A, US5525363 A, US5519982 A, US5513915 A, US5511884 A, US5509735 A, US5505037 A, US5492411 A, US5489252 A, US5486051 A, US5482375 A, US5470156 A, US5461845 A, US5457930 A, US5456928 A, US5448808 A, US5448807 A, US5442838 A, US5442837 A, US5435864 A, US5431760 A, US5428830 A, US5426830 A, US5425825 A, US5425216 A, US542216 A, US5417035 A, US5415904 A, US5412924 A, US5405629 A, US5405478 A, US5403094 A, US5400568 A, US5400565 A, US5391136 A, US5383989 A, US5334127 A, US5322579 A, US5301395 A, US5301394 A, US5293671 A, US5283932 A, US5273511 A, US5259904 A, US5254073 A, US5247781 A, US5211482 A, US5198055 A, US5189764 A, US5188461 A, US5186705 A, US5179816 A, US5167608 A, US5161586 A, US5161286 A, US5152613 A, US5147272 A, US5140796 A, US5131121 A, US5127208 A, US5116301 A, US5111643 A, US5107658 A, US5105603 A, US5103546 A, US5096516 A, US5092831 A, US5088971 A, US5088546 A, US5085031 A, US5072571 A, US5071689 A, US5070583 A, US5067822 A, US5067583 A, US5067208 A, US5063644 A, US5063639 A, US5046300 A, US5042224 A, US5036643 A, US5027584 A, US5024537 A, US5020194 A, US502019 A, US5014498 A, US5010627 A, US5007143 A, US5007142 A, US5005707 A, US4993212 A, US4987658 A, US4974395 A, US4971454 A, US4969309 A, US4945714 A, US4941307 A, US4929225 A, US4927271 A, US4925318 A, US4925316 A, US4924655 A, US4909017 A, US4894975 A, US4892512 A, US4892414 A, US4891867 A, US4890935 A, US4878987 A, US4876842 A, US4874257 A, US4863285 A, US4850178 A, US4844759 A, US4840611 A, US4840012 A, US4832505 A, US4812074 A, US4809935 A, US4807300 A, US4792240 A, US4790126 A, US4787880 A, US4786190 A, US4782951 A, US4710157 A, US4709533 A, US4709398 A, US4703518 A, US4699272 A, US4691372 A, US4673383 A, US4666536 A, US4663915 A, US4655862 A, US4651504 A, US4637063 A, US4620320 A, US4617683 A, US4612153 A, US4601694 A, US4582549 A, US4581006 A, US4563319 A, US4528224 A, US4517788 A, US4514959 A, US4446088 A, US4437293 A, US4430070 A, US4415386 A, US4395891 A, US4372793 A, US4355494 A, US4341575 A, US4277241 A, US4262395 A, US4241865 A, US4240241 A, US4235064 A, US4232429 A, US4199845 A, US4196030 A, US4173283 A, US4122594 A, US4101355 A, US4101335 A, US4094729 A, US4055032 A, US3999358 A, US3962007 A, US3948705 A, US3868891 A, US3849843 A, US3839128 A, US3790992 A, US3785111 A, US3736198 A, US3713923 A, US3712923 A, US3701192 A, US3701191 A, US3660875 A, US3644981 A, US3631903 A, US3613524 A, US3608439 A, US3579747 A, US3532571 A, US3473589 A, US3426499 A, US3426396 A, US3394798 A, US3381592 A, US3259951 A, US3225429 A, US3202559 A, US3149927 A, US3122807 A, US2779385 A, US2620535 A, US2504 A, US2091617 A, US2005086911 AA, US2003185945 AA, US2003165945 AA, US2003054931 AA, US2001005973 AA, US2001002504 AA, US20010005, US20010002, US1785234 A, US04894975, US04581006, GB522663, GB2138494 A1, GB2109771 A1, GB2085519 A1, GB1333004, GB1173019, GB02085519, FR1564039, EP0978450, EP0908392 B1, EP0908392 A1, EP0761532, EP0689993 A1, EP0098392 A2, EP0098392 A1, EP0050505 A1,

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US8231273, US8176604, US8171702, US8127517, US8127379, US8122687, US8096022, US8087826, US8021048, US8002467, US7967509, US7946766, US7921534, US7904996, US7887238, US7886412, US7874731, US7857515, US7827765, US7784160, US7779605, US7775018, US7748200, US7681732, US7674220, US7669307, US7665192, US7637297, US7634892, US7552573, US7552572, US7540662, US7527585, US7506488, US7494280, US7478512, US7470061, US7458925, US7430844, US7415810, US7404787, US7383675, US7377015, US7364362, US7341160, US7337507, US7320662, US7320545, US7316641, US7313846, US7306370, US7267856, US7254873, US7234285, US7228608, US7219481, US7213305, US7200911, US7178309, US7165887, US7159282, US7152756, US7137942, US7128204, US7128203, US7128203, US7121063, US7114310, US7101079, US7099741, US7096646, US7093409, US7086782, US7074359, US7063215, US7059099, US7052181, US7041249, US7040808, US7036679, US7008106, US6994663, US6993884, US6981936, US6979289, US6974256, US6962034, US6954970, US6941722, US6939041, US6925779, US6921359, US6918234, US6918230, US6913387, US6910806, US6907713, US6904735, US6886310, US6884207, US6871473, US6868654, US6863646, US6843038, US6834474, US6829873, US6823647, US6820393, US6810639, US6804935, US6780146, US6769229, US6767423, US6732491, US6715262, US6713152, US6712509, US6701695, US6688080, US6688079, US6675558, US6663283, US6662410, US6622353, US6616333, US6611996, US6609353, US6581358, US6575625, US6533711, US6530870, US6526727, US6526726, US6526632, US6517242, US6508969, US6499878, US6499272, US6494018, US6477821, US6477820, US6474045, US6470551, US6461042, US6460238, US6449924, US6439771, US6439770, US6438926, US6427421, US6419391, US6412254, US6389780, US6363692, US6360513, US6347437, US6327837, US6327754, US6293896, US6293701, US6292986, US6289561, US6286189, US6279298, US6244021, US6216423, US6209287, US6178722, US6148588, US6131369, US6071011, US2015098666, US2013291350, US2013209000, US2013184137, US2013108188, US2012200041, US2012047849, US2011235951, US2011158561, US2011038571, US2011038570, US2011036741, US2011033138, US2011022845, US2010281830, US2010279840, US2010273621, US2010262273, US2010240512, US2010197474, US2010195936, US2010154180, US2010111450, US2010011545, US2009313795, US2009265898, US2009255215, US2009234922, US2009178945, US2009148080, US2009142008, US2009142007, US2009127371, US2009124479, US2009098257, US2009095369, US2009042706, US2008134632, US2008098693, US2008085823, US2008072541, US2008063321, US2008010950, US2007294885, US2007184961, US2007175180, US2007157560, US2007151210, US2007127850, US2007116387, US2007113522, US2007094850, US2007086682, US2006210203, US2006201626, US2006196019, US2006185325, US2006126971, US2006112664, US2006111226, US2006096245, US2006062495, US2006003879, US2005281490, US2005261118, US2005247027, US2005245376, US2005241274, US2005239622, US2005152622, US2005150186, US2005124479, US2005086911, US2005050852, US2005050850, US2005043159, US2005041892, US2005034422, US2005025395, US2005025394, US2005016125, US2005008266, US2005003940, US2004261234, US2004256761, US2004252916, US2004231293, US2004221960, US2004204303, US2004148056, US2004147346, US2004146222, US2004138038, US2004134926, US2004130050, US2004128806, US2004120610, US2004074210, US2004066985, US2004047524, US2004045256, US2004045255, US2004045141, US2004022460, US2004016765, US2004016205, US2004000124, US2003236160, US2003235347, US2003231811, US2003220179, US2003219176, US2003213213, US2003208989, US2003198407, US2003167606, US2003124294, US2003074861, US2003072502, US2003056470, US2003053722, US2003050167, US2002184858, US2002154837, US2002154836, US2002072460, US2001039783, TWI371400, JP5002789, JP4607283, JP2015520088, JP2004505807, JP2001018928, FR2846944, EP1488716, EP1418133, EP1400446, EP1400446, EP1309487, EP1307118, EP1295797, EP1253081, EP1169934, EP1099636, EP1057620, EP1057620, EP0978450, DE102010027087, AU776602, AU2015202504, AU2009240577,

Abstract:

Source: US2001005971A An invention for forming, filling, and sealing a flexible recloseable container. Both vertical and horizontal methods for placing product within the container are disclosed. The invention includes guiding a web of film which has interlocking fastener strips sealed to the web. A slider for locking and unlocking the fastener strips is placed in the correct orientation, spread apart at a pair of inner feet, and inserted over the fastener strips. The slider is positioned to close a substantial portion of the strips, and then an end stop, docking station, and corner seal are formed against a sealing plate. The slider is then repositioned, and a tamper evident seal may be placed over the fastener strips.

Title: TAMPER EVIDENT CLOSURE**Priority:** EP20120794547 20121113 NL20112007839 20111122 WO2012NL50803 20121113**Family:**

Publication number	Publication date	Application number	Application date
AU2012341130 AA	20130530	AU20120341130	20121113
AU2012341130 BB	20160728	AU20120341130	20121113
BR112014012146 A2	20170523	BR20141112146	20121113
CA2855487 AA	20140509	CA20122855487	20121113
DE602012027797 D1	20170223	DE201260027797T	20121113
EP2782841 A1	20141001	EP20120794547	20121113
EP2782841 B1	20170111	EP20120794547	20121113
ES2618977 T3	20170622	ES20120794547T	20121113
IN01098MN2014 A	20150213	IN2014MN01098	20140603
MX2014006119 A1	20150416	MX20140006119	20121113
NL2007839 C	20130523	NL20112007839	20111122
RU2014123779 A	20151227	RU20140123779	20121113
RU2624182 C2	20170630	RU20140123779	20121113
US2015166225 AA	20150618	US20120357665	20121113
US9409680 BB	20160809	US20120357665	20121113
WO13077733 A1	20130530	WO2012NL50803	20121113

Probable Assignee: WEENER PLASTICS NETHERLANDS BV**Assignee(s):^(std):** PLASTICUM GROUP B V ; PLASTICUM GROUP BV ; PLASTICUM NETHERLANDS BV ; WEENER PLASTICS NETHERLANDS BV**Assignee(s):** DEN BOER SEBASTIAAN WILHELMUS JOSEPHUS ; VAN ALFEN JAN ; STEGEMAN GERRIT JAN ; PLASTICUM NETHERLANDS BV9, ZEVENHEUVELENWEGNL-5048 ANTILBURGNL ; PUN SHI MING**Inventor(s):^(std):** ALFEN JAN ; ALFEN JAN VAN ; BOER SEBASTIAAN WILHELMUS JOSEPHUS ; BOER SEBASTIAAN WILHELMUS JOSEPHUS DEN ; DEN BOER SEBASTIAAN ; DEN BOER SEBASTIAAN WILHELMUS JOSEPHUS ; GERRIT JAN STEGEMAN ; JAN VAN ALFEN ; PUN SHI MING ; SEBASTIAAN WILHELMUS JOSEPHUS DEN BOER ; SHI MING PUN ; STEGEMAN GERRIT ; STEGEMAN GERRIT JAN ; VAN ALFEN YAN ; STEGEMAN GERRIT YAN ; PUN SHI MIN ; DEN BUR SEBASTIAN VILKHELMUS JOSEFUS ; STEGEMAN JAN GERRIT ; VAN ALFEN JAN**Inventor(s):** VAN ALFEN JANNL ; STEGEMAN GERRIT JANNL ; PUN SHI MINGNL ; JAN GERRIT STEGEMAN ; DEN BOER SEBASTIAAN WILHELMUS JOSEPHUSNL**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; BROUILLETTE AND ASSOCIES PARTNERS; PATENTANWAELE BAUER VORBERG KAYSER PARTNERSCHAFT MBB; EP AND C; SALVA JOAN; HOFFMANN AND BARON LLP; HOUBEN CHWF**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [B65D41/32](#) [B65D41/46](#) [B65D47/06](#) [B65D47/08](#) (Advanced/Invention);
(IPC 8-9); [B65D43/16](#) (Advanced/Non-invention)**CPC:** [B65D41/32](#) [B65D47/06](#) [B65D47/08](#) [B65D2101/0023](#) [B65D2101/0053](#)**US class:** [1/1 220/266](#)[Classification Explorer](#)

Cited documents: US8256632 BB, US7527159 BB, US6112923 A, US6047840 A, US5909827 A, US5687866 A, US5593055 A, US5456376 A, US5186369 A, US5105960 A, US5020682 A, US4986430 A, US4967920 A, US4638917 A, US3407976 A, US2009308833 AA, US2007034591 AA, JP2010235167 A2, EP1174359 A2, DE3421820 A1,

Forward Citations: WO15111017,

Abstract:

Source: US2015166225A A tamper-evident dispensing closure includes a body adapted to be attached to a container. The container has a shoulder portion surrounding a dispensing opening. The closure body has a peripheral wall and a top wall which extends over one end of the peripheral wall, such that the corresponding end of the body is closed off by the top wall and an opposite end of the body is open. The open end is in use placed over the shoulder portion of the container. The top wall is provided with a dispensing passage which in use is in line with the dispensing opening of the container. The peripheral wall is provided with tamper-evident means, which cause the peripheral wall to rupture when the closure is removed from the container, thereby indicating tampering.

50) Family number: 33175420 (US2006169666A)

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Title: ANTI-BACKOFF, LOW APPLICATION TORQUE, TAMPER EVIDENT PLASTIC CLOSURE AND CONTAINER SYSTEM WITH ENHANCED VISUAL TAMPER EVIDENCY**Priority:** US20050047271 20050131 WO2006US02680 20060126**Family:**

Publication number	Publication date	Application number	Application date
AT504516 E	20110415	AT20060719514T	20060126
AU2006211468 AA	20060810	AU20060211468	20060126
BRPI0606362 A2	20090623	BR2006PI06362	20060126
CA2596246 AA	20070727	CA20062596246	20060126
DE602006021148 D1	20110519	DE200660021148T	20060126
EP1853492 A2	20071114	EP20060719514	20060126
EP1853492 A4	20090610	EP20060719514	20060126
EP1853492 B1	20110406	EP20060719514	20060126
ES2362906 T3	20110714	ES20060719514T	20060126
MX2007008627 A1	20070912	MX20070008627	20060126
US2006169666 AA	20060803	US20050047271	20050131
US7451885 BB	20081118	US20050047271	20050131
WO06083654 A2	20060810	WO2006US02680	20060126
WO06083654 A3	20070405	WO2006US02680	20060126

Probable Assignee: ALCAN PACKAGING PHARMACEUTICAL AND PERSONAL CARE INC**Assignee(s):^(std):** ALCAN PACKAGING PHARMACEUTICAL AND PERSONAL CARE INC ; CISTONE DAVID R ; NYMAN HENRY H ; THOMAS THOMAS ; YEAGER DON ; ALCAN PACKAGING PHARMACEUTICAL**Assignee(s):** ALCAN PACKAGING PHARMACEUTICAL AND PERSONAL CARE I**Inventor(s):^(std):** CISTONE DAVID R ; NYMAN HENRY ; NYMAN HENRY H ; THOMAS THOMAS ; YEAGER DON**Inventor(s):** DAVID R CISTONE ; DON YEAGER ; HENRY H NYMAN ; CISTONE DAVID**Agent(s):** SPRUSON AND FERGUSON; OGILVY RENAULT LLP SENCRL SRL; DELORME NICOLAS; RATNERPRESTIA**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class** **(IPC 8-9):** [B65B7/28](#) [B65D41/16](#) [B65D41/34](#) [B65D51/00](#) (Advanced/Invention); [B65B7/28](#) [B65D41/02](#) [B65D41/34](#) [B65D51/00](#) (Core/Invention)**CPC:** [B65D1/0246](#) [B65D41/3428](#)**European class:** [B65D1/02D1B](#) [B65D41/34C1](#)**US class:** [215/252](#) [215/258](#) [215/321](#) [215/44](#)[Classification Explorer](#)**Cited documents:** WO9622233 A1, WO8702009 A1, US6382444 BA, US5975320 A, US5860542 A, US5845798 A, US5815798 A, US5813553 A, US5685445 A, US5664694 A, US5660288 A, US5484071 A, US5402901 A, US5292020 A, US5271512 A, US5169033 A, US5137163 A, US4936474 A, US4923073 A, US4828127 A, US4753360 A, US4715506 A, US4595547 A, US4595110 A, US4579241 A, US4541536 A, US4530438 A, US4511054 A, US4506795 A, US4501373 A, US4458821 A, US4156490 A, US3484012 A, US3455478 A, US3001657 A, US2162713 A, US2054012 A, EP1138609 A1,**Forward Citations:**

Abstract:

Source: US2006169666A A container for use with a closure is provided, and includes a receptacle, a neck extending therefrom, a closure-engaging thread segment arranged on the neck of the container to engage the closure thread segment arranged on the closure, and a plurality of spaced apart protrusions protruding radially toward the closure from the neck of the container, the plurality of spaced apart protrusions forming a protrusion pattern that has a composite orientation that is helically opposite that of the closure-engaging thread segment to engage and to separate the frangible tamper-evident band portion from the closure when the closure is rotated off of the neck. With this structure, the closure and container system provides an improved anti-backoff, tamper evident closure and container system that reduces torque used to initially apply the closure to the container and improves reliably by reducing stress on the component parts, while desirably preventing backoff from occurring.

- **search:** SS5 (4) and FT=(ratchet) (Results 179)
- **List:** SS5 1–50 ((4) and FT=(ratchet)) (Results 179)

0) US2001000602A – SNAP–ON, SCREW–OFF CAP AND CONTAINER NECK

1) Family number: 30455912 (US2001000602A)

© PatBase

Title: Snap-on, screw-off cap and container neck

Priority:

CA19912047916	19910725	EP19910309273	19911009	GB19930011495	19930603
GB19950017979	19940310	GB19940004495	19921006	GB19940023499	19921006
GB19950011099	19921006	GB19960011601	19951208	GB19950025299	19921006
GB19960021311	19940310	US19950456781	19950601	US19940213864	19940316
US19950456744	19950601	US19920951653	19920925	US19950456741	19950601
US19940274911	19940714	US19930029177	19930310	US19920830133	19920131
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US19980071625	19980501	US19970853669	19970509	US19970956633	19971023

Family:

Publication number	Publication date	Application number	Application date
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AU199464027 A1	19940926	AU19940064027	19940310
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AU199935546 A1	19991123	AU19990035546	19990412
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CA2120952 AA	19940408	CA19922120952	19921006
CA2120952 C	20050322	CA19922120952	19921006
CA2157398 AA	19950831	CA19942157398	19940310
CA2157398 C	20050816	CA19942157398	19940310
CA2330924 AA	20001031	CA19992330924	19990412
EP0540786 A1	19930512	EP19910309273	19911009
EP1107919 A1	20010620	EP19990917417	19990412
EP1107919 A4	20030507	EP19990917417	19990412
GB2265892 A1	19931013	GB19930011495	19930603
GB2265892 B2	19940727	GB19930011495	19930603
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Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): CAP SNAP CO ; PORTOLA PACKAGING INC

Assignee(s): WAYZATA INVESTMENT PARTNERS LLC ; WELLS FARGO FOOTHILL LLC AS AGENT ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AGENT AS ; HELLER FINANCIAL INC A DELAWARE BUSINESS TRUST ; LUCH DANIEL ; PORTOLA PACKAGING INC F K A CAP SNAP CO ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS ; REPP RICHARD E ; CAP SNAP CO A CORP OF CALIFORNIA ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; HELLER FINANCIAL INC A DE CORP

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Agent(s): SMART AND BIGGAR; DORSEY AND WHITNEY LLP

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CS CU CY CZ
DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE
KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO
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B65D77/20 B67B3/00 B67B3/20 (Advanced/Invention);
B65D77/20 (Advanced/Non-invention);
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B65D51/18 (Core/Invention);
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BE1016618, BE1016618, AU768786, AU2010202765,

Abstract:

Source: US2001000602A A tamper-evident, snap-on, screw-off closure is used with a specially shaped

container neck. The neck has double lead external threads and, below the threads, a conical wall having external ratchet teeth. The closure has an upper skirt having internal threads mating with the neck threads. A conical lower skirt is connected to the upper skirt by a plurality of frangible bridges. The lower skirt has internal ratchet teeth to mate with the neck ratchet teeth. The cap skirt threads are double pitch and slightly over 360 degrees in length. When the cap is applied to the neck it snaps on in two stages. The lower skirt has a tear tab which, when pulled, fractures the lower skirt on a vertical line. Continued pulling on the tab sequentially fractures the bridges.

0) US5213225A – CONTAINER AND CLOSURE

2) Family number: 13261905 (US5213225A)

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Title: CONTAINER AND CLOSURE

Priority:

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Family:

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Probable Assignee: BEESON AND SONS LTD

Assignee(s):^(std): BEESON AND SONS LTD ; BISAN END SANZ LIMITED ; BEESON AND SONS LIMITED COMPAN

Assignee(s): BEESON AND SONS LIMITED COMPANHIA DE REINO UNIDO ; BEESON AND SONS LILIMITED ; BEESON AND SONS LIMITED ; BISAN EHND SANS LIMITED ; BEESON AND SONS LTD RICKMANSWORTH HERTFORDSHIRE GB ; BISAN EHND SANZ LIMITED ; KING WITNEY MILNER ; KING ROGER MILNER ; POWELL ROGER EDWIN ; OFFLEY RODNEY GEORGE

Inventor(s):^(std): CROSS ; KING ROGER ; KING ROGER M ; KING ROGER MILNER ; KING WITNEY M ; KING WITNEY MILNER ; OFFLEY RODNEY GEORGE ; OFFLEY RODNEY ; OFFLEY RODNEY G ; OFFLEY RODNEY GEORGE ; POWELL ROGER ; POWELL ROGER E ; POWELL ROGER EDWIN ; ROGER MILNER KING ; RODNEY GEORGE OFFLEY ; RODNI DZHORDZH OFFLEJ ; RODZHER EDVIN PAUELL ; RODZHER MILNER KING ; ROGER EDWIN POWELL

Inventor(s): ROGER MILNER KING ; UITNI MILNER KING ; WITNEY MILNER KING ; WITNEY MILNER KING ; RODZHER MILNER KING[GB] ; RODZHER EHDVIN PAUEHLL[GB] ; RODNI DZHORDZH OFFLEJ[GB] ; OFFLEY RODNEY GEORGE MOUNT SORREL LEICESTERSHIRE LE12 7EA GB ; POWELL ROGER EDWIN MUNDFOORD NORFOLK IP26 5HJ GB ; RODNEY GEORGE OFFEY ; KING WITNEY MILNER LATIMER BUCKS HP5 1UL GB ; MILNER KING ROGER ; KING ROGER MILNER LATIMER BUCKS HP5 1UL GB

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; GOWLING LAFLEUR HENDERSON LLP; REINHOLD COHN AND PARTNERS

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IT JP KP KR LI LK LU MC MG ML MN MR MW NL NO PL RO RU SD SE SN SU TD TG US

International class
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B29C49/06 B65D41/34 (Advanced/Non-invention);
B29C49/06 B65D1/00 B65D1/02 B65D23/00 B65D25/14 B65D39/00 B65D41/04 B65D41/32 B65D41/34 B65D50/00 B65D51/18 B65D51/24 B65D55/02 (Core/Invention)

International class
(IPC 1-7): B29C49/06 B29C69/00 B65B41/04 B65D1/02 B65D1/20 B65D25/16 B65D39/00 B65D39/08 B65D41/04 B65D41/08 B65D41/18 B65D41/28 B65D41/32 B65D41/34 B65D41/48 B65D45/00 B65D47/14 B65D50/00 B65D50/04 B65D50/06 B65D50/10 B65D51/18 B65D51/20 B65D53/04 B65D55/02 B65D55/06 B65D55/08 B65D55/12

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European class: B65D1/02 B65D1/02D1 B65D23/06 B65D25/16 B65D41/04B1 B65D41/04B2 B65D41/04E B65D41/04F B65D41/34D1 B65D41/48 B65D50/04B B65D51/20 B65D51/24B B65D55/06D L65D101/00A3 L65D251/00Y2D L65D251/00Y6M L65D501/02Y9

US class: 205/305 205/329 205/330 205/331 215/214 215/216 215/217 215/218 215/219 215/220 215/228 215/252 215/305 215/317 215/321 215/329 215/330 215/331 215/332 215/341

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Abstract:

Source: US5213225A A container neck (14) and a container closure comprises a first thread (15) on one of the neck and the closure, a complementary second thread on the other of the neck and the closure such that the closure is moveable from fully disengaged from the neck to fully closed by turning the closure relative to the neck by less than 360 DEG, at least one stop formation (17,18) carried by said one of the neck (14) and the closure, and stop means on said other of the neck and the closure engageable with the stop formation or at least one of the stop formations to hold the closure in a closed position on the neck The arrangement of the or each stop formation (17,18), the stop means and the threads is such that the stop means is rotated past the stop formation or at least one of the stop formations (17,18) without engagement therewith when the closure is screwed on to the neck, engagement of the stop means with the stop formation or at least one of the stop formations commencing only when the closed positioned is neared.

0) US2004045925A – TAMPER EVIDENT CLOSURE WITH LOCKING BAND

3) Family number: 30359630 (US2004045925A)

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Title: TAMPER EVIDENT CLOSURE WITH LOCKING BAND

Priority: EP20010306874 20010813 EP20020794765 20020809 US20020241416 20020911
 US20040775885 20040209 US20020486658 20020809 US20040957924 20041004
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Family:

Publication number	Publication date	Application number	Application date
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WO03016161 A1	20030227	WO2002EP08948	20020809
WO04048220 A1	20040610	WO2003EP10028	20030910

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH

Assignee(s):^(std): BOSL UDO ; CROWN CORK AND SEAL TECH CORP ; CROWN CORK AND SEAL TECHNOLOGI ; SEIDITA THOMAS M ; METAL BOX PLC ; HABERSAAT PATRICK ; CROWN PACKAGING TECHNOLOGY INC ; CROWN PACKAGING TECHNOLOGY ; OBRIST CLOSURES SWITZERLAND ; OBRIST KLOUZHERZ SVITZERLAND G

Assignee(s): BOESL UDO ; PRICE MICHAEL L ; CROWN OBRIST GMBH ; OBRIST KLOUZHERZ SVITZERLAND GMBKH ; OBRIST CLOSURES SWITZERLAND GMBH ; CROWN CORK AND SEAL TECHNOLOGIES CORP ; CROWN CORK AND SEAL TECHNOLOGIES ; CARNAUDMETALBOX PLC ; CITICORP NORTH AMERICA INC ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS

Inventor(s):^(std): BOESL UDO ; HABERSAAT PATRICK ; PATRICK HABERSAAT ; PRICE MICHAEL L ; SEIDITA THOMAS M ; HABERSAAT P ; BOSL U ; SEJDITA TOMAS M ; BOSL UDO ; UDO BOSL

Inventor(s): U BOSL ; P HABERSAAT ; THOMAS M SEIDITA ; SEIDITA THOMAS ; PRICE MICHAEL

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FETHERSTONHAUGH AND CO; REINHOLD COHN AND PARTNERS; VINCENT L RAMIK DILLER RAMIK AND WIGHT; KNOBLE YOSHIDA AND DUNLEAVY; KNOBLE YOSHIDA AND DUNLEAVY LLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [B65D39/00](#) [B65D41/04](#) [B65D41/34](#) (Advanced/Invention);
[B65D39/00](#) [B65D41/04](#) [B65D41/34](#) (Core/Invention)

International class
(IPC 1-7): [A61J1/03](#) [B65B7/28](#) [B65D41/04](#) [B65D41/34](#) [B65D41/43](#) [B65D55/02](#)

CPC: [B65D41/3428](#)

European class: [B65D41/34C1](#)

US class: [215/201](#) [215/252](#) [215/253](#) [215/258](#) [215/330](#) [215/44](#) [222/253](#) [222/258](#)

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US4801031 A, US4801030 A, US4798193 A, US4739893 A, US4657153 A, US4638917 A, US4598835 A, US4592476 A, US4572388 A, US4550844 A, US4402418 A, US4402415 A, US4326639 A, US3565073 A, US3484012 A, US3199702 A, US2005021086 AA, US2005000931 AA, US2004133217 AA, US2004106846 AA, US2004097974 AA, US2004087970 AA, US2003204191 AA, US2003176875 AA, US2003176762 AA, US2003171644 AA, US2003160020 AA, US2003149440 AA, US2003102280 AA, US2003065246 AA, US2002156489 AA, US2002147382 AA, US2002077526 AA, US2002072694 AA, US2002066713 AA, US2002033374 AA, US2001002661 AA, US1722587 A, US1170160 A, JP8164960 A2, JP8058817 A2, JP7291318 A2, GB2125382 A1, GB2068912 A1, FR2580593 A1, FR2525565 A1, EP0593396 A1, EP0511502 A2, EP0410059 A1, EP0072924 B1, EP0072924 A1, DE8815335 U, DE8815335, DE8811108 U, DE8811108, CN1271681 A, AU3015900 A1,

Forward Citations: WO13131773, WO13044669, WO12050759, WO08092903, WO08092716, WO07085896, WO07085896, WO07033722, WO05014414, USD723919, USD538654, USD508204, US9821934, US9790005, US8807360, US8763830, US8544666, US8529501, US8453866, US8353413, US8123056, US7878351, US7875000, US7637384, US7510094, US7451898, US2014190968, US2012091134, US2012067892, US2011309048, US2011100947, US2011024423, US2011000915, US2010032402, US2009152229, US2008164235, US2007173756, US2006207960, US2006103135, US2005263476, US2005029217, US2004155006, US2004045925, JP6207394, JP2013542894, FR2987607, EP2627570, EP1953091, EP1757528, EP1654165, DE102005040745, CN105398665, CN104627504, CN103097254, CN102310970, AU2003292243,

Abstract:

Source: US2004045925A A container assembly includes a container that has an externally threaded finish portion as well as retention structure for preventing upward movement of a tamper evident band. The container assembly further includes a closure having a body portion of a base and an internally threaded downwardly depending sidewall portion that is sized and shaped to screw onto the finish portion of the container. The closure further includes a tamper evident band that is frangibly connected to the sidewall portion and that includes a main band portion and a J-hook retention member. The J-hook retention member includes a plurality of pleated retaining elements, each of which has upper portion for engaging the retention structure. Advantageously, at least one of the pleated retaining elements is further constructed and arranged to engage the container so as to resist rotation with respect to the container, whereby separation of said tamper evident band from said body portion is better assured when the closure is unscrewed from the container.

4) Family number: 15136637 (US6003701A)

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Title: Tamper resistant bottle cap and neck

Priority: CA19992261017 19990203 US19980018620 19980204 US19990467433 19991220

Family:

Publication number	Publication date	Application number	Application date
CA2261017 AA	19990804	CA19992261017	19990203
CA2261017 C	20050614	CA19992261017	19990203
CN1132766 C	20031231	CN19991005628	19990204
CN1239058 A	19991222	CN19991005628	19990204
DE60019077 D1	20050504	DE20006019077	20001220
DE60019077 T2	20050901	DE20006019077T	20001220
DE69916520 D1	20040527	DE19996016520	19990204
DE69916520 T2	20040819	DE19996016520T	19990204
EP0941938 A2	19990915	EP19990300823	19990204
EP0941938 A3	20001227	EP19990300823	19990204
EP0941938 B1	20040421	EP19990300823	19990204
EP1114781 A2	20010711	EP20000311474	20001220
EP1114781 A3	20021113	EP20000311474	20001220
EP1114781 B1	20050330	EP20000311474	20001220
ES2218951 T3	20041116	ES19990300823T	19990204
ES2238976 T3	20050916	ES20000311474T	20001220
GB200030847 A0	20010131	GB20000030847	20001218
GB2358182 A1	20010718	GB20000030847	20001218
GB2358182 B2	20040107	GB20000030847	20001218
GB2358182 C	20071106	GB20000030847	20001218
HK1023759 A1	20040924	HK20000102997	20000519
IL128333 A0	20000131	IL19990128333	19990202
IL128333 A1	20010913	IL19990128333	19990202
MXPA99001314 A1	20020619	MX19990001314	19990203
US6003701 A	19991221	US19980018620	19980204
US6523710 BA	20030225	US19990467433	19991220

Probable Assignee: BLACKHAWK MOLDING CO INC

Assignee(s):^(std): BLACKHAWK MOLDING CO ; BLACKHAWK MOLDING CO INC ; HIDDING DOUGLAS J ; WALTER E HIDDING ; HIDDING WALTER E ; HIDDING ROBERT D ; HIDDING WALTER EDWARD ; ROBERT D HIDDING

Assignee(s): WALTER EDWARD HIDDING ; DOUGLAS J HIDDING

Inventor(s):^(std): DOUGLAS J HIDDING ; HIDDING DOUGLAS J ; HIDDING ROBERT D ; HIDDING WALTER E ; HIDDING WALTER EDWARD ; ROBERT D HIDDING ; WALTER E HIDDING

Inventor(s): WALTER EDWARD HIDDING

Agent(s): CASSAN MACLEAN; REINHOLD COHN AND PARTNERS

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

International class
(IPC 8-9): [B65D23/00](#) [B65D41/32](#) [B65D41/34](#) [B65D41/48](#) (Advanced/Invention);
[B65D41/32](#) [B65D41/34](#) (Core/Invention)

International class
(IPC 1-7): [B65D](#) [B65D1/02](#) [B65D23/00](#) [B65D41/32](#) [B65D41/34](#) [B65D41/38](#) [B65D41/48](#) [B65D50/00](#) [B65D55/02](#)

CPC: [B65D41/325](#) [B65D41/3409](#) [B65D41/32](#) [B65D41/485](#)

European class: B65D41/32 B65D41/32B B65D41/34A1 B65D41/48B

US class: 215/252 215/256 215/44

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Forward Citations: WO17136590, WO16010542, WO15150661, WO08027044, WO02053472, USD709766, USD474112, USD451393, US9181001, US9016489, US8839976, US8544666, US8132685, US8118182, US8056744, US7975863, US7905369, US7713055, US7581652, US7314146, US7014055, US6988642, US6931821, US6779672, US6523710, US6338414, US2013308880, US2013126530, US2012000879, US2011174761, US2009283492, US2009277861, US2009200258, US2008169262, US2007272647, US2007087075, US2007051691, US2007051690, US2007034591, US2007034590, US2006102584, US2005263476, US2005252878, US2005039416, US2005029219, US2004060893, US2003173325, ITMI20120443, GB2399559, GB2399559, GB2358182, GB2358182, EP2641841, EP1847472, EP1724201, EP1724201, EP1114781, DE102005037274, DE102005025760, DE102005022952, AU725554, AU2005209675, AU2002216840,

Abstract:

Source: US6003701A A tamper resistant bottle cap and neck for a threaded blow molded bottles which hold liquid, such as milk. The bottle cap and neck combination has an enhanced tamper evidency feature wherein a circumferential lip is formed at the outside edge of the interface between the cap and the neck. The lip protects the contents of the bottle by limiting the ability of potential tamperers to pry or bend upwardly the ratchet ring at lower edge of the cap.

0) US5862953A – TAMPER EVIDENT PUSH–PULL CLOSURE WITH POUR SPOU...

5) Family number: 23545519 (US5862953A)

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Title: Tamper evident push–pull closure with pour spout
Priority: US19960633225 19960416 US19960687149 19960724 WO1997US06159 19970416
US20000643087 20000821 US19970927743 19970911 US19970838133 19970415
WO1998US19024 19980911

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199726677 A1</u>	19971107	AU19970026677	19970416
	<u>BRPI9710530 A</u>	19990817	BR1997PI10530	19970416
	<u>CA2303127 AA</u>	20000310	CA19982303127	19980911
	<u>CA2303127 C</u>	20090609	CA19982303127	19980911
	<u>CN1091058 C</u>	20020918	CN19971095346	19970416
	<u>CN1221386 A</u>	19990630	CN19971095346	19970416
	<u>EP0904238 A2</u>	19990331	EP19970918611	19970416
	<u>US5862953 A</u>	19990126	US19960687149	19960724
	<u>US6357628 BA</u>	20020319	US19970927743	19970911
	<u>US6431404 BA</u>	20020813	US20000643087	20000821
	<u>US6769575 BA</u>	20040803	US19970838133	19970415
	<u>WO9738912 A2</u>	19971023	WO1997US06159	19970416
	<u>WO9738912 A3</u>	19971218	WO1997US06159	19970416
	<u>WO9912815 A2</u>	19990318	WO1998US19024	19980911
	<u>WO9912815 A3</u>	19990826	WO1998US19024	19980911
	<u>WO9912815 B1</u>	19991028	WO1998US19024	19980911

Probable Assignee: SILGAN IPEC CORP

Assignee(s):^(std): INT PLASTICS AND EQUIPMEN ; INT PLASTICS AND EQUIPMENT ; INT PLASTICS AND EQUIPMENT COR

Assignee(s): INT PLASTICS AND EQUIPMENT CORP ; INTERNATONAL PLASTICS AND EQUIPMENT CORP ; LONG CHARLES J JR ; SILGAN IPEC CORP

Inventor(s):^(std): LONG JR CHARLES J ; LONG CHARLES J JR

Inventor(s): LONG CHARLES J ; CHARLES J LONG JR

Agent(s): BORDEN LADNER GERVAIS LLP

Designated states: AT AU BE BR CA CH CN CY DE DK ES FI FR GB GR IE IT JP KR LI LU MC MX NL PT RU SE

International class
(IPC 8–9): B65D41/34 B65D41/62 B65D47/24 B65D51/18 (Advanced/Invention)

International class
(IPC 1–7): B65D41/24 B65D41/34 B65D41/62 B65D45/02 B65D47/10 B65D47/24 B65D50/00 B67D47/10 B67D5/00

CPC: B65D51/18 B65D41/3447 B65D41/62 B65D47/243 B65D2251/0015 B65D2251/0087

European class: B65D41/34D1 B65D41/62 B65D47/24A2 B65D51/18 L65D251/00Y2D L65D251/00Y6J

US class: 222/153.06 222/523 222/525 222/541.06 222/541.6

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Abstract:

Source: US5862953A A resealable push-pull pour spout closure having an annular secondary closure with a central opening through which a plug is adapted to engage to close a container. The central opening is defined by an annular wall having at least one internally extending annular flange. The diameter of the central opening is substantially the same as that of the plug. The plug takes the form of a circular closure disk having an integrally molded depending annular skirt projecting from the periphery of the disk that attaches to angularly extending legs that connect the plug to the spout thereby defining a hollow cavity for the plug interior and increasing the structural flexibility of the plug. The annular seal flange projects radially into opening for form fitting engagement with the plug to substantially eliminate any leakage when the plug is positioned in the central opening.

0) US5174465A – ONE-PIECE FITMENT AND CAP WITH TAMPER-EVIDENT B...

6) Family number: 50639889 (US5174465A)

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Title: One-piece fitment and cap with tamper-evident band

Priority: CA19922062008 19920227 US19910664658 19910305 US19920822200 19920117
 US19910780774 19911022 US19910771057 19911002 US19920823200 19920121
 US19940226767 19940412 US19930057050 19930503 US19930013258 19930203
 US19930058872 19930505 US19920823708 19920121 US19920961088 19921014
 US19920831806 19920205 US19920939838 19920902 US19950565927 19951201
 US19940255563 19940608 US19950437078 19950505 WO1992US09105 19921021
 WO1993US00351 19930114 WO1993US00421 19930121 WO1993US00350 19930114

Family:

Publication number	Publication date	Application number	Application date
AR248252 A1	19950712	AR19920321873	19920304
AT187698 E	20000115	AT19920923541T	19921021
AT203483 E	20010815	AT19920301866T	19920304
AU199211340 A1	19920910	AU19920011340	19920302
AU199229333 A1	19930521	AU19920029333	19921021
AU199334738 A1	19930803	AU19930034738	19930114
AU199334739 A1	19930803	AU19930034739	19930114
AU199335845 A1	19930903	AU19930035845	19930121
AU653779 B2	19941013	AU19920011340	19920302
AU664730 B2	19951130	AU19930034739	19930114
AU666683 B2	19960222	AU19920029333	19921021
BRPI9206669 A	19950502	BR1992PI06669	19921021
BRPI9305765 A	19970128	BR1993PI05765	19930114
CA2062008 AA	19920906	CA19922062008	19920227
CA2121890 AA	19940421	CA19922121890	19921021
CA2121890 C	20030128	CA19922121890	19921021
CA2128526 AA	19940720	CA19932128526	19930114
DE69230439 D1	20000120	DE19926030439	19921021
DE69231954 D1	20010830	DE19926031954	19920304
EP0502716 A2	19920909	EP19920301866	19920304
EP0502716 A3	19950830	EP19920301866	19920304
EP0502716 B1	20010725	EP19920301866	19920304
EP0608378 A1	19940803	EP19920923541	19921021
EP0608378 A4	19970903	EP19920923541	19921021
EP0608378 B1	19991215	EP19920923541	19921021
EP0621848 A1	19941102	EP19930903502	19930114
EP0621848 A4	19950517	EP19930903502	19930114
IE920680 A1	19920909	IE19920000680	19920303
JP5196141 A2	19930806	JP19920048885	19920305
JP7500304 T2	19950112	JP19930507939T	19921021
JP7502955 T2	19950330	JP19930512670T	19930114
MX9200986 A1	19920901	MX19920000986	19920305
RU94022547 A	19970310	RU19940022547	19940421
US5174465 A	19921229	US19910780774	19911022
US5249695 A	19931005	US19930013258	19930203
US5271519 A	19931221	US19920823708	19920121
US5303837 A	19940419	US19920823200	19920121
US5348182 A	19940920	US19920831806	19920205

<u>US5348183 A</u>	19940920	US19920939838	19920902
<u>US5348184 A</u>	19940920	US19920961088	19921014
<u>US5397013 A</u>	19950314	US19940255563	19940608
<u>US5512228 A</u>	19960430	US19940226767	19940412
<u>US5597082 A</u>	19970128	US19950437078	19950505
<u>US5678719 A</u>	19971021	US19950565927	19951201
<u>WO9215496 A1</u>	19920917	WO1992US01522	19920304
<u>WO9308092 A1</u>	19930429	WO1992US09105	19921021
<u>WO9313998 A1</u>	19930722	WO1993US00350	19930114
<u>WO9314001 A1</u>	19930722	WO1993US00351	19930114
<u>WO9315970 A1</u>	19930819	WO1993US00421	19930121
<u>ZA9300103 A</u>	19930810	ZA19930000103	19930107
<u>ZA9300104 A</u>	19930810	ZA19930000104	19930107

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; CAP SNAP CO ; INC ; INK ; PORTOLA PEHKADZHING

Assignee(s): WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS ; LUCH DANIEL ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; ADAMS BRIAN M ; WAYZATA INVESTMENT PARTNERS LLC ; WELLS FARGO FOOTHILL LLC AS AGENT ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; CAP SNAP CO A CORP OF CA ; CAP SNAP CO A CORP OF CALIFORNIA ; CAP SUNATSUPU CO ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; HELLER FINANCIAL INC A DELAWARE BUSINESS TRUST ; HELLER FINANCIAL INC A DE CORP ; PORTOLA PACKAGING INC A DE CORP ; PORTOLA PACKAGING INC F K A CAP SNAP CO

Inventor(s):^(std): CHENAULT RAWSON L ; CHENAULT RAWSON ; BURAIAN EMU ADAMUSU ; ADAMS BRIANS M ; ADAMS BRIAN M ; ADAMS BRIAN ; DEHNIEL LACH ; BRAJAN M EHDAMS ; LUCH DANIEL ; DANIERU RUUKU

Inventor(s): DANIEL LUCH ; BRAJAN MEHDAMS ; BRIANS M ADAMS ; BRIAN M ADAMS

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR LI LK LU MC MG ML MN MR MW NL NO NZ PL PT RO RU SD SE SN TD TG UA

International class
(IPC 8-9): B29C45/38 B29C45/44 B29C57/12 B29C65/56 B65B55/02 B65D39/00 B65D39/08 B65D41/32 B65D41/34 B65D41/47 B65D47/06 B65D47/12 B65D47/14 B65D47/36 B65D5/74 B65D55/02 B65D55/06 B65D75/58 F16J13/12 (Advanced/Invention); B65B55/02 B65D55/02 (Advanced/Non-invention); B29C57/00 B29C65/56 B65D39/00 B65D41/34 B65D47/00 B65D47/12 B65D5/74 F16J13/00 (Core/Invention)

International class
(IPC 1-7): B29C45/38 B29C45/44 B65B55/02 B65D17/40 B65D25/42 B65D3/26 B65D33/38 B65D39/00 B65D39/04 B65D39/08 B65D39/16 B65D41/00 B65D41/32 B65D41/34 B65D41/38 B65D41/47 B65D41/62 B65D43/04 B65D43/14 B65D47/06 B65D47/10 B65D47/14 B65D47/36 B65D5/14 B65D5/74 B65D50/00 B65D51/18 B65D51/20 B65D55/02 B65D55/08 B65D55/16 B65D59/08 B65D75/58

CPC: B65D39/08 B65D55/06 B65D75/5877 B65D47/141 B65D2101/00 B29C45/006 B29L2031/565 Y10S425/058 B29C66/53247 B29C65/56 B29C65/58 B65D5/749 B29C57/12 B29C65/568 B29C66/8322 B65D39/00 B65D39/0023 B65D39/0076 B65D39/084 B65D41/3409 B65D47/121 B65D47/36 B65D2101/0038 B65D2539/003 B65D2539/006 B29C66/61 B29C66/112 B29C66/135 B29C66/1312 B29C66/24221 B29C66/232

European class: B29C45/00J3 B29C57/12 B29C65/56 B29C65/56H2 B29C65/58 B29C66/532 B29C66/8322 B65D39/00 B65D39/00F3 B65D39/00G4 B65D39/08 B65D39/08A1 B65D41/34A1 B65D47/12A B65D47/14A B65D47/36 B65D5/74D1C B65D55/06 B65D75/58G3A L29C66/53246 L29L31/56B L65D101/00 L65D101/00A3C L65D539/00Y2 L65D539/00Y6

US class:

215/213 215/214 215/216 215/225 215/232 215/250 215/253 215/256 215/318 215/356
215/44 220/254 220/255.1 220/256 220/258 220/258.3 220/265 220/266 220/270 220/276
220/288 220/307 220/375 220/790 222/541 222/541.2 222/541.5 222/541.6 222/541.9
222/545.1 222/562 222/563 222/566 222/569 229/125.15 229/125.17 264/152 264/238
264/308.1 264/318 264/328.1 264/334 425/554 425/577 425/DIG.58

Classification Explorer

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Forward Citations:

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US2006213935, US2006186079, US2006186078, US2006138138, US2006138136, US2006138073, US2006054625, US2006037958, US2006011637, US2005252916, US2005252839, US2005199313, US2005145629, US2005139609, US2005121478, US2005072804, US2005061840, US2005035130, US2005035129, US2005033240, US2004226950, US2004178235, US2004118880, US2004035883, US2004035426, US2004011829, US2004000532, US2003195143, US2003159403, US2002000441, RU2577740, JP4044631, JP10086953, GB2435467, GB2435467, GB2398560, GB2398560, GB2396151, GB2396151, GB2368835, GB2368835, GB2301098, GB2301098, FR2836897, FR2836896, FR2765194, ES2264332, EP2614009, EP2614009, EP2581323, EP2256056, EP1980498, EP1843949, EP1647311, EP1415926, EP1352840, EP1352840, EP1298063, EP1281626, EP1161379, EP1100676, EP1100676, EP1092646, EP1042178, EP0968120, EP0931729, EP0763482, EP0663344, EP0621848, DE19815413, DE10146466, DE10146466, CN103231847, AU689478, AU2006209845, AU2002300136,

Abstract:

Source: US5174465A A fitment and cap therefor are integrally molded with lugs interconnecting the part. The fitment has a flange to be attached to a container and an internally threaded spout. The cap has an externally threaded skirt. The lugs are diametrically spaced and interconnect the bottom edge of the skirt and upper edge of the spout. After molding, force is applied to break the lugs and snap the skirt inside the spout, the threads slipping past each other and inter-engaging. A temper-evident band extends around the skirt and is connected thereto by frangible bridges. At diametrically spaced locations vertically projecting fingers extend down from the temper evident band and are received in sockets on the fitment flange shaped so that the band fingers prevent unscrewing the cap without removing the temper-evident band. A pull tab and thumb tab assist the consumer in removing the tamper evident band so that the cap may be unscrewed from the fitment.

0) US2002033374A – TAMPER EVIDENCING CLOSURE

7) Family number: 28185285 (US2002033374A)

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Title: Tamper evidencing closure

Priority: EP20030770468 20030924 KR20007000005U 20000522 US19970904878 19970801
 US19990323571 19990601 US20000653679 20000901 US20050250249 20051011
 US20080203992 20080904 WO2000US12283 20000505 WO1998US15527 19980723
 WO2003US30350 20030924 US20020266091 20021004 US20010955844 20010918
 US20010900505 20010705

Family:

Publication number	Publication date	Application number	Application date
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AU200048219 A1	20001218	AU20000048219	20000505
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AU2003278956 AH	20040504	AU20030278956	20030924
AU785404 B2	20070419	AU20010091356	20011115
CA2298700 AA	20000131	CA19982298700	19980723
CA2298700 C	20070522	CA19982298700	19980723
CA2501327 AA	20050404	CA20032501327	20030924
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<u>WO04033312 A3</u>	20040826	WO2003US30350	20030924	
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<u>ZA200109159 A</u>	20021106	ZA20010009159	20011106	
<u>ZA200205290 A</u>	20030410	ZA20020005290	20020702	

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; ADAMS BRIAN M ; MA MIKE X ; MA MIKE XIAOLI

Assignee(s): MA XIAOLI ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL CORP ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; WAYZATA INVESTMENT PARTNERS LLC ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AS AGENT ; WELLS FARGO FOOTHILL LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS

Inventor(s):^(std): MIKE X MA ; MA XIAOLI ; MA MIKE XIAOLI ADAMS BRIAN M ; MA MIKE X ; ADAMS BRIAN M ; XIAOLI MA ; MA MIKE XIAOLI ; BRIAN M ADAMS

Inventor(s): THE DESIGNATION OF THE INVENTOR HAS NOT YET BEEN FILED ; MA MIKE ; ADAMS BRIAN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL; DAVID J BREZNER DORSEY AND WHITNEY LLP; ADAM K SACHAROFF MUCH SHELST FREED DENENBERG AMENT AND RUBENSTEIN PC; DORSEY AND WHITNEY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B28B13/06 B28B7/10 B29C41/42 B29C45/44 B65D1/00 B65D39/00 B65D41/00 B65D41/32 B65D41/34 B65D49/12 B65D50/00 B65D51/00 B65D51/16 B65D55/02 (Advanced/Invention); B65D41/34 (Advanced/Non-invention); B65D39/00 B65D41/34 B65D50/00 B65D55/02 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B28B13/06 B28B7/10 B29C41/42 B65D0/0000 B65D1/00 B65D39/00 B65D41/00 B65D41/34 B65D50/00 B65D55/02

CPC: B65D41/3428 B29C43/42 B29C43/50 B29C45/4407 B29L2031/565 B65D41/3409 B65D2101/0046

European class: B29C43/42 B29C43/50 B29C45/44B B65D41/34A1 B65D41/34C1 L29C43/50 L29L31/56B L65D101/00A3D

US class: 215/252 215/254 215/256 215/258 215/258S 215/307 215/307S 215/329 215/344 215/344S 215/43 215/44 264/328.1 264/328.100S 264/334 264/334S

[Classification Explorer](#)

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Forward Citations:

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Abstract:

Source: US2002033374A A container including a neck and an opening, in combination with a tamper-evidencing closure including a top, a depending annular skirt and a tamper-evidencing band frangibly connected to the annular skirt. The container includes a first securing structure on the neck spaced from the opening. The tamper-evidencing band includes an inwardly turned retaining rim that extends at least partially upwardly. The retaining rim has a free edge for engagement with the locking surface as the closure is removed from the neck. The retaining rim includes a plurality of outwardly directed flutes spaced circumferentially thereon and a second securing structure located on the retaining rim between the flutes.

0) US2004251228A – SNAP–ON SCREW–OFF CLOSURE WITH RETAINING MEMBER...

8) Family number: 15831595 (US2004251228A)

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Title: SNAP–ON SCREW–OFF CLOSURE WITH RETAINING MEMBER FOR TAMPER–INDICATING BAND

Priority: US19970961440 19971030 US19980145690 19980902 US19990414179 19991007
US20040869622 20040616 WO1998US22933 19981029

Family:	Publication number	Publication date	Application number	Application date
	AT261861 E	20040415	AT19980955191T	19981029
	CA2307851 AA	20000428	CA19982307851	19981029
	CA2307851 C	20070821	CA19982307851	19981029
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	DE69822493 T2	20041223	DE19986022493T	19981029
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	EP1027261 B1	20040317	EP19980955191	19981029
	MXPA00004145 A1	20030801	MX2000PA04145	19981029
	US2004251228 AA	20041216	US20040869622	20040616
	US6059134 A	20000509	US19970961440	19971030
	US6305579 BA	20011023	US19990414179	19991007
	US6793082 BA	20040921	US19980145690	19980902
	US7228979 BB	20070612	US20040869622	20040616
	WO9923002 A2	19990514	WO1998US22933	19981029
	WO9923002 A3	19990819	WO1998US22933	19981029

Probable Assignee: SILGAN IPEC CORP

Assignee(s):^(std): INT PLASTICS AND EQUIPMEN ; INT PLASTICS AND EQUIPMENT COR

Assignee(s): INT PLASTICS AND EQUIPMENT CORP ; LONG CHARLES J ; INT PLASTICS AND EQUIPMENT CORP NEW CAST ; SILGAN IPEC CORP ; INT PLASTICS AND EQUIPMENT CORP NEW CASTLE ; LONG CHARLES J JR

Inventor(s):^(std): LONG J ; LONG JR CHARLES J ; LONG CHARLES J ; LONG JR CHARLES C ; LONG CHARLES J JR ; CHARLES J LONG JR

Inventor(s): LONG ; JR CHARLES J

Agent(s): BORDEN LADNER GERVAIS LLP; DAVID V; ROBERT A

Designated states: AT BE CA CH CY DE DK ES FI FR GB GR IE IT LI LU MC MX NL PT SE

International class
^(IPC 8–9): [B65D41/00](#) [B65D41/34](#) [B65D41/47](#) [B65D41/58](#) ^(Advanced/Invention);
[B65D41/00](#) [B65D41/32](#) [B65D41/34](#) ^(Core/Invention)

International class
^(IPC 1–7): [B65D41/34](#) [B65D41/58](#)

CPC: [B65D41/3447](#) [B65D41/47](#) [B65D41/58](#)

European class: [B65D41/34D1](#) [B65D41/47](#) [B65D41/58](#)

US class: [215/252](#) [215/253](#) [215/318](#) [215/329](#) [215/341](#) [215/354](#) [215/44](#) [215/45](#) [220/296](#) [222/153.02](#)
[222/153.06](#) [222/525](#)

[Classification Explorer](#)

Cited documents: WO9923002, WO9912815, WO9821110, WO9738912 A2, WO9729969, WO9623699 A1, WO9620872, WO9613442, WO9418084 A1, WO9414673, US94834296, US92774396, US92731196, US83813396, US74948896, US68714996, US6793082 BA, US6769575 BA, US6758397 A, US6431404 BA, US6357628 BA, US63322596, US6305579 BA, US6073810 A, US6073809 A, US6070766 A, US6059134 A, US6050452 A, US60314896, US6024255 A, US5975369 A, US5862953 A, US5853095 A, US5829611 A, US5810185 A, US5779075 A, US5738231 A, US5699924 A, US5685443 A, US5680965 A, US5680945 A, US5676269 A, US5662247 A, US5657906 A, US5655685 A, US5609263

A, US5593055 A, US5588562 A, US5560504 A, US5553727 A, US5487481 A, US5484071 A, US5480045 A, US5472120 A, US5465876 A, US5456376 A, US5456375 A, US5456374 A, US5450972 A, US5437140 A, US5429282 A, US5397009 A, US5379910 A, US5368178 A, US5348183 A, US5328063 A, US5307946 A, US5307945 A, US5303838 A, US5301849 A, US5285933 A, US5285912 A, US5271512 A, US5267661 A, US5246125 A, US5224616 A, US5215204 A, US5213224 A, US5199635 A, US5190178 A, US5186369 A, US5176300 A, US5129530 A, US5105960 A, US5104008 A, US5103991 A, US5056675 A, US5036991 A, US5009323 A, US5004114 A, US4989740 A, US4981230 A, US4971212 A, US4948003 A, US4948001 A, US4946055 A, US4938370 A, US4934546 A, US4930647 A, US4927065 A, US4919309 A, US4913300 A, US4903849 A, US4899898 A, US4884706 A, US4852774 A, US4850503 A, US4844268 A, US4844250 A, US4836407 A, US4834252 A, US4828128 A, US4828127 A, US4826055 A, US4817831 A, US4815620 A, US4815617 A, US4813577 A, US4807770 A, US4805807 A, US4801032 A, US4801030 A, US4796770 A, US4785952 A, US4779764 A, US4770306 A, US4751036 A, US4749103 A, US4746035 A, US4746025 A, US4744478 A, US4739891 A, US4729488 A, US4709823 A, US4700860 A, US4699287 A, US4699286 A, US4687114 A, US4676389 A, US4667839 A, US4664278 A, US4658977 A, US4632265 A, US4625875 A, US4593830 A, US4589561 A, US4572387 A, US4567991 A, US4561553 A, US4550843 A, US4548329 A, US4546893 A, US4540102 A, US4540098 A, US4534480 A, US4530437 A, US4519569 A, US4506797 A, US4500016 A, US4498597 A, US4497765 A, US4496066 A, US4484687 A, US4474314 A, US4469253 A, US4458822 A, US4448319 A, US4438857 A, US4437593 A, US4416383 A, US4402415 A, US4401227 A, US4385708 A, US4380303 A, US4354609 A, US4343408 A, US4330067 A, US4307821 A, US4305517 A, US4301937 A, US4298129 A, US4278180 A, US4269320 A, US4241841 A, US4230229 A, US4206852 A, US4202455 A, US4196818 A, US4180175 A, US4177906 A, US4166552 A, US4126240 A, US4098422 A, US4098419 A, US4084716 A, US4078700 A, US4066182 A, US4053077 A, US4037746 A, US4034882 A, US3980195 A, US3973719 A, US3963139 A, US3942679 A, US3940004 A, US3928109 A, US3913772 A, US3902621 A, US3901404 A, US3893583 A, US3874540 A, US3868039 A, US3865263 A, US3844443 A, US3837518 A, US3825144 A, US3817418 A, US3812994 A, US3793719 A, US3792793 A, US3750821 A, US3695475 A, US3688942 A, US3682345 A, US3677430 A, US3504818 A, US3434613 A, US3407957 A, US3392860 A, US3372833 A, US3223269 A, US3175741 A, US3123259 A, US3120900 A, US3073472 A, US3022917 A, US2998902 A, US2805001 A, US2789717 A, US2684168 A, US2181340 A, US1866770 A, US1630687 A, US1443682 A, SK81995, RU2133701 C1, PL309213, NO952384, NL7312410, MX99/04463, MX165366, MX/04145, KR97702817, JP8034461, JP8034460, JP3977, HU72936, GB651018, GB2269163, GB2264110, GB2216505, GB2191178, GB2177384, GB2172273, GB2163413, GB2114553, GB2105693, GB2102774, GB2068912, FR2721282, FR2692555 A1, FR2682357, FR2659065 A1, FR2538787, FR2421812 A1, FR1536459 A, FR1298166 A, FI952692, EP97947524, EP1027261, EP0688724 A1, EP0683106 A1, EP0450959, EP0413466 A1, EP0390412, EP0355949 A1, EP0337046, EP0298247, EP0176279 A2, EP0118267, EP0103567 A2, EP0080846 A1, EP0009525 A1, DKG9005575, DK9005575, DK3723235, DE48201 A, DE4321649, DE4108453, DE3025738 A1, DE2852080, DE2619825, DE2356007, DE1154369, CZ9501629, CN971953465, CN97181203, CN95195989, CN510563, CN1141841, CN1116603, CH510563, CA812597 A, CA685952, CA2307851, CA2303127, CA2271967, CA2151861, CA1286631, CA1260871, BRPI97127698, BRPI97105309, BRPI95095446, BR97127698, BR97105309, BR95095446, BR9502239, AU686428, AU6658474, AU595484, AU571893, AU4739585, AU3934495, AU3337684, AU3173895, AU2667797, AU2059295, AT245415 B, AT245415,

Forward Citations: WO15065481, WO14041442, WO05009854, US9796265, US9611079, US8757416, US8397927, US8353413, US8308005, US8231025, US7882977, US7712619, US7694835, US7228979, US7198170, US7114625, US7114625, US6988642, US6938787, US6878340, US6793082, US6367640, US2011155758, US2011100947, US2011088505, US2009277861, US2009188888, US2009173738, US2009114651, US2009057261, US2008173611, US2008164235, US2007272647, US2007181578, US2006265951, US2006159237, US2006124644, US2005145629, US2005045578, US2004251228, US2004079765, US2004011757, US2003155361, US2002073647, JP2006182357, EP2796382, EP1847469, DE102006017259, CN105705425, AU2004202619,

Abstract:

Source: US2004251228A A closure is provided with a thread configuration adapted for snap-on or screw-on application to a container neck finish. The closure is optionally provided with at least one member attached to the tamper-indicating ring which cooperates with the arcuate projection to assist in breaking said tamper indicating ring during removal of the closure from the container neck.

0) US2007131641A – CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

9) Family number: 31517864 (US2007131641A)

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Title: CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

Priority:

AU20030900141	20030114	AU20030900678	20030217	AU20030904044	20030804
AU20040261315	20040804	AU20040900141	20040114	AU20030904359	20030815
AU20030904196	20030808	AU20030904527	20030822	AU20040200617	20040217
AU20040902799	20040526	AU20040902799	20040526	AU20040902722	20040521
AU20040900744	20040216	AU20040900450	20040203	AU20040902794	20040526
AU20040900814	20040218	AU20040900245	20040121	AU20040902721	20040521
AU20040900657	20040212	AU20040902799	20040527	AU20040900879	20040223
AU20060203297	20060801	GB20070009820	20040804	GB20060004470	20040804
WO2004AU01035	20040804	AU20040903406	20040622	AU20040903775	20040709
AU20040903477	20040624	AU20040903434	20040624	AU20040903507	20040629
AU20040902928	20040601	AU20040903041	20040607	AU20040902931	20040602
AU20040903153	20040610				

Family:

Publication number	Publication date	Application number	Application date
<u>AU2003900141 A0</u>	20030130	AU20030900141	20030114
<u>AU2003900678 A0</u>	20030227	AU20030900678	20030217
<u>AU2003904044 A0</u>	20030814	AU20030904044	20030804
<u>AU2003904196 A0</u>	20030821	AU20030904196	20030808
<u>AU2003904359 A0</u>	20030828	AU20030904359	20030815
<u>AU2004200617 AA</u>	20040902	AU20040200617	20040217
<u>AU2004261315 AA</u>	20050210	AU20040261315	20040804
<u>AU2004261315 BB</u>	20060504	AU20040261315	20040804
<u>AU2004261315 CA</u>	20070802	AU20040261315	20040804
<u>AU2006203297 AA</u>	20060824	AU20060203297	20060801
<u>BRPI0412963 A</u>	20060926	BR2004PI12963	20040804
<u>CA2534758 AA</u>	20060203	CA20042534758	20040804
<u>CN1863710 A</u>	20061115	CN200480028971	20040804
<u>DE112004001435 T5</u>	20060727	DE200411001435	20040804
<u>EP1660379 A1</u>	20060531	EP20040737650	20040804
<u>EP1660379 A4</u>	20091230	EP20040737650	20040804
<u>GB200604470 A0</u>	20060412	GB20060004470	20040804
<u>GB200709820 A0</u>	20070704	GB20070009820	20040804
<u>GB2420114 A1</u>	20060517	GB20060004470	20040804
<u>GB2420114 B2</u>	20070718	GB20060004470	20040804
<u>GB2435038 A1</u>	20070815	GB20070009820	20040804
<u>GB2435038 B2</u>	20080521	GB20070009820	20040804
<u>JP2007501169 T2</u>	20070125	JP20060522180T	20040804
<u>KR20060042422 A</u>	20060512	KR20067002437	20040804
<u>KR20070033052 A</u>	20070323	KR20077005410	20040804
<u>NZ544867 A</u>	20080926	NZ20040544867	20040804
<u>US2007131641 AA</u>	20070614	US20040567195	20040804
<u>WO05012125 A1</u>	20050210	WO2004AU01035	20040804
<u>WO05077777 A1</u>	20050825	WO2005AU00222	20050218
<u>ZA200601839 A</u>	20070627	ZA20060001839	20060101

Probable Assignee: RBC TRUSTEES CI LTD

Assignee(s):^(std): ABACUS ; ABACUS C I LTD ; ABACUS C I LTD TRUSTEE OF T AS ; ABACUS C I LTD COMO FIDEI COMI ; ABACUS C I LTD TRUSTEE FOR AS ; ABACUS C I LTD AS TRUSTEE FOR ; ABACUS C I LTD AS TRUSTEE OF T ; CTECH EQUIPMENT PTY LTD ; WOOLFORD L ; RBC TRUSTEES CI LTD AS TRUSTEE ; HIGGINS CHRISTOPHER

LYNDON ; CTECH CLOSURES PTY LTD ; ABACUS C I COMO FIDEI COMISSARIO DO FIDE LTD

Assignee(s): ABACUS C I LIMITED ; ABACUS TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVI ; ABACUS TRUSTEE FOR BAYVIEW TRUST AS LTD ; ABACUS C I TRUSTEE OF BAYVIEW TR AS LTD ; RBC TRUSTEES LTD ; RBC TRUSTEES CI LTD ; RBC TRUSTEES CI LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS CI TRUSTEE OF BAYVIEW TRUST LTD AS ; ABACUS CI LTD ; RBC TRUSTEES (CI) LTD ; ABACUS CI LIMITED TRUSTEE FOR BAYVIEW TRUST AS ; ABACUS C I TRUSTEE FOR BAYVIEW T AS LTD ; ABACUS C I LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS C I LIMITED COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVIEW TRUST ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST JERSEY ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST ; ABACUS LTD ; ABACUS C I TRUSTEE FOR BAYVIEW TR AS LTD ; ABACUS (C I) LIMITED AS TRUSTEE FOR THE... ; ABACUS (C I) LIMITED COMO FIDEI COMISSARIO DO... ; ABACUS (CI) LTD

Inventor(s):^(std): PETER WILLIAM BROWN ; LYNDON HIGGINS CHRISTOPHER ; HIGGINS CHRISTOPHER LYNDON ; CHRISTOPHER LYNDON HIGGINS ; BROWN PETER WILLIAM ; HIGGINS CHRISTOPHER L

Inventor(s): HIGGINS CHRISTOPHER

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; BROOKS KUSHMAN PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D41/04 B65D41/32 B65D41/34 B65D47/06 B65D47/08 B65D47/20 B65D51/00 B65D51/28 B65D81/32 B65D83/00 (Advanced/Invention);
B65D41/32 B65D41/34 (Advanced/Non-invention);
B65D41/04 B65D41/32 B65D41/34 B65D47/04 B65D47/06 B65D47/08 B65D51/00 B65D51/24 (Core/Invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D101/00 B65D41/34 B65D47/20 B65D51/28

CPC: B65D51/2835 B65D47/06 B65D47/08 B65D41/3409 B65D51/2828 B65D41/0421 B65D41/0428 B65D41/3428 B65D47/0857 B65D51/2807 B65D2101/00

European class: B65D41/04B1A B65D41/04B2 B65D41/34 B65D41/34A1 B65D41/34C1 B65D47/06 B65D47/08 B65D47/08D B65D51/28B1B B65D51/28B1B1 L65D101/00

US class: 215/252

[Classification Explorer](#)

Cited documents: WO9840289 A1, WO9838104 A1, WO9743190 A1, WO05012125 A1, WO03010061 A2, WO03004369 A1, WO02062675 A1, WO0168469 A1, US6230884 BA, US6148996 A, US5950850 A, US5660288 A, US5346082 A, US5038951 A, US5020682 A, US4903865 A, US4813561 A, US4738370 A, US4458821 A, US4457438 A, US2003102280 AA, US2003015490 AA, JP8091402 A2, JP2003519602 T2, JP2003165555 A2, JP11100093 A2, JP11059791 A2, GB2222812 A1, EP1332977 A1, EP1316507 A2,

Forward Citations: WO16009192, WO15004352, WO12130916, WO09154666, WO09154666, WO08061766, WO07082322, WO06013443, WO06013443, WO05077777, US9828146, US9731869, US9382044, US9061801, US8851310, US8807360, US8684225, US8684204, US8356711, US7775386, US2013313287, US2012292321, US2011024423, RU2507137, KR100951526, FR3008393, EP1778555,

Abstract:

Source: US2007131641A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102), a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamper-evident band (110) frangibly connected to said skirt; the neck (10) of the container including a plurality of discretely spaced projections (18) extending outwardly from said neck and adapted to engage with tabs (122) on said tamper-evident band to facilitate breaking of the band (110) from the skirt of the closure.

10) Family number: 18992158 (US4343408A)

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Title: Tamper-evident plastic closure**Priority:** CA19810375474 19810414 JP19810501664 19810410 US19800142429 19800421
WO1981US00480 19810410**Family:**

Publication number	Publication date	Application number	Application date
<u>AU198171709 A1</u>	19811110	AU19810071709	19810410
<u>BR8108447 A</u>	19820309	BR19810008447	19810410
<u>CA1163233 A1</u>	19840306	CA19810375474	19810414
<u>DE3144407 A1</u>	19820701	DE19813144407	19810410
<u>DE3144407 C2</u>	19910529	DE19813144407	19810410
<u>DE3144407 T</u>	19820701	DE19813144407T	19810410
<u>EP0050647 A1</u>	19820505	EP19810901238	19810410
<u>EP0050647 A4</u>	19830209	EP19810901238	19810410
<u>EP0050647 B1</u>	19850911	EP19810901238	19810410
<u>ES266008 U</u>	19830216	ES19810266008U	19810420
<u>ES266008 Y</u>	19840701	ES19810266008U	19810420
<u>GB2085416 A1</u>	19820428	GB19810037551	19810410
<u>GB2085416 B2</u>	19850123	GB19810037551	19810410
<u>JP57500972 T2</u>	19820603	JP19810501664	19810410
<u>JP60182349 U1</u>	19851203	JP19850064148U	19850426
<u>MX151989 A</u>	19850523	MX19810186927	19810420
<u>US4343408 A</u>	19820810	US19800142429	19800421
<u>WO8103006 A1</u>	19811029	WO1981US00480	19810410

Probable Assignee: GEN KAP PR CORP**Assignee(s):^(std):** GEN KAP PR CORP**Assignee(s):** GENERAL KAP CHIMNEY ROCK ROAD BLDG 4W BOUND BROOK ; GENERAL KAP CORP ; GENERAL KAP P R CORP ; GENERAL KAP P R CORP SAN JUAN PUERTO RICO US ; GENERAL KAP PR CORP ; GENERAL KAP PR A CORP OF PUERTO RICO CORP ; CSASZAR ERNEST J**Inventor(s):^(std):** CSASZAR E ; CSASZAR E J ; CSASZAR ERNEST J ; CSASZAR ERNEST JULIUS**Inventor(s):** CSASZAR ERNEST JULIUS MOUNTAINSIDE N J ; E J CSASZAR ; ERNEST JULIUS CSASZAR ; EJ CSASZAR**Agent(s):** BORDEN LADNER GERVAIS LLP**Designated states:** AT AU BR CH DE DK FI FR GB JP LU NL NO SE**International class** B65D17/28 B65D17/32 B65D41/34 (Advanced/Invention) ;
^{(IPC 8-9) :} B65D17/28 (Core/Invention)**International class** B65D17/32 B65D17/50 B65D39/08 B65D41/32 B65D41/34 B65D49/12
^{(IPC 1-7) :}**CPC:** B65D41/3442 B65D41/3452**European class:** B65D41/34D B65D41/34D1A**US class:** 215/252 215/258[Classification Explorer](#)**Cited documents:** US4210251 A, US4196818 A, US4033472 A, US3955716 A, US3904062 A, US3784041 A, US3414151 A, US3360149 A, US3329295 A, US3160303 A, US2914206 A, JP54083588 A2, GB1303436 A, FR2320870 A1, FR1536459 A, DE7908673 U, DE3100424 A1, DE2349265 A1, DE1859147 U,

Forward Citations: WO9923002, WO0155000, US8596477, US8453859, US7735666, US7228979, US6991123, US6926162, US6793082, US6705479, US6640988, US6626310, US6527132, US6491175, US6325225, US6237791, US6126886, US6089390, US6062408, US5967351, US5950849, US5891380, US5853097, US5755346, US5575967, US5100009, US4925617, US4886947, US4872304, US4856667, US4823967, US4811857, US4806301, US4726483, US4669623, US4555039, US4545496, US4529096, US4526282, US4506795, US4494664, US4485934, US4479586, US4461390, US4452364, US4436212, US4417666, US4380299, US2008093394, US2007187352, US2007108154, US2005284837, US2005189355, KR101298855, JP5022142, JP4949161, JP2009051526, JP2009029483, GB2121392, FR2584050, FR2527558, EP0239176, DE19953660, DE19953660,

Abstract:

Source: US4343408A Tamper-evident closures which are useful in conjunction with various bottles and containers are disclosed. The closures are intended to be used in connection with containers having threaded necks above an annular collar, and they comprise one-piece closures including an end wall, an internally threaded upper portion and a depending lower skirt portion which includes an inwardly projecting bead adapted to engage the annular collar on the container. The depending lower skirt portion has a substantially uniform thickness throughout its entire area intended to contact the annular collar on the container, and the closure includes an area of weakness which is designed to fracture in a substantially horizontal plane across the closure or, in another embodiment, in a plane which neither passes through nor is tangential to the annular collar on the container. Fracture thus occurs when the closure is unthreaded from the container, thereby leaving the lower skirt portion engaged to the annular collar on the container after the end wall and internally threaded upper portion of the closure have been removed.

11) Family number: 28144587 (US2001052531A)

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Title: Fitment and resealable dispensing closure assembly for high–pressure sealing and bi–modal dispensing

Priority: US20000579323 20000525 US20010811098 20010316 WO2001US15977 20010517

Family:	Publication number	Publication date	Application number	Application date
	<u>AR028930 AA</u>	20030528	AR2001P102518	20010524
	<u>AU2001264648 AA</u>	20011203	AU20010264648	20010517
	<u>AU2001264648 BB</u>	20050224	AU20010264648	20010517
	<u>AU200164648 A1</u>	20011203	AU20010064648	20010517
	<u>AU200164648 A5</u>	20011203	AU20010064648	20010517
	<u>BRPI0111064 A</u>	20040113	BR2001PI11064	20010517
	<u>CA2406252 AA</u>	20021016	CA20012406252	20010517
	<u>CN1280175 C</u>	20061018	CN20018010089	20010517
	<u>CN1438967 A</u>	20030827	CN20018010089	20010517
	<u>CZ20023847 A3</u>	20030416	CZ20020003847	20010517
	<u>CZ302284 B6</u>	20110202	CZ20020003847	20010517
	<u>EP1322542 A1</u>	20030702	EP20010939091	20010517
	<u>EP1322542 A4</u>	20060215	EP20010939091	20010517
	<u>MXPA02011589 A1</u>	20030327	MX2002PA11589	20010517
	<u>PL198315 B1</u>	20080630	PL20010364527	20010517
	<u>PL364527 A1</u>	20041213	PL20010364527	20010517
	<u>RU2002134907 A</u>	20040420	RU20020134907	20010517
	<u>RU2266852 C2</u>	20051227	RU20020134907	20010517
	<u>US2001052531 AA</u>	20011220	US20010811098	20010316
	<u>US6334555 BA</u>	20020101	US20010811098	20010316
	<u>WO0189983 A1</u>	20011129	WO2001US15977	20010517

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s):^(std) SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC

Assignee(s): SMITH KELLY A ; BLOMDAHL CORINNE M ; RANDALL JEFFREY T

Inventor(s):^(std) CM BLOMDAHL ; BLOMDAHL C M ; BLOMDAHL J T RANDALL K A SMITH ; JT RANDALL ; SMITH KELLY A ; REHNDAHL DZHEFFRI T ; RANDALL JEFFREY T ; BLOMDAL KORINN M ; BLOMDAHL CORINNE M ; RANDALL J T ; SMITH K A ; SMITH KELLY A ; KA SMITH

Inventor(s): KELLY A SMITH ; SMITH KELLY ; JT RANDALL KA SMITH CM BLOMDAHL ; K A SMITH ; C M BLOMDAHL ; CORINNE M BLOMDAHL ; J T RANDALL ; J T RANDALL K A SMITH C M BLOMDAHL ; JEFFREY T RANDALL

Agent(s): SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO

Designated states: AT AU BE BR CA CH CN CY CZ DE DK ES FI FR GB GR IE IT LU MC MX NL PL PT RU SE TR

International class
(IPC 8–9): [B65D41/34 B65D47/04 B65D47/08 B65D47/24 B67D5/32 B67D7/32 B67D7/34 F17C13/06](#) (Advanced/Invention)

International class
(IPC 1–7): [B65D47/00 B65D47/04 B67D3/00 B67D5/32](#)

CPC: [B65D47/0809 B65D47/242](#)

European class: [B65D47/08B1 B65D47/24A1](#)

US class: [222/521 222/545 222/545S 222/546 222/546S](#)

Cited documents: US6095382 A, US6065648 A, US6062441 A, US6059132 A, US6039218 A, US6024256 A, US5938086 A, US5810185 A, US5772076 A, US5743444 A, US5692651 A, US5680969 A, US5562220 A, US5456374 A, US5431305 A, US5421487 A, US5377873 A, US5325999 A, US5295597 A, US5267673 A, US5145094 A, US5145083 A, US5125539 A, US5111977 A, US5111949 A, US5104008 A, US4941598 A, US4867354 A, US4805807 A, US4785978 A, US4690304 A, US4569456 A, US4561570 A, US4506809 A, US4358031 A, US3901410 A, US3887116 A, US3297212 A, US3273754 A, US3194453 A, US3123259 A, US3010619 A, US2808169 A, US2759643 A, FR2716170 A3, EP0759876 A1, EP0467554 A1, EP0439109 A2, DE4328582 A1,

Forward Citations: WO15073256, WO13003474, WO13003474, WO07091209, WO06083994, WO04101384, USD499793, USD484061, US9828146, US8613378, US8544685, US8459502, US8403159, US8205762, US7967160, US7900789, US7510095, US7331491, US7182230, US6786363, US6672487, US2016016706, US2012160882, US2011155688, US2011056982, US2011006031, US2009308832, US2009095700, US2008296251, US2008210712, US2008029557, US2007215627, US2007199914, US2007108153, US2006273095, US2006102654, US2004232167, US2004178231, JP2008162597, ITMI20102372, ES2244281, EP2468657, EP1816084, EP1619135, EP1619135, EP1582475, EP1582475, CN102616453,

Abstract:

Source: US2001052531A A fitment is provided for incorporation into a closure assembly to provide at least one high-pressure seal suitable for maintaining high-positive pressures in a container having pressurized contents, such as carbonated beverages. The fitment and closure assembly also provide for bi-modal dispensing operations, because the fitment it can be removed from the closure assembly to provide alternative flow characteristics from the container through the closure assembly. The fitment may also be provided with one or more projections adapted to engage a thread on the closure body such that rotation of the closure body relative to the container results in removal of the fitment from the container. The fitment may also be provided with one or more projections for engaging the closure body to limit its movement relative to the container, thereby defining a fully open dispensing position of the closure body. The projection(s) preferably take the form of a plurality of radially extending ratchet shaped projections or the form of a single, helical flange extending around a peripheral surface of the fitment. A closure assembly incorporating the fitment also may include a plurality of seals formed between various features on the fitment and the closure body, which may include a hinged lid, to enhance the sealing characteristics of the closure assembly.

12) Family number: 20706421 (US5884788A)

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Title: Tamper-indicating closure**Priority:** US19970992145 19971217 WO1998US26771 19981217

Family:	Publication number	Publication date	Application number	Application date
	AT363437 E	20070615	AT19980964739T	19981217
	AU199919998 A1	19990705	AU19990019998	19981217
	AU740205 B2	20011101	AU19990019998	19981217
	CA2314273 AA	20000609	CA19982314273	19981217
	CA2314273 C	20080401	CA19982314273	19981217
	DE69837857 D1	20070712	DE19986037857	19981217
	DE69837857 T2	20080131	DE19986037857T	19981217
	EP1040048 A1	20001004	EP19980964739	19981217
	EP1040048 A4	20060111	EP19980964739	19981217
	EP1040048 B1	20070530	EP19980964739	19981217
	ES2286865 T3	20071201	ES19980964739T	19981217
	JP2002508285 T2	20020319	JP20000538924T	19981217
	NZ505739 A	20011221	NZ19980505739	19981217
	US5884788 A	19990323	US19970992145	19971217
	WO9930977 A1	19990624	WO1998US26771	19981217

Probable Assignee: WILDE SHELDON**Assignee(s):^(std):** SHELDON L ; SHELDON L WILDE ; WILDE SHELDON ; WILDE SHELDON L ; ALUMINUM CO OF AMERICA**Assignee(s):** ALUMINUM COMPANY OF AMERICA**Inventor(s):^(std):** SHELDON L WILDE ; WILDE SHELDON ; WILDE SHELDON L**Agent(s):** GRIFFITH HACK; DEETH WILLIAMS WALL LLP**Designated states:** AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

International class [B65D41/04](#) [B65D41/34](#) [B65D51/16](#) [B65D55/02](#) (Advanced/Invention);
 (IPC 8-9): [B65D41/34](#) (Advanced/Non-invention);
[B65D41/04](#) [B65D41/34](#) [B65D51/16](#) [B65D55/02](#) (Core/Invention)

International class [B65D41/34](#) [B65D51/22](#)
 (IPC 1-7):

CPC: [B65D41/045](#) [B65D51/1688](#) [B65D55/026](#)**European class:** [B65D41/04D2](#) [B65D51/16E3](#) [B65D55/02G](#)**US class:** [215/230](#) [215/252](#) [215/253](#) [215/349](#) [215/351](#)[Classification Explorer](#)**Cited documents:** WO9429186 A1, US5564582 A, US4801028 A, US4721219 A, US4564117 A, US4531649 A, US4505399 A, US4473163 A, US4446979 A, US4378894 A, US2939597 A, US2560793 A, US2054033 A, US2054032 A, GB2225778 A1,**Forward Citations:** WO15028979, WO15028959, WO07122323, WO05097614, WO05097614, WO02057141, WO02057141, US9790009, US9434518, US8985361, US8851310, US8813988, US8650839, US8596477, US8584877, US8360256, US8251236, US8100277, US7798359, US7780024, US7766178, US7644902, US7568586, US7549547, US7380678, US6761275, US6655553, US6179139, US2013200035, US2012292321, US2011114595, US2009184082, US2009101620, US2007289934, US2007187352, US2007144997, US2007125785, US2007017891, US2005284837, US2005269283,

Abstract:

Source: US5884788A A tamper-indicating closure for a container includes a cap with removable panels of a top wall of the cap. Each removable panel is connected to a tab on the inside of the cap. The top wall includes inner and outer cams on an inside surface and the tabs underlie the cams. A liner disc is applied inside the cap for sealing against the container. A plurality of spaced-apart ratchet teeth are arranged in one or two circular patterns on the liner disc and sized and located such that the circular pattern of teeth meshes with the two cams. The tabs have a toothed transverse cross-section which allow the tabs to ride over the ratchet teeth in a screwing-on direction to the cap, but the tabs are engaged by the ratchet teeth in a screwing-off direction of rotation of the cap. Since the liner disc and ratchet teeth are stationary with respect to the container, unscrewing of the cap causes the ratchet teeth to separate the panels from the moving cap.

13) Family number: 42071209 (US2010032402A)

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Title: TAMPER EVIDENT CLOSURE CAP, CONTAINER AND COMBINATION THEREOF
Priority: EP20070101504 20070131 EP20080701348 20080109 WO2008EP50184 20080109
Family:

Publication number	Publication date	Application number	Application date
AU2008209882 AA	20080807	AU20080209882	20080109
AU2008209882 BB	20130912	AU20080209882	20080109
BRPI0807067 A2	20140408	BR2008PI07067	20080109
DE602008020386 D1	20130124	DE200860020386T	20080109
EP1953091 A1	20080806	EP20070101504	20070131
EP2114786 A2	20091111	EP20080701348	20080109
EP2114786 B1	20121128	EP20080701348	20080109
IL199816 A0	20100415	IL20080199816	20080109
IL199816 A1	20150924	IL20080199816	20080109
KR20090106607 A	20091009	KR20097016811	20080109
MA31181 B1	20100201	MA20090032163	20090812
MX2009008074 A1	20090812	MX20090008074	20080109
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US2010032402 AA	20100211	US20080524308	20080109
WO08092716 A2	20080807	WO2008EP50184	20080109
WO08092716 A3	20081030	WO2008EP50184	20080109

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH

Assignee(s):^(std): DREYER LINO ; OBRIST CLOSURES SWITZERLAND ; ODET PHILIPPE GERARD ; WIDMER SEBASTEN CEDRIC

Assignee(s): OBRIST CLOSURES SWITZERLAND GMBH

Inventor(s):^(std): WIDMER SEBASTEN CEDRIC ; WIDMER SEBASTIEN CEDRIC ; WIDMER SEBASTIAN CEDRIC ; ODET PHILIPPE GERARD ; DREYER LINO

Inventor(s): LINO DREYER ; PHILIPPE GERARD ODET ; SEBASTEN CEDRIC WIDMER ; SEBASTIEN CEDRIC WIDMER

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; MITSCHERLICH PATENT U RECHTSANWAELTE PARTMBB; HEPP DIETER ET AL; MUELLER CHRISTOPH EMANUEL; GREENWOOD MATTHEW DAVID; REINHOLD COHN AND PARTNERS; SHOEMAKER AND MATTARE LTD; MULLER CHRISTOPH ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
 (IPC 8-9): [B65D](#) [B65D41/04](#) [B65D41/34](#) [B65D49/12](#) (Advanced/Invention);
[B65D41/00](#) [B65D41/04](#) [B65D41/34](#) [B65D49/00](#) (Core/Invention);
[B65D](#) (Subclass/Invention)

International class
 (IPC 1-7): [B65D41/34](#)

CPC: [B65D41/3409](#) [B65D41/3428](#) [B65D41/3447](#)

European class: [B65D41/34A1](#) [B65D41/34C1](#) [B65D41/34D1](#)

US class: [215/252](#) [215/329](#) [215/329S](#)

[Classification Explorer](#)

Cited documents:

US7878351 BB, US7775386 BB, US7344039 BB, US6766917 BA, US5950850 A, US5801030 A, US5695083 A, US5320233 A, US5111949 A, US4957211 A, US4875594 A, US4801030 A, US4785963 A, US4732289 A, US4629082 A, US4560076 A, US4546892 A, US4402418 A, US4153174 A, US2006283828 AA, US2006060555 AA, US2006021959 AA, US2005189312 AA, US2005072751 AA, GB2385321 A1, GB2116155 A1, EP0697343 A1, DE29502309 U1, CH599004,

Forward Citations: WO17068151, USD723919, USD701460, US2015129534,

Abstract:

Source: US2010032402A The invention relates to a tamper evident closure cap (101). A tamper evident band is provided with an extension (107) having an upper edge (113) extending above an engagement surface (110) of a projection (109). The extension (107) and the projections (109) are arranged on an annular, circumferentially running band (105). When the closure is applied to a container, the extension (107) is clamped between the inner surface (114) of the tamper evident band or the closure and a retaining structure on a container finish.

14) Family number: 31959217 (US2007090110A)

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Title: TAMPER EVIDENT CLOSURE**Priority:** EP20030257261 20031031 EP20040790841 20041026 US20060577575 20060905
WO2004EP12056 20041026 US20130828642 20130314**Family:**

Publication number	Publication date	Application number	Application date
<u>AT387382 E</u>	20080315	AT20040790841T	20041026
<u>BRPI0416014 A</u>	20070102	BR2004PI16014	20041026
BRPI0416014 B1	20160823	BR2004PI16014	20041026
<u>DE602004012149 D1</u>	20080410	DE200460012149T	20041026
<u>DE602004012149 T2</u>	20090312	DE200460012149T	20041026
<u>EP1694576 A1</u>	20060830	EP20040790841	20041026
<u>EP1694576 B1</u>	20080227	EP20040790841	20041026
<u>ES2302040 T3</u>	20080701	ES20040790841T	20041026
<u>HK1094438 A1</u>	20080613	HK20070101359	20070205
<u>HK1094438 A3</u>	20070330	HK20070101359	20070205
<u>MXPA06004684 A1</u>	20061214	MX2006PA04684	20041026
<u>MY137973 A</u>	20090430	MY20040004392	20041025
<u>PT1694576 T</u>	20080527	PT20040790841T	20041026
<u>SI1694576 T1</u>	20080831	SI20040030703T	20041026
<u>TH39056 B</u>	20140212	TH20041004179	20041026
<u>TH70496 A</u>	20050907	TH20041004179	20041026
<u>TW200519000 A</u>	20050616	TW20040132373	20041026
<u>TWI331118 B</u>	20101001	TW20040132373	20041026
<u>US2007090110 AA</u>	20070426	US20040577575	20041026
<u>US2013206765 AA</u>	20130815	US20130828642	20130314
<u>US8522991 BB</u>	20130903	US20040577575	20041026
<u>US9242768 BB</u>	20160126	US20130828642	20130314
<u>WO05049443 A1</u>	20050602	WO2004EP12056	20041026

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):^(std):** CROWN PACKAGING TECHNOLOGY INC ; CROWN PACKAGING UK PLC ;
MCCLUSKIE STEVEN A ; MCCLUSKIE STEVEN ALLEN ; MCIVOR CHARLES A ;
MCIVOR CHARLES ANTHONY ; RAMSEY CHRISTOPHER ; SKELTON STEVEN
ANDREW ; SKELTON STEVEN A ; OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBHCH ; OBRIST CLOSURES SWITZERLAND
GMBH**Inventor(s):^(std):** ALLEN MCCLUSKIE STEVEN ; ANDREW SKELTON STEVEN ; ANTHONY MCIVOR
CHARLES ; MCCLUSKIE STEVEN A ; MCCLUSKIE STEVEN ALLAN ; MCCLUSKIE
STEVEN ALLEN ; MCIVOR CHARLES A ; MCIVOR CHARLES ANTHONY ; MCLVOR
CHARLES ANTHONY ; CHRISTOPHER RAMSEY ; RAMSEY CHRISTOPHER ;
SKELTON STEVEN A ; SKELTON STEVEN ANDREW ; RAMSEY CHRISTOPHER PAUL**Inventor(s):** CHRISTOPHER PAUL RAMSEY ; CHARLES ANTHONY MCIVOR ; STEVEN ALLEN
MCCLUSKIE ; STEVEN ANDREW SKELTON ; STEVEN ALLAN MCCLUSKIE ;
SKELTON STEVEN ; MCCLUSKIE STEVEN ; MCIVOR CHARLES**Agent(s):** GREENWOOD MATTHEW DAVID ET AL; KNOBLE YOSHIDA AND DUNLEAVY;
BRADLEY ARANT BOULT CUMMINGS LLP; THOMAS G**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ
GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC
MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC
SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA

ZM ZW

International class
(IPC 8-9):

B65D39/00 B65D41/00 B65D41/04 B65D41/34 B65D41/62 B65D43/00 B65D43/18
B65D47/00 B65D49/02 B65D49/06 B65D50/04 B65D51/00 B65D51/18 B65D51/20
B65D55/02 (Advanced/Invention);
B65D41/34 B65D50/00 B65D50/04 (Core/Invention);
B65D55/02 (Core/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7):

B65D41/04 B65D41/34 B65D50/04 B65D51/18 B65D55/02

CPC:

B65D41/0478 B65D41/0492 B65D41/3428 B65D49/06 B65D50/041 B65D2251/0015
B65D2251/0078 B65D55/026

European class:

B65D41/04E1 B65D41/04G B65D41/34C1 B65D49/06 B65D50/04B L65D251/00Y2D
L65D251/00Y6D

US class:

1/1 215/21 215/252 215/258 215/277 220/254.1 220/254.8 220/254.9 220/254.900
220/256.1 220/257.1 220/259.3 220/259.4 220/290

[Classification Explorer](#)

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WO9957031 A1, WO9407470 A1, WO09056829 A1, WO07125292 A2, WO06117505, WO06020059 A2, WO06008285, WO06003168 A1, WO06000532 A1, WO05049443, WO05024745 A2, WO04011347, WO03016165 A1, WO03016162 A1, WO0244047 A1, WO02096771 A1, WO02096771 A1, WO02085730, WO0183668 A1, WO0136290 A1, WO0066451 A1, WO0026878 A1, US8522991 BB, US8453856 BB, US7204383 BB, US7125828 BB, US7121419 BB, US6880729 BB, US6866164 BB, US6727215 BB, US6688501 BB, US6685046 BB, US6683038 BB, US6484879 BB, US6328174 BA, US6269986 BA, US6095375 A, US6036036 A, US5819965 A, US5819965, US5755348 A, US5738231, US5683016 A, US5603422 A, US5588545 A, US5588545, US5445824 A, US5427260 A, US5332113 A, US5004126 A, US4942970 A, US4941592 A, US4838441 A, US4837441 A, US4790442 A, US4774480 A, US4744480 A, US4697719 A, US4637519 A, US4569464 A, US4531649 A, US4310105 A, US4303171 A, US4091949 A, US3892351 A, US3871545 A, US3820683 A, US3810556 A, US3603470 A, US3455479 A, US3425578 A, US3412890 A, US3348718 A, US2858054 A, US2011259844 AA, US2009173007 AA, US2008277613 AA, US2008190880 AA, US2007090110 AA, US2006770621, US2006124646 AA, US2006077062 AA, US2006043052 AA, US2006011573 AA, US2005205607 AA, US2005133475 AA, US2004143505 AA, US2004026420 AA, US2002125249 AA, US1798151 A, TW522981, TW468641, TW354068, JP2003160162 A2, JP2000229651 A2, JP10338251 A2, GB2432153 A1, GB2430667 A1, GB2415426 A1, GB2375516 A1, GB2356842 A1, GB2355269 A1, GB2311283 A1, GB2264110 B2, GB2264110 A1, GB2222821 A1, GB2172803 A1, GB2158424 A1, GB2158424 A, GB2148235 A1, GB2136782 A1, GB2123392 A1, GB1484517 A, GB1473482 A, GB1298084 A, FR2591571 A1, FR2567106 A1, FR2439139 A1, EP2005053085, EP1786698 B1, EP1786698 A1, EP1694576 B1, EP1694576 A1, EP1663809 B1, EP1663809 A1, EP1283175 A2, EP1266839 A2, EP1161382 B1, EP1161382 A1, EP1101707 A1, EP0688723 A1, EP0619243 A1, EP0593952 A1, EP042539171, EP0425391 A1, EP0414462 A2, EP0337568 A2, EP0306670 A2, EP0236136 A2, EP0179498 A1, EP0132792 A1, EP0127943 A1, DE861666 A, DE8535205 U, DE809896 A, DE3605963 A1, DE20019797 U1,

Forward Citations:

WO17093218, WO17081045, WO14170286, WO14027602, WO14016391, WO13185781, WO13113435, WO13050390, WO12163409, WO11157978, WO09141581, WO09106172, WO08110917, USD630093, US9796513, US9790011, US9636276, US9242768, US9174778, US9162803, US9102448, US9010554, US8944292, US8851310, US8627968, US8522991, US8490804, US8453856, US8413830, US8387809, US8286812, US7830263, US2016347520, US2016101913, US2016023814, US2014183196, US2013206765, US2012292321, US2012223103, US2010264108, US2010004617, US2008105644, JP6068489, JP6065454, JP2014534136, JP2014037249, GB2459010, GB2459010, GB2450940, GB2450940, GB2450939, GB2450939, EP3081506, EP2765090, EP1379441, EA019762, CN105246791, CN102658910,

Abstract:

Source: US2007090110A A tamper-evident closure (10) for a container (20) is provided. The closure (10) comprises a first portion (25) including inner (35) and outer (45) parts, and a second portion (30). The outer part (45) is movable relative to the inner part (35) from a first position in which the outer part (45) is immediately adjacent the second portion (30) to a second position in which there is an empty unobstructed gap (G) therebetween. The inner (35) and outer (45) parts are adapted to become irreversibly locked in the second position so that the outer part (45) cannot be moved back to the first position to close the gap (G). A combination of such a closure (110) with an in-bore filament (100) connectable to a container (120) is also provided.

15) Family number: 32061506 (US2005145629A)

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Title: CLOSURE AND CONTAINER SYSTEM AND METHOD FOR SEALING A CLOSURE ON A CONTAINER**Priority:** US20040753850 20040107 WO2005US00362 20050107

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2551717 AA</u>	20060627	CA20052551717	20050107
	<u>CA2551717 C</u>	20100622	CA20052551717	20050107
	<u>US2005145629 AA</u>	20050707	US20040753850	20040107
	<u>US7198170 BB</u>	20070403	US20040753850	20040107
	<u>WO05067616 A2</u>	20050728	WO2005US00362	20050107
	<u>WO05067616 A3</u>	20060908	WO2005US00362	20050107

Probable Assignee: BERRY PLASTICS CORP**Assignee(s):^(std):** ENTIRE INTEREST ; KERR GROUP INC ; HERR JAMES E ; BERRY PLASTICS CORP

Assignee(s): BERRY STERLING CORP ; BANK OF AMERICA NA ; BANK OF AMERICA NA ABL COLLATERAL AGENT AS ; BANK OF AMERICA NA COLLATERAL AGENT AS ; WELLS FARGO BANK NA ; LANDIS PLASTICS LLC ; SETCO LLC ; TUBED PRODUCTS LLC ; GRAFCO IND PARTNERSHIP LTD ; WELLS FARGO BANK NA COLLATERAL AGENT AS ; DEUTSCHE BANK TRUST CO ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLAT AS ; CAPTIVE PLASTICS INC ; GRAFCO IND ; CREDIT SUISSE ADMINISTRATIVE AGENT AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERA ; DEUTSCHE BANK TRUST CO AMERICAS COLLATERAL AGENT A ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERAL AGENT AS ; DEUTSCHE BANK TRUST CO AMERICAS COLLATERAL AGENT AS ; CREDIT SUISSE AS ADMINISTRATIVE AGENT ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AS TERM COLLAT

Inventor(s):^(std): HERR JAMES E**Inventor(s):** HERR JAMES**Agent(s):** SMART AND BIGGAR; KENYON AND KENYON; BARNES AND THORNBURG LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class B65D41/06 B65D41/34 B65D41/36 B65D50/06 B65D55/02 (Advanced/Invention);
^{(IPC 8-9):} B65D41/06 (Advanced/Non-invention);
B65D41/04 B65D41/34 B65D50/00 B65D55/02 (Core/Invention)

International class B65D41/06
^{(IPC 1-7):}

CPC: B65D41/06 B65D2101/0038**European class:** B65D41/06 L65D101/00A3C**US class:** 215/222 215/252 215/330 215/331 215/332 220/293 220/298 220/300[Classification Explorer](#)

Cited documents: US801283 A, US6382444 BA, US6305579 BA, US6119883 A, US6085921 A, US6056136 A, US6015054 A, US5950850 A, US5927532 A, US5894124 A, US5829613 A, US5749484 A, US5685445 A, US5450972 A, US5449078 A, US5341947 A, US5320233 A, US5307946 A, US5307945 A, US5174465 A, US5009323 A, US4936475 A, US4923073 A, US4875594 A, US4828127 A, US4709830 A, US4700860 A, US4567991 A, US4560076 A, US4547332 A, US4534480 A, US4530438 A, US4448318 A, US4380299 A, US4378894 A, US4241842 A, US4190169 A, US3913772 A, US3692200 A, US3460703 A, US3197055 A, US3165220 A, US201283 A, US2003071007 AA, US2002062626 AA, US2002033374 AA, US2000407 A, US1683388 A, GB2148259 A1,

GB2096110 A1, EP0341949 A1, DE3842443 A1,

Forward Citations: WO12153540, USD671834, US9615725, US9056698, US8925755, US8720717, US8708176, US8701921, US8424695, US8267980, US8141793, US8132684, US8016862, US7755489, US7510094, US2015015035, US2014275781, US2013087573, US2012261378, US2011011947, US2010162900, US2009057260, US2008243185, US2008223807, US2008001741, US2007012645, US2006273061, JP5755020, JP2012236640, CN102781786,

Abstract:

Source: US2005145629A A system includes a container including projections equi-spaced around a neck region. Each of the projections includes a cam surface, a lock surface, a ramp, and a clamping surface. The system also include a closure including a closure plane and a circumferentially depending outer skirt extending from the closure plane, a tamper-evident arrangement frangibly connected to an edge of the outer skirt opposite the closure plane, and pairs of lugs equi-spaced around an inner sidewall formed by the outer skirt and the tamper-evident arrangement. A lock lug of each pair of lugs is arranged on the tamper-evident arrangement and a sealing lug of each pair of lugs is arranged on the outer skirt. In the system, each lock lug is adapted to engage the cam surface of a corresponding projection during an initial application operation. The lock lug is adapted to engage the lock surface of the corresponding projection after the initial application operation. In the system each sealing lug is adapted to engage the ramp of the corresponding projection during the initial application operation. The sealing lug is adapted to engage the clamping surface of the corresponding projection after the initial application operation. A number of pairs of lugs may be equal to a number of projections. A method is provided for sealing a closure on a container in a tamper-evident manner using the system. A method is provided for removing a closure from a container sealed with a tamper-evident device.

16) Family number: 8776227 (US5609262A)

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Title: Tamper evident, child-resistant closure
Priority: CA19962185976 19960919 US19950532157 19950922 US19960733223 19961017
Family:

Publication number	Publication date	Application number	Application date
AU199665711 A1	19970327	AU19960065711	19960918
BRPI9603842 A	19980602	BR1996PI03842	19960920
CA2185976 AA	19970323	CA19962185976	19960919
CL1996001644 A1	19970609	CL19960001644	19960917
CO4560348 A1	19980210	CO19960050315	19960920
EP0764591 A1	19970326	EP19960306773	19960918
MX9604215 A1	19980430	MX19960004215	19960920
NO963955 A	19970324	NO19960003955	19960920
NO963955 A0	19960920	NO19960003955	19960920
SG43410 A1	19971017	SG19960010685	19960923
US5609262 A	19970311	US19950532157	19950922
US5749484 A	19980512	US19960733223	19961017

Probable Assignee: RIEKE CORP**Assignee(s):^(std):** RIEKE CORP

Assignee(s): RESKA SPLINE PRODUCTS INC ; RICHARDS MICRO TOOL INC ; RIEKE LEASING CO INC ; RIEKE OF INDIANA INC ; RIEKE OF MEXICO INC ; TOWING HOLDING LLC ; TRIMAS CO LLC ; TRIMAS CORP ; TRIMAS INT HOLDINGS LLC ; WESBAR CORP ; TROUT STANLEY D ; RIEKE UNA SOC ORGANIZADA BAJO LAS LEYES DEL ESTADO DE INDIANA CORP ; ARROW ENGINE CO ; BANK OF NEW YORK MELLON TRUST CO NA SECOND LIEN AG ; BANK OF NEW YORK MELLON TRUST CO NA SECOND LIEN AGENT AS ; BEAUMONT BOLT AND GASKET INC ; CEQUENT CONSUMER PRODUCTS INC ; CEQUENT PERFORMANCE PRODUCTS INC ; CEQUENT TOWING PRODUCTS INC ; COMPAC CORP ; CONSUMER PRODUCTS INC ; CUYAM CORP ; DEW TECHNOLOGIES INC ; DI RITE CO ; DRAW TITE INC ; INTEGRA FASTENER CORP ; FULTON PERFORMANCE PRODUCTS INC ; JPMORGAN CHASE BANK NA ; JPMORGAN CHASE BANK NA COLLATERAL AGENT AS ; HAMMERBLOW ACQUISITION CORP ; HAMMERBLOW CO LLC ; HI VOL PRODUCTS LLC ; INDUSTRIAL BOLT AND GASKET INC ; KEO CUTTERS INC ; LAKE ERIE PRODUCTS CORP ; LAMONS GASKET CO ; LAMONS METAL GASKET CO ; LOUISIANA HOSE AND RUBBER CO ; MONOGRAM AEROSPACE FASTENERS INC ; NETCONG INVESTMENTS INC ; NI IND INC ; NI WEST INC ; NORRIS CYLINDER CO ; NORRIS ENVIRONMENTAL SERVICES INC ; NORRIS IND INC ; PLASTIC FORM INC ; REESE PRODUCTS INC

Inventor(s):^(std): TROUT STANLEY D**Inventor(s):** STANLEY D TROUT**Agent(s):** SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; SMART AND BIGGAR; VILLASECA; ERNESTO CAVELIER**Designated states:** BE CH DE ES FR GB IT LI

International class [B29C13/02](#) [B29C37/00](#) [B29C45/44](#) [B65D41/32](#) [B65D41/34](#) [B65D50/00](#)
^{(IPC 8-9):} [B65D50/04](#) (Advanced/Invention);
[B29C37/00](#) [B29C45/44](#) [B65D41/34](#) [B65D50/00](#) (Core/Invention)

International class [B29C13/02](#) [B65D41/32](#) [B65D41/34](#) [B65D50/00](#) [B65D50/04](#) [B65D55/02](#) [B65D55/06](#)
^{(IPC 1-7):} [B65D55/08](#) [B67B3/00](#)

CPC: [B29C37/0014](#) [B29C45/4407](#) [B29L2031/565](#) [B65D41/3428](#) [B65D50/041](#)**European class:** [B29C37/00B3](#) [B29C45/44B](#) [B65D41/34C1](#) [B65D50/04B](#) [L29L31/56B](#)**US class:** [215/219](#) [215/252](#)

Cited documents: US5450973 A, US5445283 A, US5400913 A, US5397009 A, US5370251 A, US5310069 A, US5295600 A, US5280842 A, US5280681 A, US5271512 A, US5252068 A, US5197620 A, US5197616 A, US5145078 A, US5129530 A, US5115929 A, US5107998 A, US5096079 A, US5090788 A, US5080246 A, US5020681 A, US5007545 A, US5005718 A, US5004112 A, US4997097 A, US4981230 A, US4978017 A, US4978016 A, US4971212 A, US4938370 A, US4913300 A, US4884706 A, US4801031 A, US4801030 A, US4721218 A, US4653657 A, US4598833 A, US4546892 A, US4527701 A, US4433789 A, US4364484 A, US3944102 A, US3888375 A, US3878961 A, GB2100238 A1, GB1441341 A, EP0623522 A1, EP0541466 A1, EP0296060 A2, DE3025911 A1, DE2254688 A1,

Forward Citations: WO9967149, WO12154887, WO12050759, WO03016161, WO0073164, WO0023343, USD723919, USD641628, USD634200, USD634199, USD633386, USD631351, USD538654, USD531505, USD530205, USD529804, USD508204, USD507745, USD462269, US9630753, US9624004, US9604760, US9586738, US9550610, US8763830, US8672158, US8608001, US8584903, US8544666, US8231025, US8231020, US7887731, US7882977, US7866497, US7850028, US7637384, US7451898, US7445130, US7413097, US7401707, US7350655, US7350654, US7350653, US7350652, US7344039, US7222741, US7198170, US7100784, US7100783, US7059485, US7007523, US7004340, US6981602, US6931821, US6929137, US6912878, US6766916, US6604643, US6484896, US6405886, US6381928, US6126025, US6116442, US6112923, US5813553, US2012091134, US2011155758, US2010288765, US2010200532, US2010089863, US2009277861, US2009173739, US2009014404, US2008173611, US2008035674, US2008011703, US2007278256, US2007272647, US2007267381, US2007205229, US2007181578, US2006163192, US2006151423, US2006108313, US2006060555, US2006043050, US2006043049, US2006027520, US2006027519, US2005189312, US2005167389, US2005161425, US2005150857, US2005145629, US2005144992, US2005072751, US2005017865, US2005000931, US2004232100, US2004168999, US2004155006, US2004144786, US2004045925, RU2578581, RU2472683, EP2666730, EP1288133, CN106255649, AU2011314265, AU2002333387,

Abstract:

Source: US5609262A A child-resistant, tamper-evident closure for sealing an open-topped container having an external thread formed on a neck finish includes a combination of inner and outer caps where the inner cap includes a tamper-evident band which is connected to the remainder of the inner cap by a series of frangible elements. The inner cap further includes a series of folded ratchet-like tabs which are in a locked position behind an annular bead. The tabs are arranged so as to engage an annular lip on the neck finish. The outer cap snaps over the inner cap and includes a series of ratchet teeth which are directed toward the inner cap. The top surface of the inner cap includes a series of depressions which are sized and arranged for engagement with the series of ratchet teeth. The child-resistant arrangement permits the outer cap to turn relative to the inner cap in a counterclockwise direction. In the clockwise direction, the ratchet teeth and depressions are in engagement such that turning of the outer cap will advance the inner cap into threaded engagement. Removal of the inner cap from the neck finish is achieved by ovalizing the outer cap so as to bring into engagement ribs on the inner cap with ribs on the inside surface of the sidewall of the outer cap. By means of rib engagement and frictional interference, the outer cap is used to remove the inner cap.

Title: TAMPER-EVIDENT CLOSURE**Priority:** EP20080775887 20080710 GB20070013712 20070713 WO2008GB02343 20080710**Family:**

Publication number	Publication date	Application number	Application date
AT545604 E	20120315	AT20080775887T	20080710
CN101743176 A	20100616	CN200880024640	20080710
CN101743176 B	20130220	CN200880024640	20080710
DE602008013463 D1	20120412	DE200860013463T	20080710
EP2173633 A1	20100414	EP20080775887	20080710
EP2173633 B1	20120215	EP20080775887	20080710
ES2380512 T3	20120514	ES20080775887T	20080710
GB200713712 A0	20070822	GB20070013712	20070713
GB2450940 A1	20090114	GB20070013712	20070713
GB2450940 B2	20111130	GB20070013712	20070713
HK1139113 A1	20120921	HK20100104888	20100518
KR101430287 B1	20140814	KR20107002271	20080710
KR20100044804 A	20100430	KR20107002271	20080710
KR20130089289 A	20130809	KR20137020300	20080710
PL2173633 T3	20120731	PL20080775887T	20080710
TW200909310 A	20090301	TW20080126525	20080711
US2010170898 AA	20100708	US20080666630	20080710
US8453856 BB	20130604	US20080666630	20080710
WO9010717 A1	20090122	WO2008GB02343	20080710

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):^(std):** HARROWER JAMES ; MCPHERSON ALEXANDER DONALD MEIKLEM ; OBRIST CLOSURES SWITZERLAND ; SKELTON STEVEN ANDREW ; OBRIST CLOUSES SWITZERLAND GMB**Assignee(s):** OBRIST CLOUSES SWITZERLAND GMBH ; OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** MCPHERSON ALEXANDER ; MCPHERSON ALEXANDER DONALD MEI ; MCPHERSON ALEXANDER DONALD MEIKLEM ; SKELTON STEVEN ; SKELTON STEVEN ANDREW ; HARROWER JAMES ; MEIKLEM MCPHERSON ALEXANDER DONALD ; JAMES HARROWER ; ANDREW SKELTON STEVEN**Inventor(s):** ALEXANDER DONALD MEIKLEM MCPHERSON ; STEVEN ANDREW SKELTON**Agent(s):** GREENWOOD MATTHEW DAVID; LACKENBACH SIEGEL LLP; ANDREW F; GREENWOOD MATTHEW ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B65D41/32](#) [B65D41/34](#) [B65D49/00](#) [B65D49/02](#) [B65D49/12](#) [B65D55/02](#) (Advanced/Invention);
[B65D41/34](#) [B65D49/12](#) [B65D55/02](#) (Advanced/Non-invention);
[B65D41/34](#) [B65D49/00](#) [B65D55/02](#) (Core/Invention);
[B65D](#) (Subclass/Invention)**CPC:** [B65D41/62](#) [B65D41/3404](#) [B65D41/3409](#) [B65D49/00](#) [B65D49/02](#) [B65D55/022](#) [B65D55/026](#)**European class:** [B65D41/34](#) [B65D41/34A](#) [B65D41/34A1](#) [B65D49/00](#) [B65D49/02](#) [B65D55/02](#) [B65D55/02D](#) [B65D55/02G](#)

US class: 215/230 215/252 220/214

[Classification Explorer](#)

Cited documents: WO9957031 A1, WO9407470 A1, WO09056829 A1, WO08110917 A1, WO07125292 A2, WO06117505 A1, WO06020059 A2, WO06008285, WO06003168, WO06000532 A1, WO05072941 A1, WO05053085 A1, WO05049443 A1, WO05024745 A2, WO04011347 A2, WO03016165 A1, WO03016162 A1, WO0244047 A1, WO02096771 A1, WO02085730, WO0183668 A1, WO0136290 A1, WO0066451 A1, WO0026878 A1, US7204383 BB, US7125828 BB, US7121419 BB, US7073679 BA, US6908013 BB, US6880729 BB, US6866164 BB, US6727215 BB, US6688501 BB, US6685046 BB, US6683038 BB, US6484879 BB, US6269986 BA, US6095375 A, US6036036 A, US5819965 A, US5683016 A, US5603422 A, US5588545 A, US5445824 A, US5427260 A, US5332113 A, US5004126 A, US4942970 A, US4941592 A, US4838441 A, US4790442 A, US4774480 A, US4744480 A, US4697719 A, US4637519 A, US4569464 A, US4531649 A, US4310105 A, US4303171 A, US4091949 A, US3892351 A, US3871545 A, US3820683 A, US3810556 A, US3603470 A, US3455479 A, US3425578 A, US3412890 A, US3348718 A, US2858054 A, US2010170898 AA, US2009173007 AA, US2008277613 AA, US2008190880 AA, US2006770621, US2006124646 AA, US2006077062 AA, US2006043052 AA, US2006011573 AA, US2005205607 AA, US2005133475 AA, US2004143505 AA, US2004026420 AA, US2002125249 AA, US1798151 A, US1303171 A, JP2003160162 A2, JP2000229651, JP10338251 A2, GB2432153, GB2430667 A1, GB2415426, GB2375516 A1, GB2356842 A1, GB2355269 A1, GB2311283 A1, GB2264110 B2, GB2222821 A1, GB2172803 A1, GB2158424 A1, GB2148235 A1, GB2136782 A1, GB2123392 A1, GB1484517 A, GB1473482 A, GB1298084 A, FR2591571 A1, FR2567106 A1, FR2439139 A1, EP2005053085, EP1981774 B1, EP1786698 B1, EP1694576 B1, EP1663809 B1, EP1392575 B1, EP1283175 A2, EP1266839 A2, EP1161382 B1, EP1101707 A1, EP0688723 A1, EP0619243 A1, EP0593952 A1, EP0414462 A2, EP0337568 A2, EP0306670 A2, EP0236136 A2, EP0179498 A1, EP0132792 A1, EP0127943 A1, DE861666 A, DE8535205 U, DE809896 A, DE3605963 A1, DE20019797 U1,

Forward Citations: WO17081045, WO17037665, WO15028959, US9242768, US9102448, US9033169, US9010554, US8752764, US8453856, US2016347520, US2014183195, US2011259844, JP6067751, JP2015509064, ITMO20130242, CN105452122, CN105452122, CN104203767, CN103906689, CN103906689, CN102211687,

Abstract:

Source: US2010170898A A tamper evident closure for a container is provided. The closure comprises a first portion including inner and outer parts, and a second portion. The outer part is movable relative to the inner part from a first position in which at least part of the first and second portions are adjacent each other to a second position in which there is a gap therebetween. The closure comprises locking means for locking it in the second position upon first opening so that the gap cannot easily be closed. The closure further comprises indicator means for providing a visual indication if the locking means is overridden to close the gap.

18) Family number: 42726276 (US2010200155A)

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Title: SECURITY SYSTEM FOR ARTICLES IN TRANSIT

Priority: AU20070903284 20070619 AU20070903284P 20070619 AU20070904211 20070806
 AU20080902339 20080513 AU20080265504 20080619 AU20070904211P 20070806
 WO2008AU00885 20080619 AU20080902339P 20080513 US20090665581 20091218
 US20130750448 20130125 CN200880104000 20080619

Family:

Publication number	Publication date	Application number	Application date
<u>AU2008265504 AA</u>	20081224	AU20080265504	20080619
<u>AU2008265504 BB</u>	20120913	AU20080265504	20080619
<u>CA2694031 AA</u>	20081224	CA20082694031	20080619
<u>CA2694031 C</u>	20151222	CA20082694031	20080619
<u>CN101808547 A</u>	20100818	CN200880104000	20080619
<u>CN101808547 B</u>	20121114	CN200880104000	20080619
<u>CN102860649 A</u>	20130109	CN201210229146	20080619
<u>CN102860649 B</u>	20140806	CN201210229146	20080619
<u>CN103924850 A</u>	20140716	CN201410073641	20080619
<u>CN103924850 B</u>	20170412	CN201410073641	20080619
<u>EP2162033 A1</u>	20100317	EP20080756965	20080619
<u>EP2162033 A4</u>	20150218	EP20080756965	20080619
<u>HK1147407 A1</u>	20130712	HK20110101558	20110217
<u>HK1180196 A1</u>	20150724	HK20130107667	20130702
<u>HK1200197 A1</u>	20150731	HK20150100519	20150116
<u>IN00104MN2010 A</u>	20100716	IN2010MN00104	20100118
<u>MY150417 A</u>	20140115	MY20090005433	20080619
<u>NZ582672 A</u>	20120727	NZ20080582672	20080619
<u>SG182217 A1</u>	20120730	SG20120045696	20080619
<u>TW200917991 A</u>	20090501	TW20080122850	20080619
<u>TWI486137 B</u>	20150601	TW20080122850	20080619
<u>US2010200155 AA</u>	20100812	US20080665581	20080619
<u>US2013133165 AA</u>	20130530	US20130750448	20130125
<u>US8388025 BB</u>	20130305	US20080665581	20080619
<u>US9157257 BB</u>	20151013	US20130750448	20130125
<u>WO08154686 A1</u>	20081224	WO2008AU00885	20080619
<u>ZA200909220 A</u>	20110525	ZA20090009220	20091223

Probable Assignee: SECUROSEAL HOLDINGS LLC**Assignee(s):^(std):** MROCKI DION ; SECUROSEAL PTY LTD ; TALINTYRE BEN ; WIEBENGA ROD ; WIEBENGA ROD ANTHONY ; SECUROSEAL PTY LTD**Assignee(s):** NEFFTEKX HOLDING V BV ; SECUROSEAL HOLDINGS LLC ; SECUROSEAL NETHERLANDS BV**Inventor(s):^(std):** BEN TALINTYRE ; DION MROCKI ; MROCKI DION ; ROD WIEBENGA ; TALINTYRE BEN ; WIEBENGA ROD ; WIEBENGA ROD ANTHONY**Inventor(s):** ROD ANTHONY WIEBENGA**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; BORDEN LADNER GERVAIS LLP; CABINET PLASSERAUD; AMICA LAW LLC; WESTMAN CHAMPLIN AND KELLY PA; DAVID D; WESTMAN CHAMPLIN AND KELLY P A; WESTMAN CHAMPLIN AND KOEHLER PA**Designated states:**

AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH
GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC
LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE
NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY
SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A44B11/00 A45C A45C13/00 A45C13/18 A45C13/20 A45C13/30 A45C13/42 B29C51/16
B32B3/04 B32B3/10 B32B3/30 B32B33/00 B32B7/14 B42D15/00 B65D65/28 C09J7/02
E05B73/00 G09C3/00 G09F G09F3/00 G09F3/02 G09F3/03 G09F3/08 G09F3/14
G09F3/20 (Advanced/Invention);
B65D33/34 (Advanced/Non-invention);
A44B11/00 A45C13/00 A45C13/30 B29C51/00 B32B3/04 B32B3/10 B32B3/30 B32B33/00
B32B7/14 B65D65/22 C09J7/02 G09F3/03 (Core/Invention);
A45C E05B G09F (Subclass/Invention)

International class
(IPC 1-7): A45C13/00 A45C13/18 A45C13/20

CPC: E05B73/0029 A45C13/20 A45C13/30 A45C13/42 G09F3/0292 G09F3/0335 G09F3/037
Y10T24/45225 Y10T24/50 Y10T29/49826 Y10T156/1028 Y10T428/1476 Y10T428/15
Y10T428/24231 Y10T428/24314 Y10T428/24331 Y10T428/24612 Y10T428/24826
Y10T428/28 Y10T428/2848

European class: A45C13/20 G09F3/02D2 G09F3/03A4B G09F3/03A8

US class: 1/1 156/212 24/591.1 24/591.100S 24/704.1 283/70 283/80 29/428 40/6 40/663 40/664
40/665 428/126 428/126S 428/136 428/136S 428/138 428/138S 428/172 428/172S
428/198 428/198S 428/343 428/343S 428/354 428/354S 428/41.8 428/41.800S 428/43
428/43S

[Classification Explorer](#)

Cited documents: WO9701495 A1, WO9312513 A1, WO8802903 A1, WO07041798 A1, WO06123952 A1,
WO06096908 A1, WO06086759 A2, WO02070368 A2, US902965 A, US8373566 BB,
US7861835 BB, US675318 A, US6695364 BB, US6694655 BB, US6430974 BA,
US6372341 BA, US6364365 BA, US6304183 BA, US6267505 BA, US6196716 BA,
US6189249 BA, US6050622 A, US6003208 A, US5915629 A, US5890345 A, US5882320
A, US5881435 A, US5683774 A, US5560657 A, US5551729 A, US5510768 A,
US5451282 A, US5399021 A, US5318817 A, US5224244 A, US4965115 A, US4501049
A, US4393548 A, US4379538 A, US4081882 A, US4065343 A, US343849 A, US3257694
A, US3231992 A, US2009194210 AA, US2009031594 AA, US2008257673 AA,
US2007221461 AA, US2006225332 AA, US2005204515 AA, US2005179548 AA,
US2004206431 AA, US2004164564 AA, US2004101664 AA, US2003168868 AA,
US2002038744 AA, US1617556 A, US1551914 A, US1419592 A, US1353814 A,
US1093096 A, RU2225644 C2, RU1795627 C, NZ514919 A, GB2415678 A1, GB2403207
A1, GB2388812 A1, GB2150108 A1, EP1347429 A1, EP1037191 B1, EP1037191 A2,
EP1028065 A1, EP1026095 A2, DE3340692 A1, CN2861057, CN2674923, CA2015183
AA, AU2005100766 AD,

Forward Citations: WO14008060, USD747112, US9607462, US2014270467, NL1036135, ITNA20110027,

Abstract:

Source: US2010200155A A strip for tamper evidencing has a first layer and one or more reinforcing layers. An adhesive is provided on a first portion of the strip to selectively adhere the first portion of the strip onto the first layer of a second portion of the strip, wherein the first layer is such that removal or attempted removal of the first portion of the strip from the second portion of the strip will be evidenced by the first layer. The reinforcing material may be arranged such that portions of it are bonded to each other at a plurality of locations spaced along the length of the strip. A security system may include a tamper evidencing device and a receipt portion having corresponding unique identifiers, wherein the receipt portion includes a zip tab securing portion for securing zip tabs or luggage locking points and the evidencing device includes a trackable identifier.

19) Family number: 20286940 (US5819965A)

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Title: TAMPER EVIDENT RING FOR A CONTAINER CLOSURE**Priority:** GB19920023779 19921113 GB19920026320 19921217 US19970915541 19970813
US19950436338 19950731 WO1993GB02341 19931115

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199454309 A1</u>	19940608	AU19940054309	19931115
	<u>AU683857 B2</u>	19971127	AU19940054309	19931115
	<u>CA2148370 AA</u>	19950501	CA19932148370	19931115
	<u>CA2148370 C</u>	20050510	CA19932148370	19931115
	<u>DE69309951 D1</u>	19970522	DE19936009951	19931115
	<u>DE69309951 T2</u>	19970731	DE19936009951T	19931115
	<u>EP0667827 A1</u>	19950823	EP19930924764	19931115
	<u>EP0667827 B1</u>	19970416	EP19930924764	19931115
	<u>ES2103502 T3</u>	19970916	ES19930924764T	19931115
	GB9223779 A0	19930106	GB19920023779	19921113
	GB9226320 A0	19930210	GB19920026320	19921217
	<u>JP3552720 B2</u>	20040811	JP19940511869T	19931115
	<u>JP8503189 T2</u>	19960409	JP19940511869T	19931115
	<u>RU2105706 C1</u>	19980227	RU19950113173	19950512
	<u>RU95113173 A</u>	19970320	RU19950113173	19931115
	<u>RU95113173 A1</u>	19970320	RU19950113173	19950512
	<u>US5819965 A</u>	19981013	US19970915541	19970813
	<u>WO9411267 A2</u>	19940526	WO1993GB02341	19931115
	<u>WO9411267 A3</u>	19940929	WO1993GB02341	19931115

Probable Assignee: BEESON AND SONS LTD**Assignee(s):^(std):** BISON EHND SANZ LIMITED ; BISON EHND SANZ LTD ; KING ROGER MILNER ; KING WITNEY MILNER ; BEESON AND SONS LTD**Assignee(s):** BEESON AND SONS LTD RICKMANSWORTH HERTFORDSHIRE GB ; BEESON AND SONS LIMITED**Inventor(s):^(std):** WITNEY MILNER KING ; ROGER MILNER KING ; KING WITNEY MILNER ; KING ROGER MILNER ; UITNI MIL NER KING ; RODZHER MIL NER KING**Inventor(s):** UITNI MIL'NER KING[GB] ; RODZHER MIL'NER KING[GB] ; KING ROGER MILNER LATIMER BUCKS HP5 1UL GB ; KING WITNEY MILNER LATIMER BUCKS HP5 1UL GB**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; GOWLING LAFLEUR HENDERSON LLP**Designated states:** AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CZ DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR KZ LI LK LU LV MC MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SK SN TD TG UA US UZ VN**International class** B65D41/34 (Advanced/Invention);
(IPC 8-9): B65D41/34 (Core/Invention)**International class** B65D41/34 B65D55/06
(IPC 1-7):**CPC:** B65D41/3409 B65D41/3428**European class:** B65D41/34A1 B65D41/34C1**US class:** 215/252

Cited documents: WO9411267 A2, WO9301098 A2, WO9101924 A1, US5676268 A, US5667088 A, US5638969 A, US5611443 A, US5590799 A, US5588545 A, US5533633 A, US5454476 A, US5411157 A, US5356020 A, US5346082 A, US5219084 A, US5213225 A, US5103991 A, US4828127 A, US4770308 A, US4756438 A, US4746026 A, US4731512 A, US4658977 A, US4592476 A, US4562931 A, US4527701 A, US4493427 A, US4469235 A, US4387822 A, US4335824 A, US4289248 A, US4157144 A, US4147268 A, US3944102 A, US3924769 A, US3737064 A, US3347403 A, GB2267484 A1, GB2267082 A1, GB2267076 A1, GB2264108 A1, GB2262280 A1, GB2261656 A1, GB2260534 A1, GB2223748 A1, GB2203729 A1, GB2134873 A1, GB1438885 A, GB1438648 A, FR724431 A, FR2572369 A1, FR2564803 A1, FR2558443 A1, FR2439140 A1, FR2411770 A1, FR2036272 A5, EP0330964 A2, EP0154611 A2, EP0146237 A1, EP0117948 A1, DE3605963 A1, AU5731686 A1, AU5477086 A1, AU2445284 A1,

Forward Citations: WO9919228, WO9735773, WO9735773, WO9733801, WO15065481, WO12040008, WO11070326, WO10086609, WO05049443, WO04022443, WO03066461, USD630093, USD525523, USD525125, USD449991, US9611079, US9290306, US9242768, US9102448, US8544666, US8522991, US8490804, US8453856, US8413830, US7830263, US7331491, US6931821, US6325227, US6227391, US6015054, US5836465, US5819965, US5667088, US5533633, US2014263475, US2011210122, US2011024420, US2010320168, US2010264145, US2010170898, US2009173007, US2008237236, US2008105644, US2007090110, US2006124646, US2004069738, TWI529103, TWI331118, KR101176225, JP5075407, JP2014031202, JP2011519330, JP2011073746, JP2008162593, JP2003026203, EP2230188, EP1694576, EP1529005, EP0816244, DE102012005039, CN103097254, CN103097254, AU681313,

Abstract:

Source: US5819965A A container closure assembly including a container neck having a first screw thread, a radially projecting bead located below the first screw thread, and one or more ratchet projections located below the radially projecting bead. The container closure further includes a closure having a skirt portion with a second screw thread complementary to the first screw thread for securing the closure on the container neck. A tamper evident ring is joined to the skirt portion by severable connections and includes a generally annular collar for the neck, an opening or recess formed in the collar, wherein a portion of an edge of the opening or recess is attached to a tab. The tab is inclined radially inwardly and obliquely relative to a central axis of the ring and flexes relative to the collar in a radially outward direction. The ratchet projections allow rotation of the tamper evident ring in a screwing direction on the neck, but block rotation of the tamper evident ring in an unscrewing direction by abutment with the tab, whereby, when the closure is initially screwed onto the container neck, the tab flexes outwardly to allow the tamper evident ring to pass over the bead, and then rotates past the ratchet projections as the tamper evident ring is rotated in the screwing down direction. When the closure is unscrewed from the container neck for the first time, the tab abuts against an underside of the bead and also against the ratchet projections to exert axial and circumferential breaking forces on the tamper evident ring.

0) US5307946A – NECK FINISH FOR A CONTAINER AND A MATCHING REGI...

20) Family number: 24043548 (US5307946A)

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Title: Neck finish for a container and a matching registering multiple thread pattern in a flexible cap for engagement on neck said finish

Priority: CA19942118622 19940309 CA19942118622 19940309 GB19940005761 19940323
GB19960022923 19940323 US19930113064 19930830 US19930036277 19930324
US19930150356 19931104 WO1994US09733 19940830 US19960654553 19960522
US19960621207 19960322

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199476051 A1</u>	19950322	AU19940076051	19940830
	<u>CA2118622 AA</u>	19940925	CA19942118622	19940309
	<u>CA2118622 C</u>	20040817	CA19942118622	19940309
	<u>EP0715591 A1</u>	19960612	EP19940926041	19940830
	<u>EP0715591 A4</u>	19961002	EP19940926041	19940830
	<u>GB2276370 A1</u>	19940928	GB19940005761	19940323
	<u>GB2276370 B2</u>	19971105	GB19940005761	19940323
	<u>GB2304337 A1</u>	19970319	GB19960022923	19940323
	<u>GB2304337 B2</u>	19971029	GB19960022923	19940323
	<u>GB2309689 A1</u>	19970806	GB19970007813	19940323
	<u>GB2309689 B2</u>	19980107	GB19970007813	19940323
	GB9405761 A0	19940511	GB19940005761	19940323
	GB9622923 A0	19970108	GB19960022923	19940323
	GB9707813 A0	19970604	GB19970007813	19940323
	<u>US5307946 A</u>	19940503	US19930036277	19930324
	<u>US5480045 A</u>	19960102	US19930113064	19930830
	<u>US5560504 A</u>	19961001	US19930150356	19931104
	<u>US5690243 A</u>	19971125	US19960654553	19960522
	<u>USRE37243 E</u>	20010626	US19960621207	19960322
	<u>WO9506597 A1</u>	19950309	WO1994US09733	19940830

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): NORTHERN ENG AND PLASTICS ; NORTHERN ENGINEERING AND PLASTIC ;
PORTOLA PACKAGING INC ; ALH SYST LTD

Assignee(s): ALH SYSTEMS LIMITED ; HELLER FINANCIAL INC ; HELLER FINANCIAL ; GENERAL
ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC
CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; NORTHERN ENGINEERING
AND PLASTICS CORP ; WAYZATA INVESTMENT PARTNERS LLC ; MOLINARO LUCA
; HELLER FINANCIAL INC A DELAWARE BUSINESS TRUST ; PORTOLA PACKAGING
INC A CORP OF DELAWARE ; WELLS FARGO FOOTHILL LLC AS AGENT ; WAYZATA
INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL
LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ;
WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED
CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR
SUBORDINATED CREDITORS

Inventor(s):^(std): CRISCI HARRY E ; CRISCI ROBERT E ; MOLINARO LUCA

Inventor(s): ROBERT E CRISCI ; HARRY E CRISCI ; LUCA MOLINARO

Agent(s): RIDOUT AND MAYBEE LLP

Designated states: AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK ES FI FR GA
GB GE GN GR HU IE IT JP KE KG KP KR KZ LK LT LU LV MC MD MG ML MN MR MW
NE NL NO NZ PL PT RO RU SD SE SI SK SN TD TG TJ TT UA UZ VN

International class B65D1/02 B65D41/04 B65D41/34 B65D41/38 B65D41/47 (Advanced/Invention);
(IPC 8-9): B65D1/02 B65D41/04 B65D41/32 B65D41/34 (Core/Invention)

International class A65D39/00 B65D39/00 B65D41/00 B65D41/34 B65D41/38 B65D41/48
 (IPC 1-7).

CPC: B65D1/0246 B65D41/04 B65D41/3404 B65D41/3409 B65D41/47 B65D2101/0038

European class: B65D1/02D1B B65D41/04 B65D41/34A B65D41/34A1 B65D41/47 L65D101/00A3C

US class: 215/224 215/256 215/288 215/296 215/318 215/329 215/330 215/331 220/288 220/296

[Classification Explorer](#)

Cited documents: US5307945 A, US5307746 A, US5213224 A, US5060813 A, US5004114 A, US4852774 A, US4834252 A, US4666053 A, US4660053 A, US4630761 A, US4625875 A, US4589561 A, US4561553 A, US4534480 A, US4497765 A, US4476987 A, US4418828 A, US4402415 A, US4389561 A, US4354609 A, US4298129 A, US4131212 A, US3980195 A, US3885696 A, US3650428 A, US3504818 A, US2162712 A, US2162711 A, US1443682 A, GB2290782 A1, GB2269163 A1, GB2268169 A1, GB2191178 A1, GB2114553 A1, EP0413466 A1, EP0281284 A2, EP0118267 A2,

Forward Citations: WO9923002, WO9633921, WO09136836, WO02098755, WO02076839, WO02076839, WO0155000, USD732391, USD531505, USD530205, USD529804, USD526565, USD486225, USD486224, US9802737, US9181001, US8353413, US8231025, US8056744, US8028848, US7882977, US7748553, US7735663, US7413097, US7228979, US7198170, US6988642, US6981602, US6931821, US6793082, US6766916, US6754965, US6752284, US6709624, US6695160, US6648157, US6637611, US6557714, US6530493, US6484896, US6464096, US6439412, US6415935, US6343705, US6327770, US6253937, US6152315, US6112923, US6105802, US6073809, US6059134, US6056136, US6047840, US6039199, US6039195, US6003701, US5975321, US5899348, US5862953, US5860545, US5845798, US5829613, US5810184, US5775528, US5711442, US5642825, US5593055, US5553727, US5462186, US2016318668, US2013299445, US2011186534, US2011174761, US2011155758, US2011100947, US2009283492, US2009194537, US2009057261, US2008314860, US2008223813, US2008169262, US2008164235, US2007181578, US2007158294, US2007034590, US2006060555, US2005269282, US2005263476, US2005252878, US2005145629, US2005092750, US2005029219, US2004251258, US2004251228, US2004122356, US2004079765, US2004055991, US2002037338, GB2399559, GB2399559, FR2811968, EP0824466,

Abstract:

Source: US5307946A A blow molded container has a cylindrical neck portion with novel seven circumferentially spaced continuous spiral thread configurations on its exterior to immediately receive and engage an improved tamper indicating flexible cap comprising a top with an annular depending wall on its peripheral edge and seven circumferentially spaced continuous spiral thread configurations on the inner surface surface of the annular depending wall. The novel constructions enable the tamper indicating flexible cap to immediately engage the lead-in ends of the seven circumferentially spaced thread patterns on the exterior of the neck of the container without the heretofore necessary rotation of the prior art caps in order to engage the single spiral thread configuration on the neck of the container.

21) Family number: 33602755 (US2008105644A)

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Title: TAMPER-EVIDENT CLOSURE**Priority:** EP20050270012 20050429 EP20060726771 20060418 WO2006GB01372 20060418**Family:**

Publication number	Publication date	Application number	Application date
AT525305 E	20111015	AT20060726771T	20060418
BRPI0611178 A2	20100817	BR2006PI11178	20060418
CN100554094 C	20091028	CN200680014684	20060418
CN101166675 A	20080423	CN200680014684	20060418
DE602006024539 D1	20111117	DE200660024539T	20060418
EP1874649 A1	20080109	EP20060726771	20060418
EP1874649 B1	20110921	EP20060726771	20060418
HK1116749 A3	20090102	HK20080107302	20080702
IN03985KN2007 A	20080509	IN2007KN03985	20071016
KR20070122515 A	20071231	KR20077024896	20071029
MX2007013259 A1	20080121	MX20070013259	20060418
RU2007144191 A	20090610	RU20070144191	20060418
RU2388673 C2	20100510	RU20070144191	20060418
US2008105644 AA	20080508	US20060912366	20060418
WO06117505 A1	20061109	WO2006GB01372	20060418

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):^(std):** DOUGLAS MARCUS H L ; DOUGLAS MARCUS HAMILTON LLOYD ; NOTT PETER ; OBRIST CLOSURES SWITZERLAND ; OBRIST KLOUZHERZ SVITZERLAND G**Assignee(s):** OBRIST CLOSURES SWITZERLAND GM ; OBRIST CLOSURES SWITZERLAND GMBH ; OBRIST KLOUZHERZ SVITZERLAND GMBKH**Inventor(s):^(std):** DOUGLAS MARCUS ; DOUGLAS MARCUS H L ; DOUGLAS MARCUS HAMILTON LLOYD ; DUGLAS MARKUS KHEHMILTON LLOJD ; NOTT PETER ; NOTT PITER ; PETER NOTT**Inventor(s):** MARCUS HAMILTON LLOYD DOUGLAS ; DOUGLAS MARCUS HAMILTON LLOYD STIRLING ; DOUGLAS MARCUS HL**Agent(s):** GREENWOOD MATTHEW DAVID ET AL; GREENWOOD MATTHEW DAVID; LACKENBACH SIEGEL LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
(IPC 8-9): [B65D55/02](#) (Advanced/Invention);
[B65D55/02](#) (Advanced/Non-invention);
[B65D55/02](#) (Core/Invention)**International class**
(IPC 1-7): [B65D55/02](#)**CPC:** [B65D55/022](#) [B65D55/026](#) [B65D2101/0084](#)**European class:** [B65D55/02D](#) [B65D55/02G](#) [L65D101/00A6](#)**US class:** [215/316](#)[Classification Explorer](#)**Cited documents:** US770621 A, US77062 A, US7204383 BB, US7125828 BB, US7121419 BB, US6880729 BB, US6866164 BB, US6727215 BB, US6688501 BB, US6685046 BB, US6683038 BB,

US6484879 BB, US6357615 BA, US6269986 BA, US6095375 A, US6036036 A, US5918752 A, US5915576 A, US5836466 A, US5819965 A, US5683016 A, US5603422 A, US5588545 A, US5551582 A, US5445824 A, US5427260 A, US5332113 A, US5004126 A, US4942970 A, US4941592 A, US4838441 A, US4790442 A, US4774480 A, US4697719 A, US4637519 A, US4569464 A, US4531649 A, US4345690 A, US4310105 A, US43052 A, US4303171 A, US4091949 A, US3971488 A, US3923184 A, US3892351 A, US3871545 A, US3820683 A, US3817416 A, US3810556 A, US3603470 A, US3455479 A, US3425578 A, US3412890 A, US3348718 A, US2858054 A, US277613 A, US26420 A, US205607 A, US2007090110 AA, US2004129729 AA, US1798151 A, US1628017 A, US143505 A, US133475 A, US125249 A, US124646 A, US11573 A, FR782818 A,

Forward Citations: WO17093218, WO17081045, WO17037271, WO14016391, WO13113435, WO13079545, WO13068750, WO11157978, WO09141581, WO09128095, WO09010722, WO09010717, USD630093, US9242768, US9102448, US9038841, US9033169, US9010554, US8522991, US8499949, US8490804, US8453856, US8413830, US7830263, US2007158958, TWI345541, RU2636376, RU2612853, KR101512526, KR101430287, ITMI20121324, GB2450940, GB2450940, GB2450939, GB2450939, EA018883, CN104203767, CN103958361, CN103906689, CN103906689, CN102774562,

Abstract:

Source: US2008105644A A tamper-evident closure for a container, the closure including a first portion including inner and outer parts, and a second portion, wherein the outer part is movable relative to the inner part from a first position in which the outer part is immediately adjacent the second portion to a second position in which there is an unobstructed gap therebetween, and wherein the inner and outer parts are adapted to become irreversibly locked in the second position so that the outer part cannot be moved back to the first position to close the gap, wherein means are provided to prevent the inner part from moving relative to the second portion until the outer part has reached the second position.

22) Family number: 8812003 (US6015054A)

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Title: Container closure assembly with profiled screw threads
Priority: GB19950025146 19951208 GB19950025876 19951218 WO1996GB03028 19961209
Family:

Publication number	Publication date	Application number	Application date
AT221494 E	20020815	AT19960941746T	19961209
AU199711027 A1	19970703	AU19970011027	19961209
AU718782 B2	20000420	AU19970011027	19961209
DE69622745 D1	20020905	DE19966022745	19961209
DE69622745 T2	20021128	DE19966022745T	19961209
DK0868358 T3	20021202	DK19960941746T	19961209
EP0868358 A2	19981007	EP19960941746	19961209
EP0868358 B1	20020731	EP19960941746	19961209
ES2180817 T3	20030216	ES19960941746T	19961209
GB2307903 A1	19970611	GB19950025146	19951208
GB2308353 A1	19970625	GB19950025876	19951218
GB2308353 B2	20000126	GB19950025876	19951218
GB9525146 A0	19960207	GB19950025146	19951208
GB9525876 A0	19960221	GB19950025876	19951218
HK1012856 A1	20021108	HK19980114170	19981221
PT868358 T	20021231	PT19960941746T	19961209
US6015054 A	20000118	US19980077716	19981124
WO9721602 A2	19970619	WO1996GB03028	19961209
WO9721602 A3	19970912	WO1996GB03028	19961209

Probable Assignee: BEESON AND SONS LTD
Assignee(s):^(std): BEESON AND SONS LTD ; KING ROGER MILNER ; KING WITNEY MILNER
Assignee(s): BEESON AND SONS LTD RICKMANSWORTH ; BEESON AND SONS LIMITED
Inventor(s):^(std): KING MILNER ; KING ROGER MILNER ; KING WITNEY MILNER
Inventor(s): ROGER MILNER KING ; WITNEY MILNER KING
Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD
Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CN CU CZ DE DK EE ES FI FR GB GE GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN
International class
 (IPC 8-9): [B65D41/04](#) [B65D41/34](#) [B65D51/16](#) [B65D51/28](#) (Advanced/Invention);
[B65D41/04](#) [B65D41/34](#) [B65D51/16](#) [B65D51/24](#) (Core/Invention)
International class
 (IPC 1-7): [B65D](#) [B65D41/04](#) [B65D41/36](#) [B65D51/28](#)
CPC: [B65D41/0471](#) [B65D41/3409](#) [B65D41/3428](#) [B65D51/1688](#) [B65D51/28](#)
European class: [B65D41/04E](#) [B65D41/34A1](#) [B65D41/34C1](#) [B65D51/16E3](#) [B65D51/28](#)
US class: [215/252](#) [215/307](#) [215/330](#) [215/44](#) [220/296](#)
[Classification Explorer](#)
Cited documents: WO9505322 A1, WO9411267 A2, WO9301098 A2, WO9202434 A1, WO9118799 A2, WO9107331 A1, USD392187, USD381907, USD364808, USD329980, USD327644, US5836465 A, US5819965 A, US5794806 A, US5788101 A, US5769254 A, US5743419 A, US5676268 A, US5667088 A, US5638969 A, US5611443 A, US5590799 A,

US5588545 A, US5533633 A, US5454476 A, US5443175 A, US5411157 A, US5320233 A, US5219084 A, US5213225 A, US5135124 A, US4936474 A, US4799597 A, US4669624 A, US4636328 A, US4553678 A, US4456137 A, US4444327 A, US4392055 A, US4387817 A, US4373641 A, US4275817 A, US4084717 A, US3794200 A, US2623657 A, US2600703 A, GB261370 A, GB2288390 A1, GB2275048 A1, GB2267693 A1, GB2267484 A1, GB2267082 A1, GB2267076 A1, GB2264108 A1, GB2262280 A1, GB2261656 A1, GB2260534 A1, GB2257693 A1, EP0227203 A2,

Forward Citations: WO9919228, WO9846493, WO15173661, WO13006772, WO12104134, WO11070326, WO11027486, WO10086609, WO04054889, WO04005155, WO03045806, WO03045805, WO03011703, WO0172597, USD553987, USD550084, USD531505, USD530205, USD529804, USD525523, USD525125, USD449991, US9254947, US8845256, US8348576, US8336728, US8302792, US8141793, US7959034, US7959022, US7703617, US7510094, US7413097, US7246713, US7198170, US7182213, US6981602, US6848590, US6766916, US6733917, US6626314, US6484896, US6227391, US2013248530, US2011056948, US2011011947, US2010206877, US2009261101, US2009045224, US2008230505, US2007272651, US2007039914, US2006213912, US2006113273, US2006060555, US2005145629, US2005082249, US2005055986, US2003121877, JP5806552, JP2012250763, GB2390361, GB2369114, GB2369114, GB2333098, GB2333098, FR2828176, EP2702943, EP2484600, EP1302406, EP1138609, EP1021352, DE102009044896, AU769799, AU2012382165, AU2002343032,

Abstract:

Source: US6015054A PCT No. PCT/GB96/03028 Sec. 371 Date Dec. 24, 1998 Sec. 102(e) Date Dec. 24, 1998 PCT Filed Dec. 9, 1996 PCT Pub. No. WO97/21602 PCT Pub. Date Jun. 19, 1997The invention provides container closure assemblies, especially for carbonated beverage containers, having substantially helical second thread segment (20) with a profiled lower thread surface (24). The profiled lower thread surface (24) includes a first, lower region (28) with a low pitch and a second region (30) with a steep pitch. The thread (20) may also include a step feature (32) to block unscrewing of the closure at an intermediate position where gas venting can take place, and a third region (34) of the said lower surface having a low pitch adjacent to the step. The closures are easy to apply and remove, and do not blow off unpredictably or uncontrollably under pressure.

Title: TAMPER-EVIDENT CLOSURE**Priority:** EP20080775918 20080710 GB20070013711 20070713 WO2008GB02377 20080710**Family:**

Publication number	Publication date	Application number	Application date
AT523444 E	20110915	AT20080775918T	20080710
CN101743175 A	20100616	CN200880024521	20080710
CN101743175 B	20110720	CN200880024521	20080710
DE602008009620 D1	20111201	DE200860009620T	20080710
EP2178771 A1	20100428	EP20080775918	20080710
EP2178771 B1	20110907	EP20080775918	20080710
ES2372787 T3	20120126	ES20080775918T	20080710
GB200713711 A0	20070822	GB20070013711	20070713
GB2450939 A1	20090114	GB20070013711	20070713
GB2450939 B2	20120201	GB20070013711	20070713
HK1139112 A1	20120629	HK20100104887	20100518
KR101512526 B1	20150415	KR20097026726	20080710
KR20100031107 A	20100319	KR20097026726	20080710
PL2178771 T3	20120229	PL20080775918T	20080710
TH100859 A	20100331	TH20081003618	20080711
TH42414 B	20141223	TH20081003618	20080711
TW200909308 A	20090301	TW20080126524	20080711
TWI345541 B	20110721	TW20080126524	20080711
US2011259844 AA	20111027	US20080664961	20080710
US9102448 BB	20150811	US20080664961	20080710
WO09010722 A1	20090122	WO2008GB02377	20080710

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** HARROWER JAMES ; MCPHERSON ALEXANDER DONALD MEIKLEM ; OBRIST CLOSURES SWITZERLAND ; SKELTON STEVEN ANDREW**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** SKELTON STEVEN ANDREW ; MEIKLEM MCPHERSON ALEXANDER DONALD ; MCPHERSON ALEXANDER DONALD MEI ; JAMES HARROWER ; HARROWER JAMES ; ANDREW SKELTON STEVEN ; MCPHERSON ALEXANDER ; SKELTON STEVEN ; MCPHERSON ALEXANDER DONALD MEIKLEM**Inventor(s):** STEVEN ANDREW SKELTON ; ALEXANDER DONALD MEIKLEM MCPHERSON**Agent(s):** GREENWOOD MATTHEW DAVID; ANDREW F; LACKENBACH SIEGEL LLP; GREENWOOD MATTHEW ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B65D41/34](#) [B65D41/38](#) [B65D47/02](#) [B65D49/00](#) [B65D49/02](#) [B65D49/04](#) [B65D51/20](#) [B65D51/24](#) [B65D55/02](#) (Advanced/Invention);
[B65D41/34](#) [B65D47/00](#) [B65D49/00](#) [B65D49/02](#) [B65D51/24](#) [B65D55/02](#) (Core/Invention);
[B65D](#) (Subclass/Invention)**International class**
(IPC 1-7): [B65D55/02](#)

CPC: B65D41/34 B65D41/3404 B65D41/3409 B65D49/02 B65D55/022 B65D49/04 B65D55/026

European class: B65D41/34 B65D41/34A B65D41/34A1 B65D49/00 B65D49/02 B65D49/04 B65D55/02 B65D55/02D B65D55/02G

US class: 1/1 215/201

[Classification Explorer](#)

Cited documents: WO9957031 A1, WO9407470 A1, WO09056829 A1, WO07125292 A2, WO06117505 A1, WO06117505 A1, WO06020059 A2, WO06008285, WO06003168, WO06003167 A1, WO06000532 A1, WO05049443 A1, WO05024745 A2, WO04011347 A2, WO03016165 A1, WO03016162 A1, WO0244047 A1, WO02096771 A1, WO02085730, WO0183668 A1, WO0136290 A1, WO0066451 A1, WO0026878 A1, US7204383 BB, US7125828 BB, US7121419 BB, US6908013 BB, US6880729 BB, US6866164 BB, US6727215 BB, US6688501 BB, US6685046 BB, US6683038 BB, US6484879 BB, US6269986 BA, US6095375 A, US6036036 A, US5819965 A, US5738231 A, US5683016 A, US5603422 A, US5588545 A, US5445824 A, US5427260 A, US5332113 A, US5004126 A, US4942970 A, US4941592 A, US4838441 A, US4790442 A, US4744480 A, US4697719 A, US4637519 A, US4569464 A, US4531649 A, US4310105 A, US4303171 A, US4091949 A, US3892351 A, US3871545 A, US3820683 A, US3810556 A, US3603470 A, US3455479 A, US3425578 A, US3412890 A, US3348718 A, US2858054 A, US2010308054 AA, US2010170898 AA, US2009289027 AA, US2009173007 AA, US2008277613 AA, US2008190880 AA, US2006124646 AA, US2006077062 AA, US2006043052 AA, US2006011573 AA, US2005205607 AA, US2005133475 AA, US2005115915 AA, US2004143505 AA, US2004026420 AA, US2002125249 AA, US1798151 A, JP2003160162 A2, JP2000229651, JP10338251 A2, GB2432153, GB2430667 A1, GB2415426, GB2399339 A1, GB2399339 A, GB2375516 A1, GB2356842 A1, GB2355269 A1, GB2311283 A1, GB2264110 B2, GB2222821 A1, GB2172803 A1, GB2158424 A1, GB2148235 A1, GB2136782 A1, GB2123392 A1, GB1484517 A, GB1473482 A, GB1298084 A, FR2591571 A1, FR2567106 A1, FR2439139 A1, EP2005053085, EP1786698 B1, EP1694576 B1, EP1663809 B1, EP1283175 A2, EP1266839 A2, EP1161382 B1, EP1101707 A1, EP0688723 A1, EP0619243 A1, EP0593952 A1, EP042539171, EP0414462 A2, EP0337568 A2, EP0306670 A2, EP0236136 A2, EP0179498 A1, EP0132792 A1, EP0127943 A1, DE861666 A, DE8535205 U, DE809896 A, DE3605963 A1, DE20019797 U1,

Forward Citations: WO17081045, WO15001084, WO14170287, WO14170287, WO14016391, WO13113435, WO13088399, WO13079545, WO13068750, WO13050390, US9242768, US9038841, US9033169, US9010554, US2015298876, RU2636376, RU2622839, RU2612853, JP2015501767, ITMI201112297, ITMI20111799, EP2925626, EP2821350, CN106586223, CN104203767, CN103906689, CN103906689, CN103842264, CN103842264, CN103057823, CN102774562, AU2012354089,

Abstract:

Source: US2011259844A A tamper-evident closure for a container is provided. The closure comprises a first portion including inner and outer parts, and a second portion. The outer part is movable relative to the inner part from a first position in which at least part of the first and second portions are adjacent each other, to a second position in which there is a gap therebetween. The first portion comprises locking means for irreversibly locking the closure in the second position upon first opening so that the gap cannot be closed. The outer part includes a top plate and at least part of the locking means is carried on or by the plate.

24) Family number: 50792790 (US2012067892A)

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Title: TAMPER-EVIDENT CONTAINER SYSTEM**Priority:** US20100886415 20100920 WO2011US51512 20110914**Family:**

Publication number	Publication date	Application number	Application date
BR112013007476 A2	20160719	BR20131107476	20110914
CA2811784 AA	20130319	CA20112811784	20110914
CN103097254 A	20130508	CN201180045242	20110914
CN103097254 B	20160330	CN201180045242	20110914
CO6710935 A2	20130715	CO20130101168	20130419
ECSP13012570 A	20130628	EC2013SP12570	20130419
EP2619107 A1	20130731	EP20110758355	20110914
HK1185047 A1	20170630	HK20130112433	20131105
IN02070DN2013 A	20141031	IN2013DN02070	20130307
MX2013002696 A1	20130522	MX20130002696	20110914
MY158471 A	20161014	MY20130000718	20110914
PE13462013 A1	20131109	PE20130000391	20110914
RU2013113315 A	20141027	RU20130113315	20110914
SG188419 A1	20130430	SG20130016514	20110914
TH129068 A	20131114	TH20131001349	20110914
TW201233599 A	20120816	TW20110133614	20110919
TWI529103 B	20160411	TW20110133614	20110919
US2012067892 AA	20120322	US20100886415	20100920
US8544666 BB	20131001	US20100886415	20100920
WO12040008 A1	20120329	WO2011US51512	20110914

Probable Assignee: MEAD JOHNSON NUTRITION CO**Assignee(s):^(std):** HORTON THOMAS C ; MEAD JOHNSON NUTRITION CO ; MJN U S HOLDINGS LLC ; MJN US HOLDINGS LLC ; VELMER MARC S**Assignee(s):** MEAD JOHNSON NUTRITION COMPANY**Inventor(s):^(std):** HORTON THOMAS C ; VELMER MARC S**Inventor(s):** MARC S VELMER ; THOMAS C HORTON**Agent(s):** GOWLING LAFLEUR HENDERSON LLP; GERMAN CASTILLO GRAU; JANSEN CORNELIS MARINUS; JAMES R; WADDEY AND PATTERSON PC; MATTHEW C; CARTIGLIA JAMES R**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B65D17/32](#) [B65D17/40](#) [B65D41/34](#) [B67B1/06](#) (Advanced/Invention);
[B65D41/34](#) (Core/Invention);
[B65D](#) (Subclass/Invention)**CPC:** [B65D41/3428](#)**European class:** [B65D41/34C1](#)**US class:** [215/252](#) [215/253](#) [215/330](#) [215/331](#) [220/265](#) [220/268](#) [220/276](#) [220/276S](#) [220/288](#) [53/490](#) [53/490S](#)[Classification Explorer](#)

Cited documents: WO9411267 A2, WO0069742 A1, USD360582 S1, US7891510 BB, US7451885 BB, US6766916 BB, US6436464 BA, US6382444 BA, US6296130 BA, US6276543 BA, US6253939 BA, US6227391 BA, US6077558 A, US6056136 A, US6047840 A, US6003701 A, US5915579 A, US5819965 A, US5803287 A, US5660842 A, US5609262 A, US5550106 A, US5545411 A, US5533633 A, US5472952 A, US5450972 A, US5346082 A, US5145078 A, US5137163 A, US5096079 A, US5058755 A, US4981230 A, US4978017 A, US4936474 A, US4572388 A, US4448318 A, US2009057261 AA, US2008314856 AA, US2008264894 AA, US2008073310 AA, US2006021959 AA, US2005252878 AA, US2005072751 AA, US2005000931 AA, US2003099753 AA, CN1307531 A,

Forward Citations: US9046122, US2010135747,

Abstract:

Source: US2012067892A A container system for storing material includes a container and a mating closure having a tamper-evident ring frangibly attached to the closure. The container includes a neck having a container thread and an annular rim for engaging the tamper-evident ring when the closure is removed from the container. In some embodiments, the neck includes one or more retaining structures for engaging the tamper-evident ring during retort sterilization processing, packaging, shipping or handling. The retaining structure in some embodiments includes one or more ramps having multiple inclined surfaces. Each inclined surface is oriented at an acute angle between about five and about forty-five degrees such that the tamper-evident ring can slip past the retaining structure when a threshold removal torque is applied. A method of sealing a container using a tamper-evident container system is also provided.

25) Family number: 52208979 (US4461390A)

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Title: Tamper-evident plastic closure**Priority:** CA19830428603 19830520 CA19840461485 19840821 US19830526488 19830825
US19820383705 19820601 US19800142429 19800421

Family:	Publication number	Publication date	Application number	Application date
	<u>AU198314967 A1</u>	19831208	AU19830014967	19830525
	<u>AU554167 B2</u>	19860807	AU19830014967	19830525
	<u>BE896917 A</u>	19831201	BE19830210904	19830601
	<u>BE896917 A1</u>	19831201	BE19830210904	19830601
	<u>CA1216548 A1</u>	19870113	CA19830428603	19830520
	<u>CA1247558 A1</u>	19881228	CA19840461485	19840821
	<u>DE3319709 A1</u>	19831201	DE19833319709	19830531
	<u>FR2527558 A1</u>	19831202	FR19830009101	19830601
	<u>FR2527558 B1</u>	19860704	FR19830009101	19830601
	<u>GB2121392 A1</u>	19831221	GB19830015022	19830601
	<u>GB2121392 B2</u>	19851016	GB19830015022	19830601
	GB8315022 A0	19830706	GB19830015022	19830601
	<u>IT1200016 A</u>	19890105	IT19830021350	19830530
	<u>IT8321350 A0</u>	19830530	IT19830021350	19830530
	<u>JP59037150 A2</u>	19840229	JP19830096857	19830531
	<u>NL8301945 A</u>	19840102	NL19830001945	19830601
	<u>NL8301945 A1</u>	19840102	NL19830001945	19830601
	<u>SE457076 B</u>	19881128	SE19830003036	19830530
	<u>SE457076 C</u>	19890323	SE19830003036	19830530
	<u>SE8303036 A</u>	19831202	SE19830003036	19830530
	<u>SE8303036 A0</u>	19830530	SE19830003036	19830530
	<u>SE8303036 L</u>	19831202	SE19830003036	19830530
	<u>US4461390 A</u>	19840724	US19820383705	19820601
	<u>US4479586 A</u>	19841030	US19830526488	19830825

Probable Assignee: GEN KAP PR CORP**Assignee(s):^(std):** GEN KAP ; GEN KAP PR CORP**Assignee(s):** GENERAL KAP CORP ; GENERAL KAP CHIMNEY ROCK ROAD BLDG 4W BOUND BROOK ; GENERAL KAP ; GENERAL KAP PR A PUERTO RICO CORP CORP ; GENERAL KAP PR PO BOX 560 HATO REY PUERTO RICO 0 ; GENERAL KAP PR CORP ; GENERAL KAP P R CORP ; GENERAL KAP P R TE HATO REY CORP ; GENERAL KAP P R TE HATO REY PUERTO RICO CORP ; CSASZAR ERNEST J**Inventor(s):^(std):** CSASZAR E J ; CSASZAR ERNEST ; CSASZAR ERNEST J ; CSASZAR ERNEST JULIUS ; CSASZR ERNEST JULIUS ; ERUNSUTO JIYURIASU KUSASUZAA**Inventor(s):** E J CSASZAR ; ERNEST JULIUS CSASZAR ; ERNEST JULIUS CSASZR**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; G RONALD BELL AND ASSOCIATES**International class**
(IPC 8-9): B65D17/28 B65D17/32 B65D41/04 B65D41/32 B65D41/34 B65D49/12 B65D55/12 (Advanced/Invention);
B65D41/34 B65D49/00 B65D55/02 (Core/Invention)**International class**
(IPC 1-7): B65D41/04 B65D41/32 B65D41/34 B65D41/38 B65D49/12 B65D55/02 B65D55/06 B65D55/08 F16J13/00**CPC:** B65D41/3442 B65D41/3452**European class:** B65D41/34D B65D41/34D1A

US class: 215/252 215/258

[Classification Explorer](#)

Cited documents: WO8103006 A1, US4417666 A, US4352436 A, US4343408 A, US4322012 A, US4322011 A, US4305516 A, US4278180 A, US4241841 A, US4165813 A, US4147268 A, US4126240 A, US3955696 A, US3944102 A, US3904062 A, US3750821 A, US3673761 A, US3463341 A, US3455478 A, US3438528 A, GB2076381 A1, GB1593072 A, GB1517898 A, GB1309057 A, FR2320870 A1, FR1581775 A, FR1536459 A, FR1347895 A, ES196899, EP0080846 A1, EP0055191 A1, EP0004500 A2, DE1955047 A1, DE1154369 B, CL26774, CL25910, CL1277, BR79597, BR175598,

Forward Citations: WO9926680, WO9926680, WO9526910, WO9011938, WO8601179, USD553987, USD550084, USD525523, USD525125, USD449991, US8596477, US6991123, US6926162, US6705479, US6527132, US6419101, US6379330, US6325227, US6325225, US6089390, US5967351, US5964363, US5950849, US5913436, US5853097, US5788100, US5755346, US5575967, US5415307, US5257705, US5131550, US5008066, US5005720, US4993571, US4967920, US4907708, US4886497, US4806301, US4732289, US4726483, US4721218, US4669623, US4667838, US4625875, US4602718, US4576298, US4567993, US4555039, US4549667, US4535904, US4534479, US4530436, US4529096, US2007187352, US2005284837, US2003116523, JP60204468, JP2001213457, GB2279940, GB2163413, FR2584050, EP1122183, DE4404070, DE4404069, AU574597,

Abstract:

Source: US4461390A Tamper-evident closures which are useful in conjunction with various bottles and containers are disclosed. The closures are intended to be used in connection with containers having threaded necks above an annular collar, and they comprise one-piece closures including a horizontal end wall, a cylindrical side wall including an internally threaded upper portion, a depending lower skirt portion which includes an inwardly projecting bead adapted to engage the annular collar on the container, and an intermediate side wall portion therebetween. The intermediate side wall portion of the closure includes an area of weakness which is designated to fracture when the closure is unthreaded from the container, thereby leaving the lower skirt portion engaged to the annular collar on the container after the end wall and internally threaded upper portion of the closure have been removed. The area of weakness includes a bridge portion which is sufficiently thin and flexible that it can collapse when the closure is being applied, whereby the faces of the intermediate side wall on either side of the bridge portion come into abutment with each other, and the bridge portions therefore do not prematurely fracture. The closure also includes stabilizers to prevent these abutting wall portions from moving relative to each other while the bridge portions have collapsed.

26) Family number: 45439084 (US2011303670A)

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Title: SECURE CLOSURE
Priority: AU20080906377 20081210 AU20090326855 20091209 WO2009AU01598 20091209
Family:

Publication number	Publication date	Application number	Application date
AU2009326855 AA	20100617	AU20090326855	20091209
CA2746068 AA	20100617	CA20092746068	20091209
EP2361197 A1	20110831	EP20090831312	20091209
EP2361197 A4	20121226	EP20090831312	20091209
IN04658DN2011 A	20120420	IN2011DN04658	20110617
JP2012511473 T2	20120524	JP20110539846T	20091209
NZ593323 A	20140228	NZ20090593323	20091209
US2011303670 AA	20111215	US20090133896	20091209
WO10065998 A1	20100617	WO2009AU01598	20091209

Probable Assignee: BAKER RAYMOND

Assignee(s):^(std) BAKER RAYMOND ; BAKER RAYMOND JOHN ; RAYMOND JOHN BAKER

Inventor(s):^(std) BAKER RAYMOND JOHN ; JOHN BAKER RAYMOND

Agent(s): GRIFFITH HACK; OYEN WIGGS GREEN AND MUTALA LLP; DELORME NICOLAS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
 (IPC 8-9): [A61J1/00 A61J1/05 A61M5/00 B65D39/04 B65D39/08 B65D41/04 B65D41/32 B65D41/34 B65D43/26 B65D45/00 B65D47/36 B65D50/00 B65D51/18 B65D51/20](#) (Advanced/Invention); [A61J1/00 A61M5/00 B65D39/00 B65D41/32 B65D47/00 B65D50/00](#) (Core/Invention)

CPC: [B65D41/3447 A61J1/1475 A61J1/18 B65D41/0471 B65D41/3409 B65D47/36 B65D51/002 B65D51/18 B65D51/20 B65D55/022 B65D2251/0015 B65D2251/0025 B65D2251/0075 B65D2251/009 A61J1/1468 A61J1/1418](#)

European class: [A61J1/14C A61J1/14P A61J1/18 B65D41/04E B65D41/34A1 B65D41/34D1 B65D47/36 B65D51/00B B65D51/18 B65D51/20 B65D55/02D K61J1/14C2 K61J1/14M L65D251/00Y2D L65D251/00Y2J L65D251/00Y6B L65D251/00Y6K](#)

US class: [220/254.9 220/254.900S 220/257.1 220/257.100P 220/258.3 220/258.300S 220/285 220/285S 220/328 220/328S](#)

[Classification Explorer](#)

Cited documents: US6050435 A, US6024235 A, US5992659 A, US5913434 A, US5823373 A, US5257724 A, US4821898 A, US4747498 A, US4533058 A, US4281778 A, US3871545 A, US2906423 A, JP56106759 A2, GB2068911 A1, EP1105319 A1,

Forward Citations: WO15073891, WO14118628, WO13118158, US9694945, US9517922, US9095667, US8893907, US2016137474, US2015129610, US2014076896, US2013237911, ITTO20120110, CN104520205, CN104443724,

Abstract:

Source: US2011303670A A cap for closing a container comprising an openable access port located at or towards one end of the cap through which contents of the container can be dispensed when the access port is in an opened condition, an internal wall surface for engaging with one or more parts of an external surface of the container, a first part of a securing means located on the internal wall surface of the cap, the first part of the securing means for cooperatively engaging with second part of the securing means located on the external surface of the container to prevent removal of the cap from the container when the cap is located in a sealing condition on the container thereby preventing removal of the cap from the container, in that the engaging elements form a ratchet arrangement or a ratchet and pawl like arrangement allowing rotational movement of the cap with respect to the container in one direction only.

27) Family number: 54110595 (US2016068311A)

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Title: TAMPER EVIDENT CLOSURE**Priority:** EP20140719673 20140414 GB20130007027 20130418 WO2014EP57549 20140414**Family:**

Publication number	Publication date	Application number	Application date
CN105189301 A	20151223	CN201480025641	20140414
CO7560404 A2	20160331	CO20150247124	20151016
EP2986526 A1	20160224	EP20140719673	20140414
EP2986526 B1	20170531	EP20140719673	20140414
ES2637692 T3	20171016	ES20140719673T	20140414
GB201307027 A0	20130529	GB20130007027	20130418
HK1217935 A1	20170127	HK20160105414	20160512
JP2016515501 T2	20160530	JP20160508120T	20140414
MX2015014626 A1	20161212	MX20150014626	20140414
PH2015502343 A	20160222	PH20150502343	20151008
PT2986526 T	20170829	PT20140719673T	20140414
RU2015143113 A	20170524	RU20150143113	20140414
TH159890 A	20170127	TH20151006342	20140414
TR201712257 T4	20170921	TR20170012257T	20140414
US2016068311 AA	20160310	US20140784547	20140414
US9708105 BB	20170718	US20140784547	20140414
WO14170284 A1	20141023	WO2014EP57549	20140414

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** ALEXANDER DONAL MEIKLEM MCPHERSON ; ALEXANDER DONALD MEIKLEM MCPHERSON ; MCPHERSON ALEXANDER DONALD MEIKLEM ; MEIKLEM MCPHERSON ALEXANDER DONALD**Agent(s):** JAIME EDUARDO DELGADO VILLEGAS; BRYERS LLP; ISERN JORGE; TOLGA CAYLAK; MCCOY RUSSELL LLP; BRYERS LLP ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B65D41/34](#) [B65D55/02](#) (Advanced/Invention);
[B65D41/34](#) (Core/Invention);
[B65D](#) (Subclass/Invention)**CPC:** [B65D41/3447](#) [B65D41/348](#) [B65D41/34](#) [B65D55/026](#)**US class:** [220/214](#)[Classification Explorer](#)**Cited documents:** WO9414674 A1, WO11064489 A1, US5360126 A, US5215204 A, US4905851 A, US4611723 A, US4489841 A, US4378893 A, US4352436 A, US2643015 A, US2141856 A, US2013001185 AA, US2011024423 AA, GB2078689 A1, CN2256857 Y, CN1078955 A,**Forward Citations:** WO17093218, US2016347520,

Abstract:

Source: US2016068311A A tamper-evident closure for a container, the closure comprising a shell having a break line along which it is separable, in which the shell further comprises a distortable portion, which is distorted upon first opening, the distortable portion being spaced from and separate to the break line.

28) Family number: 11244199 (US5638969A)

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Title: Child-resistant closure assemblies

Priority: GB19950007892 19950418 US19950463216 19950605 WO1996GB00902 19960415
US19960743519 19961104

Family:	Publication number	Publication date	Application number	Application date
	AU199653388 A1	19961107	AU19960053388	19960415
	CA2218213 AA	19971014	CA19962218213	19960415
	EP0824470 A1	19980225	EP19960910077	19960415
	GB2299985 A1	19961023	GB19950007892	19950418
	GB9507892 A0	19950531	GB19950007892	19950418
	JP2000513680 T2	20001017	JP19960531541T	19960415
	NO974753 A	19971218	NO19970004753	19971014
	NO974753 A0	19971014	NO19970004753	19971014
	US5638969 A	19970617	US19950463216	19950605
	US5836465 A	19981117	US19960743519	19961104
	WO9633105 A1	19961024	WO1996GB00902	19960415

Probable Assignee: BEESON AND SONS LTD

Assignee(s):^(std): BEESON AND SONS LTD ; KING ROGER MILNER

Assignee(s): BEESON AND SONS LIMITED

Inventor(s):^(std): KING ROGER M ; KING ROGER MILNER

Inventor(s): ROGER MILNER KING

Agent(s): GOWLING LAFLEUR HENDERSON LLP

Designated states: AL AM AT AU AZ BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI
FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LI LK LR LS LT LU LV MC MD
MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG
US UZ VN

International class [B65D41/04](#) [B65D41/34](#) [B65D50/04](#) (Advanced/Invention);
(IPC 8-9): [B65D41/04](#) (Advanced/Non-invention)

International class [B65D41/04](#) [B65D50/04](#) [B65D50/08](#) [B65D55/02](#)
(IPC 1-7):

CPC: [B65D41/3428](#) [B65D50/046](#)

European class: [B65D41/34C1](#) [B65D50/04F2](#)

US class: [215/216](#) [215/222](#) [215/252](#) [215/344](#) [215/352](#) [215/354](#) [215/44](#)

[Classification Explorer](#)

Cited documents: WO9411267 A2, WO9301098 A2, US5611443 A, US5590799 A, US5588545 A,
US5533633 A, US5454476 A, US5411157 A, US5307945 A, US5219084 A, US5213225
A, US5103991 A, US5020681 A, US4957210 A, US4782965 A, US4756435 A,
US4754892 A, US4605135 A, US4527701 A, US4480760 A, US4471878 A, US4452363
A, US4436211 A, US4413743 A, US4383620 A, US4351443 A, US4280631 A,
US4213534 A, US4134513 A, US4117945 A, US4106654 A, US4098419 A, US4093096
A, US3993209 A, US3984021 A, US3944102 A, US3941268 A, US3917097 A,
US3770153 A, IT704508 A, GB2275048 A1, GB2267484 A1, GB2267082 A1, GB2267076
A1, GB2264108 A1, GB2262280 A1, GB2261656 A1, GB2260534 A1, GB2257693 A1,
GB2203729 A1, GB2155447 A1, GB2114552 A1, GB2031856 A1, GB2011869 A1,
GB1603667 A, GB1438885 A, GB1434546 A, GB1387572 A, FR724431 A, EP0443868
A1, EP0257481 A2, EP0182519 A2, EP0110709 A2,

Forward Citations: WO9850283, WO09000616, WO07140401, USD790340, USD786087, USD776535,
USD766727, USD701460, USD525523, USD525125, USD492596, USD489610,
USD489005, USD449991, US9586738, US9085396, US8870004, US8783485,

US8365932, US8360257, US8302792, US7967159, US7571826, US7124904, US7124904, US7111746, US7108145, US7108145, US7070063, US7000789, US6926161, US6802427, US6698605, US6640987, US6523709, US6446823, US6227391, US6149023, US6053343, US6039196, US6015054, US5927527, US5819965, US2013097973, US2011000930, US2010288765, US2010206877, US2010102020, US2008223811, US2007272646, US2007034590, US2006289377, US2005236354, US2004226907, US2003075519, US2002027120, KR101016645, FR2918041, EP0979199,

Abstract:

Source: US5638969A A child-resistant container and closure assembly having a container neck with a first screw thread and two first locking elements located below the first screw thread on opposite sides of the container neck. A closure for the container neck has a second screw thread complementary to the first screw thread, a resiliently deformable skirt, and two second locking elements on opposite sides of the resiliently deformable skirt. The first and second locking elements mutually engage in ratchet fashion when the closure is screwed onto a fully engaged position on the container neck and subsequently block unscrewing of the closure unless a radial pressure is applied to the skirt at positions spaced from the locking elements to deform the skirt to release the locking elements. The first and second threads are two-start, fast-turn threads so that the closure can be moved from a substantially fully disengaged position to a substantially fully engaged position on the neck by rotation through about 180 DEG or less.

0) US2007278256A – TAMPER–EVIDENT CLOSURE FOR A CONTAINER

29) Family number: 40891076 (US2007278256A)

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Title: TAMPER–EVIDENT CLOSURE FOR A CONTAINER

Priority: CA20072590786 20070530 EP20070252116 20070523 US20060447822 20060606
US20060447882 20060606

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2590786 AA</u>	20071206	CA20072590786	20070530
	<u>DE602007027913 D1</u>	20130307	DE200760027913T	20070523
	<u>EP1864915 A2</u>	20071212	EP20070252116	20070523
	<u>EP1864915 A3</u>	20080206	EP20070252116	20070523
	<u>EP1864915 B1</u>	20130109	EP20070252116	20070523
	<u>MX2007006712 A1</u>	20071205	MX20070006712	20070605
	<u>US2007278256 AA</u>	20071206	US20060447822	20060606

Probable Assignee: RIEKE CORP

Assignee(s):^(std): RIEKE CORP ; LAW BRIAN R ; ROHR ROBERT D

Assignee(s): TRIMAS CORP ; RIEKE LEASING CO INC ; TRIMAS CO LLC ; TRIMAS INT HOLDINGS LLC ; TRIMAS SUCCESSOR TO MASCO TECH INC CORP ; ARMINAK AND ASSOCIATES LLC ; ARROW ENGINE CO ; CEQUENT CONSUMER PRODUCTS INC ; CEQUENT PERFORMANCE PRODUCTS INC SUCCESSOR TO CEQUENT ELECTRICAL PRODUCTS INC CEQUENT TOWING PRODUCTS INC CEQUENT TRAILER PRODUCTS INC FULTON PERFORMA ; COMPAC CORP ; JPMORGAN CHASE BANK NA COLLATERAL AGENT AS ; INNOVATIVE MOLDING ; LAMONS GASKET CO ; MONOGRAM AEROSPACE FASTENERS INC ; NI IND INC ; NORRIS CYLINDER CO ; RIEKE ARMINAK CORP ; RIEKE AUBURN CORP

Inventor(s):^(std): LAW BRIAN R ; ROHR ROBERT D

Inventor(s): ROHR ROBERT D LAOTTO ; ROBERT D ROHR ; BRIAN R LAW

Agent(s): SMART AND BIGGAR; WAECHTERS HAEUSER AND HARTZ
PATENTANWALTSPARTNERSCHAFT MBB; WILLIAMS MICHAEL IAN ET AL;
WILLIAMS MICHAEL IAN; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC
MK MT NL PL PT RO SE SI SK TR YU

International class
(IPC 8–9): B65D41/34 B65D47/06 B65D47/12 B65D47/26 B65D51/18 B65D51/20 B65D55/02
B67D3/00 (Advanced/Invention);
B65D47/04 B65D51/00 B65D55/02 B67D3/00 (Core/Invention)

CPC: B65D47/061 B65D47/063 B65D47/068 B65D47/123 B65D51/20 B65D2251/0015
B65D2251/0087

European class: B65D47/06A B65D47/06A1 B65D47/06C B65D47/12B1 B65D51/20 L65D251/00Y2D
L65D251/00Y6J

US class: 222/530

[Classification Explorer](#)

Cited documents: USD617188 S1, USD612236 S1, USD519837 S1, US7798378 BB, US7789277 BB, US7717307 BB, US7614530 BB, US7080749 BB, US6966469 BB, US6871752 BB, US6848484 BA, US6561370 BA, US6454137 BA, US6360908 BA, US6338414 BA, US6296130 BA, US6237818 BA, US5899364 A, US5749484 A, US5720402 A, US5685445 A, US5649650 A, US5609262 A, US5251788 A, US5101993 A, US4550862 A, US4351442 A, US4261478 A, US4236629 A, US4111331 A, US3934744 A, US3613966 A, US3250428 A, US3040938 A, US2895654 A, US2772037 A, US2715480 A, US2661128 A, US2565699 A, US2561596 A, US2124638 A, US2005124057 AA, US2004011812 AA, US2004011757 AA, FR2862620 A1, EP0286843 A1,

Forward Citations: WO16153835, WO14201098, WO13155127, US9550606, US9533806, US9145241, US9056699, US8505787, US2012085788, US2010043910, EP2595892, CN105584717,

Abstract:

Source: US2007278256A A closure for capping a container neck finish by threaded engagement includes a unitary, molded plastic inner cap designed for threaded connection to the neck finish and a unitary, molded plastic outer cap designed for threaded connection to the inner cap. The container neck finish includes an annular series of ratchet teeth positioned below the threaded portion of the neck finish and the inner cap includes a cooperating plurality of ratchet teeth to prevent removal of the inner cap from the neck finish once fully assembled. The inner cap includes an integral pouring spout defined by an inner spout wall and the inner and outer caps cooperate to create a liquid-tight plug seal. A tamper-evident arrangement is provided by the connection of the inner cap and the outer cap, resulting in the fracture of frangible portions as the outer cap is unscrewed from the inner cap to open the container.

30) Family number: 28188972 (US2002030054A)

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Title: TAMPER EVIDENT CONTAINER CLOSURES
Priority: EP19990301401 19990225 EP20000900781 20000118 WO2000IB00087 20000118
Family:

Publication number	Publication date	Application number	Application date
AT263715 E	20040415	AT20000900781T	20000118
AU200030707 A1	20000914	AU20000030707	20000118
AU200030707 A5	20000914	AU20000030707D	20000118
DE60009672 D1	20040513	DE20006009672	20000118
DE60009672 T2	20050407	DE20006009672T	20000118
EP1154934 A1	20011121	EP20000900781	20000118
EP1154934 B1	20040407	EP20000900781	20000118
US2002030054 AA	20020314	US20010942287	20010830
US6688484 BB	20040210	US20010942287	20010830
WO0050311 A1	20000831	WO2000IB00087	20000118

Probable Assignee: GREIF INT HOLDING BV

Assignee(s):^(std): BOULANGE MICHEL ; DAVOUS PHILIPPE ; LEER KONINKLL EMBALLAGE ; ROYAL PACKAGING IND BR VAN LEE ; LEER KONINKLIJKE EMBALLAGE

Assignee(s): ROYAL PACKAGING IND VAN LEER NV ; ROYAL PACKAGING INDUSTRIES VAN LEER N V AMSTELVEEN ; GREIF INT HOLDING BV ; ROYAL PACKAGING INDUSTRIES VAN LEER N V ; ROYAL PACKAGING INDUSTRIES BR VAN LEER B V ; DAVOUS PHILIPPE J ; GREIF INT

Inventor(s):^(std): BOULANGE MICHEL ; DAVOUS PHILIPPE ; DAVOUS PHILIPPE J

Inventor(s): MICHEL BOULANGE ; PHILIPPE DAVOUS

Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

International class [B65D39/00 B65D39/08](#) (Advanced/Invention)
 (IPC 8-9).

International class [B65D39/08 B65D41/32](#)
 (IPC 1-7).

CPC: [B65D39/0023 B65D39/08 B65D2101/003](#)

European class: [B65D39/00F3 B65D39/08 L65D101/00A3B](#)

US class: [215/215 215/252 220/265 220/266 220/284 81/176.15](#)

[Classification Explorer](#)

Cited documents: USH1777 H1, US6325225 BA, US5915579 A, US5220767 A, US4785963 A, US4607759 A, US4308969 A, US3253963 A, EP0324196 A2, DE9109185 U, DE3010769 A1,

Forward Citations: WO06109128, US8066139, US8061543, US8056742, US2010133285, US2009032486, EP2088089,

Abstract:

Source: US2002030054A Disclosed herein is a method and apparatus for closing a container (10) with a tamper evident closure (26) wherein the closure has a tamper evident ring (38) with driving features (52) that enable a given closure fitting tool (54) with driving features (60) complementary to those of the closure and the ring to be used to drive the closure and the ring onto the container neck (12) without exerting closing torque on the frangible links (40), the links may be made more readily frangible than heretofore; in an embodiment the ring driving features are one-way to prevent the tool from being used to open the container without breaking the links.

31) Family number: 50613583 (US2012031871A)

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Title: STEP TWIST ZIPPED VISUAL TAMPER-EVIDENT CAP AND NECK FINISH

Priority: US20100370656P 20100804 US20100414680P 20101117 US20110198019 20110804
US20140582574 20141224

Family:	Publication number	Publication date	Application number	Application date
	<u>US2012031871 AA</u>	20120209	US20110198019	20110804
	<u>US2015191280 AA</u>	20150709	US20140582574	20141224
	<u>US9181001 BB</u>	20151110	US20140582574	20141224
	<u>WO12018994 A2</u>	20120209	WO2011US46566	20110804
	<u>WO12018994 A3</u>	20120419	WO2011US46566	20110804

Probable Assignee: OMEGA CAP SOLUTIONS LLC

Assignee(s):^(std): CRISCI ROBERT E ; MOLINARO LUCA ; OMEGA CAP SOLUTIONS LLC ; OMEGA CAP SOLUTIONS LLC

Inventor(s):^(std): CRISCI ROBERT E ; MOLINARO LUCA

Agent(s): ALAN G; PIETRAGALLO GORDON ALFANO BOSICK AND RASPANTI LLP; ROTHWELL CHRISTY G ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TM TJ TT TN TR TZ UA UG US UZ VC VN ZA ZM ZW

International class B65B7/28 B65D1/02 B65D41/34 (Advanced/Invention);
(IPC 8-9): B65D41/36 (Advanced/Non-invention)

CPC: B65D1/023 B65D41/3409 B65D41/3447 B65D1/0246 B65D2101/0046

European class: B65D1/02D1 B65D41/34A1

US class: 1/1 215/252 215/252S 215/44 215/44P

[Classification Explorer](#)

Cited documents: US8091724 BB, US6523710 BA, US6306330 BA, US61414680, US61370656, US6003701 A, US5829613 A, US5597082 A, US5553727 A, US5480045 A, US5465876 A, US5456376 A, US5415306 A, US5346082 A, US5307946 A, US5307945 A, US5303838 A, US5285912 A, US5267661 A, US5249695 A, US5213224 A, US5190178 A, US5105960 A, US5104008 A, US5103991 A, US5009323 A, US4938370 A, US4884707 A, US4830207 A, US4785952 A, US4722447 A, US4687114 A, US4667839 A, US4658977 A, US4625875 A, US4589561 A, US4561553 A, US4534480 A, US4497765 A, US4062466 A, US3980195 A, US3874540 A, US2009283492 AA, US2007051691 AA, US2007034591 AA, US2007034590 AA, US2005252878 AA, US2002134747 AA, GB2277080 A1, GB2269163 A1,

Forward Citations: WO17088036, USD789201, USD762115, USD723919, USD714147, US8985361, US2016128741, US2013200035, US2011100947,

Abstract:

Source: US2012031871A A tamper-evident cap is disclosed having a circular closure member, a cylindrical annular wall depending generally from the periphery of the closure member terminating with a base and having a plurality of serrations, and a tamper-evident band circumferentially positioned around the base having teeth and attached to a portion of the base. The tamper-evident band may be mounted to the base by at least one of the teeth or attached by at least one of the serrations extending below the base. The interior and/or exterior of the cylindrical wall may be stepped. The tamper-evident band may have a groove between the teeth for retaining the tamper-evident band on a neck finish. A neck finish having at least one set of teeth and optional raised portions for securing the tamper-evident band in place is also disclosed. The neck finish may be stepped to correspond with a cap having a cylindrical wall with a stepped interior. A cap and neck finish combination for a container is also disclosed.

32) Family number: 50918532 (US2014183195A)

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Title: TAMPER-EVIDENT CLOSURE**Priority:** EP20120808731 20121207 GB20120001976 20120203 WO2012EP74846 20121207**Family:**

Publication number	Publication date	Application number	Application date
CN104203767 A	20141210	CN201280071340	20121207
CN104203767 B	20160706	CN201280071340	20121207
CO7240353 A2	20150417	CO20140168333	20140801
DE602012020061 D1	20160811	DE201260020061T	20121207
EP2809589 A1	20141210	EP20120808731	20121207
EP2809589 B1	20160629	EP20120808731	20121207
ES2594412 T3	20161220	ES20120808731T	20121207
GB201201976 A0	20120321	GB20120001976	20120203
JP2015509064 T2	20150326	JP20140555104T	20121207
JP6067751 B2	20170125	JP20140555104T	20121207
MX2014009278 A1	20140911	MX20140009278	20121207
MX345129 B	20170118	MX20140009278	20121207
PE24272014 A1	20150213	PE20140001202	20121207
PH2014501691 A	20141110	PH20140501691	20140725
PH2014501691 B	20141110	PH20140501691	20140725
PL2809589 T3	20170228	PL20120808731T	20121207
RU2014131782 A	20160327	RU20140131782	20121207
RU2612853 C2	20170313	RU20140131782	20121207
TR201613259 T4	20161021	TR20160013259T	20121207
US2014183195 AA	20140703	US20120824936	20121207
US9010554 BB	20150421	US20120824936	20121207
WO13113435 A1	20130808	WO2012EP74846	20121207

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND ; OBRIST KLOUZHES SVITTSEERLAND GMBKH**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** ALEXANDER DONALD MEIKLEM MCPHERSON ; MAKFERSON ALEKSANDR DONALD MEJKLEM ; MCPHERSON ALEXANDER DONALD MEIKLEM ; MEIKLEM MCPHERSON ALEXANDER DONALD**Agent(s):** LICHOTA CATHERINE MARGARET TIMMIS; ISERN JORGE; OZAWA SEIJI; HIROTA MASANORI; TOLGA CAYLAK; ALLEMAN HALL MCCOY RUSSELL AND TUTTLE LLP; BEATSON MATTHEW ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [B65D41/34](#) [B65D49/04](#) [B65D50/00](#) [B65D55/02](#) (Advanced/Invention)
(IPC 8-9):**CPC:** [B65D50/00](#) [B65D49/04](#) [B65D55/022](#) [B65D55/026](#) [B65D2101/0023](#)**US class:** [215/17](#) [215/215](#) [215/230](#) [215/252](#) [215/26](#) [220/259.4](#) [220/266](#)[Classification Explorer](#)

Cited documents: WO09010722 A1, WO06117505 A1, WO05049443 A1, WO04067387 A2, WO04011347 A2, WO02096771 A1, US8439213 BB, US6908013 BB, US5738231 A, US4984699 A, US2011259844 AA, US2010170898 AA, US2010170898, US20100170898, US2009289027 AA, US2008105644 AA, US2005115915 AA, JP61164953 A2, JP61164953, JP59500961 T2, JP59500961, JP54157146 U, JP54157146 U, GB2450939 A1, CN201334173 Y, CN1741942 A, CN1318027 A, CN1264674 A, CN102076573 A,

Forward Citations: WO17093218, WO17081045, WO15113851, US2016347520, EP3093256,

Abstract:

Source: US2014183195A A tamper-evident closure for a container is provided. The closure comprises a first portion including inner and outer parts, and a second portion. The outer part is rotatable relative to the inner part from a first position in which at least part of the first and second portions are adjacent each other to a second position in which there is a gap therebetween. The first portion comprises locking means for irreversibly locking the closure in the second position upon a first opening so that the gap cannot be closed. The inner part includes a line of weakness which breaks if the outer part is reverse rotated relative to the inner part.

33) Family number: 2760546 (US4785963A)

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Title: Tamper-evident buttress plug closure

Priority: CA19880576136 19880831 EP19880201659 19880801 US19880142510 19880111

Family:

Publication number	Publication date	Application number	Application date
AT99627 E	19940115	AT19880201659T	19880801
AU198820270 A1	19890713	AU19880020270	19880801
AU600846 B2	19900823	AU19880020270	19880801
BRPI8804224 A	19900410	BR1988PI04224	19880819
CA1305100 A1	19920714	CA19880576136	19880831
DE3886914 D1	19940217	DE19883886914	19880801
DE3886914 T2	19940428	DE19883886914T	19880801
EP0324196 A2	19890719	EP19880201659	19880801
EP0324196 A3	19900801	EP19880201659	19880801
EP0324196 B1	19940105	EP19880201659	19880801
JP1182264 A2	19890720	JP19880213492	19880827
MX166314 B	19921229	MX19880012843	19880826
US4785963 A	19881122	US19880142510	19880111
ZA8805848 A	19890426	ZA19880005848	19880809

Probable Assignee: RIEKE A CORP OF IN CORP

Assignee(s):^(std): RIEKE CORP

Assignee(s): RIIKU CORP ; RIEKE CORP AUBURN IND US ; RIEKE A CORP OF IN CORP ; METALDYNE F K A MASCOTECH INC CORP ; CHASE MANHATTAN BANK COLLATERAL AGENT AS ; MAGLEY ROBERT E ; MASCOTECH INC ; METALDYNE CORP

Inventor(s):^(std): MAGLEY ROBERTO E ; ROBERT E MAGLEY ; ROBAATO II MAGUREI ; MAGLEY ROBERT E

Inventor(s): MAGLEY ROBERT E AUBURN INDIANA 46706 US ; ROBERTO E MAGLEY

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; SMART AND BIGGAR

Designated states: AT BE CH DE ES FR GB IT LI LU NL SE

International class
(IPC 8-9): [B65D39/08](#) [B65D55/02](#) (Advanced/Invention);
[B65D39/00](#) [B65D55/02](#) (Core/Invention)

International class
(IPC 1-7): [B65D39/08](#) [B65D41/34](#) [B65D55/02](#) [B65D55/12](#)

CPC: [B65D39/088](#) [B65D55/022](#)

European class: [B65D39/08A3](#) [B65D55/02D](#)

US class: [215/252](#) [220/266](#) [220/284](#)

[Classification Explorer](#)

Cited documents: US4687112 A, US4666063 A, US4458820 A, US4326639 A, US4308969 A, US4165813 A, US4153174 A, US4081097 A, US4062466 A, US4019663 A, US3811590 A, US3405837 A, US31496 A, US3074580 A, US2940627 A, US2423582 A, US2134178 A, US2054031 A, US1901196 A, US1891033 A, JP54058586 A2, EP0166664 A2, DE3010769 A1, AU580799 B2, AU577015 B2, AU1198383 A1,

Forward Citations: WO9315970, WO9314001, WO12085942, WO08092716, WO08092716, WO03051737, WO03051737, WO0050311, USRE44310, US9790009, US9434518, US8851315, US8833589, US8813988, US8596477, US8360262, US8251242, US8146766, US8127961, US8123064, US8083089, US8028851, US7980403, US7891510, US7823695, US7690527, US7674248, US7585292, US7546857, US7537132, US7115115, US6776518, US6688484, US6673055, US6672477, US6626877,

US6494869, US6471082, US6368310, US6364146, US6244311, US6102225, US5971189, US5947310, US5871476, US5688255, US5683371, US5620428, US5597082, US5489041, US5413240, US5353944, US5348183, US5348182, US5328046, US5303837, US5184747, US5158197, US2010032402, US2009250426, US2009120937, US2008277397, US2008264894, US2008011785, US2007075084, US2006157487, US2006037958, FR2708914, EP3208435, EP0873943, EP0653358,

Abstract:

Source: US4785963A A tamper-evident buttress plug for sealing closed a plastic 55-gallon drum includes a plug body which is externally threaded and compatible with the internally threaded container outlet, a ratchet ring which includes a circumferentially distributed series of ratchet teeth on its inner surface and a series of four frangible elements which initially integrally join the ratchet ring to the plug body. The container outlet has neck which is configured with two spaced series of ratchet teeth which are of a size and configuration so as to be mutually engageable with the ratchet teeth on the closure ring. As the closure is threadedly advanced into the outlet, threaded engagement is first achieved and then ratchet engagement. When it is time for the closure to be removed from the container, the frangible elements must be severed so as to separate the ring and the plug body. In view of the fact that the 55-gallon plastic drum is blow-molded by split-block technique, it is necessary for the two series of ratchet teeth on the container outlet to be less than 180 degrees in their circumferential extent thus leaving spaces between the series. In order to prevent compression of the ring by squeezing inwardly at the location of these two spaces, semi-circular raised protuberances are provided in order to prevent ovalizing and an ability to disengage the ratchet teeth.

34) Family number: 54110629 (US2016060007A)

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Title: TAMPER-EVIDENT CLOSURE**Priority:** EP20140719674 20140414 GB20130007034 20130418 WO2014EP57551 20140414**Family:**

Publication number	Publication date	Application number	Application date
CN105246791 A	20160113	CN201480026937	20140414
CN105246791 B	20170308	CN201480026937	20140414
CO7550394 A2	20160318	CO20150247120	20151016
EP2986525 A1	20160224	EP20140719674	20140414
EP2986525 B1	20170621	EP20140719674	20140414
ES2637786 T3	20171017	ES20140719674T	20140414
GB201307034 A0	20130529	GB20130007034	20130418
HK1216631 A1	20161125	HK20160104632	20160422
JP2016515502 T2	20160530	JP20160508122T	20140414
MX2015014462 A1	20160205	MX20150014462	20140414
PH2015502344 A	20160125	PH20150502344	20151008
PT2986525 T	20170922	PT20140719674T	20140414
RU2015143114 A	20170523	RU20150143114	20140414
TH160052 A	20170209	TH20151006372	20140414
TR201713426 T4	20171121	TR20170013426T	20140414
US2016060007 AA	20160303	US20140784728	20140414
WO14170286 A1	20141023	WO2014EP57551	20140414

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** ALEXANDER DONALD MEIKLEM MCPHERSON ; MCPHERSON ALEXANDER DONALD MEIKLEM ; MEIKLEM MCPHERSON ALEXANDER DONALD**Agent(s):** JAIME EDUARDO DELGADO VILLEGAS; BRYERS LLP; ISERN JORGE; TOLGA CAYLAK; BRYERS LLP ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** **(IPC 8-9):** [B65D39/00](#) [B65D41/28](#) [B65D41/38](#) [B65D55/02](#) (Advanced/Invention);
[B65D41/28](#) [B65D55/02](#) (Core/Invention);
[B65D](#) (Subclass/Invention)**CPC:** [B65D55/026](#) [B65D2101/0023](#) [B65D39/0011](#) [B65D55/022](#) [B65D41/28](#)**US class:** [220/259.3](#)[Classification Explorer](#)**Cited documents:** WO11086407 A2, WO05049443 A1, WO02096771 A1, CN1524053,**Abstract:**

Source: US2016060007A A tamper-evident closure for a container. The closure comprises a first portion including inner and outer parts, and a second portion. The outer part is rotatable relative to the inner part from a first position in which at least part of the first and second portions are adjacent each other to a second position in which there is a gap therebetween. The first portion comprises locking means for irreversibly locking the closure in the second position upon first opening so that the gap cannot be closed, in which the first portion comprises a

compressible stopper for sealing the second portion and/or the container. A tamper-evident closure in combination with a container.

35) Family number: 20641408 (US5553727A)

© PatBase

Title: TAMPER-EVIDENT CAP AND NECK FINISH**Priority:** US19950430019 19950427 WO1996US05835 19960426

Family:	Publication number	Publication date	Application number	Application date
	AU199655782 A1	19961118	AU19960055782	19960426
	DE69616775 D1	20011213	DE19966016775	19960426
	EP0824466 A1	19980225	EP19960913190	19960426
	EP0824466 B1	20011107	EP19960913190	19960426
	US5553727 A	19960910	US19950430019	19950427
	US5553727 C1	20010904	US19950430019	19950427
	WO9633921 A1	19961031	WO1996US05835	19960426

Probable Assignee: CONSUMER CAP CORP**Assignee(s):^(std):** CONSUMER CAP CORP ; MOLINARO LUCA ; NORTHERN ENG AND PLASTICS ; RICAL SA**Assignee(s):** NORTHERN ENGINEERING AND PLASTICS CORP NEW CASTLE ; NORTHERN ENGINEERING AND PLASTICS CORP ; RICAL S A ; NORTHERN ENGINEERING AND PLASTICS CORP ; FIRST WESTERN BANK ; HELLER FINANCIAL**Inventor(s):^(std):** LUCA MOLINARO ; MOLINARO LUCA**Designated states:** AL AM AT AU AZ BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LI LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN**International class**
(IPC 8-9): [B65D1/02](#) [B65D41/04](#) [B65D41/34](#) (Advanced/Invention);
[B65D1/02](#) [B65D41/04](#) [B65D41/34](#) (Core/Invention)**International class**
(IPC 1-7): [B65B7/28](#) [B65D1/02](#) [B65D41/04](#) [B65D41/34](#)**CPC:** [B65D41/0421](#) [B29B2911/14446](#) [B65D1/0246](#) [B65D41/0471](#) [B65D41/3409](#) [B65D41/3442](#)**European class:** [B65D1/02D1B](#) [B65D41/04B1A](#) [B65D41/04E](#) [B65D41/34A1](#) [B65D41/34D](#)**US class:** [21/544](#) [215/254](#) [215/318](#) [215/346](#) [215/354](#) [215/44](#) [215/440](#) [215/45](#)[Classification Explorer](#)**Cited documents:** US5307946 A, US5307945 A, US5267661 A, US5213224 A, US5190178 A, US5103991 A, US5009323 A, US4938370 A, US4785952 A, US4625875 A, US4572387 A, US4561553 A, US4534480 A, US4497765 A, GB2172273 A1, EP0450959 A1, EP0337046 A1, EP0118267 A2,**Forward Citations:** WO9923002, WO9735773, WO9735773, WO0155000, USD732391, US9617027, US9586738, US9199780, US9181001, US8857636, US8109396, US8056744, US7891510, US7694835, US7588155, US7228979, US7097790, US7097056, US7007817, US6561369, US6415935, US6386380, US6116440, US6073809, US5947309, US5862953, US5860545, US5827471, US5775528, US2015329233, US2014166607, US2013306498, US2011174761, US2011108507, US2010288765, US2010230374, US2009283492, US2009200258, US2008264894, US2008169262, US2007034590, US2005263476, US2005150856, US2005062183, US2005061766, US2002162818,**Abstract:**

Source: US5553727A A neck finish for a tamper evident bottle is disclosed having at least ten helically spaced threads which extend along a substantial length of the exterior wall of the neck. The neck finish may include one or two annular ring flanges to accept a snap-on cap. Also disclosed are tamper evident caps having at least ten helically spaced threads positioned on the inner surface of the cap. In one embodiment, the cap includes one or two annular ring flanges to engage the ring flanges on the disclosed neck finish. Another tamper evident cap includes ten helically spaced thread which are adapted to engage at least some portion of threads on a neck finish.

36) Family number: 14738567 (US5307945A)

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Title: Closure

Priority: CA19932099145 19930625 CA19932099145 19930625 GB19930013166 19930625
 NZ19930247995 19930625 US19920902170 19920626 US19920916815 19920720

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199341522 A1</u>	19940113	AU19930041522	19930625
	<u>AU671999 B2</u>	19960919	AU19930041522	19930625
	<u>CA2099145 AA</u>	19931227	CA19932099145	19930625
	<u>CA2099145 C</u>	19991026	CA19932099145	19930625
	<u>GB2268166 A1</u>	19940105	GB19920019439	19920914
	<u>GB2268166 B2</u>	19961204	GB19920019439	19920914
	<u>GB2268169 A1</u>	19940105	GB19930013166	19930625
	<u>GB2268169 B2</u>	19961211	GB19930013166	19930625
	<u>GB2299807 A1</u>	19961016	GB19950025866	19930625
	<u>GB2299807 B2</u>	19961211	GB19950025866	19930625
	GB9219439 A0	19921028	GB19920019439	19920914
	GB9313166 A0	19930811	GB19930013166	19930625
	GB9525866 A0	19960221	GB19950025866	19930625
	<u>NZ247995 A</u>	19970424	NZ19930247995	19930625
	<u>NZ280558 A</u>	19971219	NZ19930280558	19930625
	<u>US5307945 A</u>	19940503	US19920916815	19920720
	<u>US5385252 A</u>	19950131	US19920902170	19920626

Probable Assignee: BLACKHAWK MOLDING CO INC

Assignee(s):^(std): HIDDING DOUGLAS J ; HIDDING WALTER EDWARD ; HIDDING DOUGLAS JOY ;
 HIDDING ROBERT DANIEL ; HIDDING WALTER E ; HIDDING DOUGLAS JAY ;
 HIDDING ROBERT D ; DOUGLAS J HIDDING ; ROBERT D HIDDING ; WALTER E
 HIDDING

Assignee(s): WALTER EDWARD HIDDING ; ROBERT DANIEL HIDDING ; DOUGLAS JAY HIDDING ;
 DOUGLAS JOY HIDDING ; BLACKHAWK MOLDING CO INC

Inventor(s):^(std): HIDDING ROBERT D ; HIDDING WALTER E ; HIDDING DOUGLAS JOY ; HIDDING
 WALTER EDWARD ; HIDDING ROBERT DANIEL ; HIDDING DOUGLAS J ; HIDDING
 DOUGLAS JAY

Inventor(s): DOUGLAS JOY HIDDING ; DOUGLAS JAY HIDDING ; DOUGLAS J HIDDING ; ROBERT
 D HIDDING ; ROBERT DANIEL HIDDING ; WALTER E HIDDING ; WALTER EDWARD
 HIDDING

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; CASSAN MACLEAN

International class B65D41/04 B65D41/34 B65D55/08 (Advanced/Invention);
 (IPC 8-9): B65D41/04 B65D41/34 (Core/Invention)

International class B65D41/00 B65D41/04 B65D41/28 B65D41/34 B65D41/38 B65D43/04 B65D55/02
 (IPC 1-7): B65D55/08

CPC: B65D41/04 Y10S215/01 B65D41/0421 B65D41/3409

European class: B65D41/04 B65D41/04B1A B65D41/34A1

US class: 215/230 215/256 215/305 215/329 215/337 215/344 215/354 215/DIG.1 220/296

[Classification Explorer](#)

Cited documents: US4790448 A, US4687114 A, US4573599 A, US4566603 A, US4346812 A, US4322012
 A, US4210251 A, US4131212 A, US3901404 A, US3812994 A, US3527372 A,
 US3232470 A, US2942747 A, GB1532919 A, GB1499895 A, GB1430302 A, AU2413677
 A1,

Forward Citations: WO9957033, WO9906295, WO9823494, WO15013482, WO07015648, WO07015648, USD725759, USD711739, USD709766, USD691046, USD688129, USD688128, USD531505, USD530205, USD529804, USD525523, USD525125, USD449991, US9181001, US9005348, US8499950, US8317053, US7891510, US7413097, US7314146, US7228979, US7198170, US7014055, US6988642, US6981602, US6931821, US6779672, US6766916, US6637611, US6530493, US6484896, US6439412, US6341707, US6328174, US6327770, US6253937, US6213299, US6196408, US6126026, US6073809, US6039195, US6003701, US5975321, US5971183, US5967352, US5913437, US5899348, US5862953, US5836465, US5829613, US5711442, US5690243, US5630522, US5553727, US2012228298, US2011174761, US2009057261, US2008264894, US2007034590, US2006060555, US2005269282, US2005194343, US2005145629, US2004251228, US2004206721, US2004060893, US2004055991, US2003173325, ITMO20120253, GB2313115, GB2304337, GB2304337, FR2798363, ES2152790, EP1556280, EP1263657, EP1263657, EP1029797, EP1025015, EP0989065, EP0941938, AU734479,

Abstract:

Source: US5307945A An injection molded threaded cap for use with containers of varying dimensions. The cap of the present invention includes a cover from which depends an integral plug. An auxiliary sealing ring is disposed at the outside base of the plug to compensate for differences between the diameter of the plug and the diameter of the opening to be sealed by the cap. To prevent doming of the cover of the cap, the underside of the cover has shrinkage resistance formations which provide the cap with structural resistance to the effects of shrinkage. The cap of the present invention further includes a ratchet ring having ratchet teeth designed to enhance the tamper-evidency of the frangible ratchet ring. In an alternative embodiment, the cap includes a thread form which reduces the amount of rotation required to install the cap onto a bottle neck. The thread form includes thread segments which result in less resin being used to form the cap and which results in the formation of an unthreaded area at the base of the inside surface of the skirt of the cap. The unthreaded area facilitates the initial engagement of the cap and the bottle neck. The alternative embodiment also includes a spline arrangement which provides the cap with an anti-stripping feature.

37) Family number: 12162226 (EP0729894A2)

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Title: Closure device**Priority:** GB19950004262 19950303 EP19960301179 19960222

Family:	Publication number	Publication date	Application number	Application date
	<u>DE69603521 D1</u>	19990909	DE19966003521	19960222
	<u>DE69603521 T2</u>	20000203	DE19966003521T	19960222
	<u>DE69613719 D1</u>	20010809	DE19966013719	19960222
	<u>DE69613719 T2</u>	20020508	DE19966013719T	19960222
	<u>EP0729894 A2</u>	19960904	EP19960301179	19960222
	<u>EP0729894 A3</u>	19970212	EP19960301179	19960222
	<u>EP0729894 B1</u>	19990804	EP19960301179	19960222
	<u>EP0882656 A1</u>	19981209	EP19980114045	19960222
	<u>EP0882656 B1</u>	20010704	EP19980114045	19960222
	<u>GB2295143 A1</u>	19960522	GB19950004262	19950303
	<u>GB2295143 B2</u>	19980422	GB19950004262	19950303
	<u>GB9504262 A0</u>	19950419	GB19950004262	19950303

Probable Assignee: MASSMOULD HOLDINGS**Assignee(s):^(std):** MASSMOULD HOLDINGS ; MASSMOULD HOLDINGS LTD**Assignee(s):** MASSMOULD HOLDINGS LTD BEDFORDSHIRE ; MASSMOULD HOLDINGS LTD FLITWICK ; MASSMOULD HOLDINGS LIMITED**Inventor(s):^(std):** MCNAUGHTON CHRISTOPHER NEIL ; MCNAUGHTON CHRIS**Inventor(s):** CHRISTOPHER NEIL MCNAUGHTON**Designated states:** BE DE FR GB IT NL**International class** [B65D41/34](#) (Advanced/Invention)
(IPC 8-9):**International class** [B65D41/32](#) [B65D41/34](#) [B65D41/48](#)
(IPC 1-7):**CPC:** [B65D41/3409](#)**European class:** [B65D41/34A1](#)[Classification Explorer](#)**Cited documents:** WO9418085 A1, WO9418084 A1, WO9108146 A1, US4699284 A, US4550845 A, US2961119 A, GB2223748 A1, GB2034674 A1, GB1457991 A, FR2339541 A1, EP0365136 A1, EP0229206 A1, EP0080846 A1, AU480881 B2,**Forward Citations:** WO16054720, GB2414230, EP0900742, DE102009044643, CH709172,**Abstract:**

Source: EP0729894A2 A closure 10 comprises a cap 11 having a skirt 13 depending therefrom, skirt 13 having an internal screw thread 14 or equivalent for engagement with a complementary formation on a container (not shown), and the closure 10 further comprising a tamper-evident ring 30 attached to skirt 13 by frangible bridges 20 and at least a portion of tamper-evident ring 30 having an undercut profile 32 for engagement behind a projection on the neck of a container during removal of closure 10. This ensures effective separation of tamper-evident ring 30 from closure 10, with retention of tamper-evident ring on the container neck. Preferably, bridges 20 extend in a non-axial direction from the bottom rim 16 of skirt 13 to the radially innermost extremity of tamper-evident ring 30. Bridges 20 may be narrower in section adjacent skirt 13. Optionally, skirt 13 and tamper-evident ring 30 have complementary formations (46, 36; See Figure 4) which interengage when closure 10 is screwed onto a container. The undercut profile 32 is preferably provided on a series of radially inwardly projecting nibs 31 formed on the inner surface of the ring 30, the nibs being of ratchet configuration for engagement with dogs formed on a container neck.

38) Family number: 33090731 (US2008073382A)

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Title: CLOSURE AND CONTAINER NECK**Priority:** AU20040907264 20041223 AU20050318877 20051223 GB20070014218 20051223
GB20080019589 20051223 WO2005AU01968 20051223

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2005318877 AA</u>	20060629	AU20050318877	20051223
	<u>AU2005318877 BB</u>	20120823	AU20050318877	20051223
	<u>CA2592067 AA</u>	20070622	CA20052592067	20051223
	<u>CN101119900 A</u>	20080206	CN200580048225	20051223
	<u>EP1833732 A1</u>	20070919	EP20050821629	20051223
	GB200714218 A0	20070829	GB20070014218	20051223
	GB200819589 A0	20081203	GB20080019589	20051223
	<u>GB2436502 A1</u>	20070926	GB20070014218	20051223
	<u>GB2436502 B2</u>	20081231	GB20070014218	20051223
	<u>GB2451775 A1</u>	20090211	GB20080019589	20051223
	<u>JP2008525274 T2</u>	20080717	JP20070547103T	20051223
	<u>KR20070110000 A</u>	20071115	KR20077016467	20070719
	<u>US2008073382 AA</u>	20080327	US20070767813	20070625
	<u>WO06066356 A1</u>	20060629	WO2005AU01968	20051223

Probable Assignee: RBC TRUSTEES CI LTD**Assignee(s):^(std):** ABACUS ; ABACUS C I LTD TRUSTEE OF T AS ; ABACUS C I LTD AS TRUSTEE OF T ; ABACUS C I LTD ; ABACUS C I LTD AS TRUSTEE OF B ; ABACUS C I LTD TRUSTEE OF B AS ; HIGGINS CHRISTOPHER LYNDON ; RBC TRUSTEES CI LTD**Assignee(s):** CTECH CLOSURES PTY LTD ; RBC TRUSTEES (CI) LTD ; RBC TRUSTEES LTD ; RBC TRUSTEES CI LIMITED ; ABACUS CI TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS CI LTD ; ABACUS TRUSTEE OF BAYVIEW TRUST LTD AS ; ABACUS TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS C I LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS LTD ; ABACUS CI TRUSTEE OF BAYVIEW TRUST LTD AS ; ABACUS C I TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS C I TRUSTEE OF BAYVIES TRU AS LTD ; ABACUS (C I) LIMITED AS TRUSTEE OF THE... ; ABACUS (CI) TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS C I LIMITED ; ABACUS C I LIMITED AS TRUSTEE OF BAYVIEW TRUST ; ABACUS C I LIMITED AS TRUSTEE OF THE BAYVIES TRUST**Inventor(s):^(std):** HIGGINS CHRISTOPHER LYNDON ; LYNDON HIGGINS CHRISTOPHER ; HIGGINS CHRISTOPHER L**Inventor(s):** CHRISTOPHER LYNDON HIGGINS ; HIGGINS CHRISTOPHER**Agent(s):** SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; BROOKS KUSHMAN PC**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
(IPC 8-9): B65D35/38 B65D41/34 B65D47/00 B65D47/20 B65D53/02 B65D55/02
B65D55/08 (Advanced/Invention);
B65D41/34 B65D55/08 (Advanced/Non-invention);
B65D35/24 B65D41/34 B65D47/00 B65D47/04 B65D55/02 (Core/Invention)**CPC:** B65D41/3428 B65D1/023 B65D41/0421 B65D47/123 B65D47/2031 B65D81/266
B65D47/00 B65D47/20 B65D47/2018 B65D47/2025 B65D55/02**European class:** B65D1/02D1 B65D41/04B1A B65D41/34 B65D41/34C1 B65D47/00 B65D47/12B1
B65D47/20 B65D47/20E B65D47/20E1 B65D47/20E2 B65D55/02 B65D55/08

B65D81/26F

US class: 222/494

[Classification Explorer](#)

Cited documents: WO9962774 A1, WO9858847 A1, WO9845184 A1, WO9832673 A1, WO05115861 A1, WO0029297 A1, WO0012402 A1, US6551093 BB, US6152324 A, US5950850 A, US5860542 A, US5165578 A, US5054268 A, US5012956 A, US4978016 A, US4653657 A, US4646945 A, US4147278 A, US4133457 A, US4124134 A, US2679954 A, US1865764 A, JP52125537 A2, JP2011058 A2, JP11240551 A2, GB2421726 A1, GB2330577 A1, GB214548 A, GB2102398 A1,

Forward Citations: WO13119781, WO12076664, WO09081029, WO09081029, WO07045894, USD739750, USD716142, US9828146, US2012080450, KR101660932, KR101625967, JP5173560, JP2009262969, JP2008308181, JP2008013179, ITPS20100028, FR2925030, EP2444334, CN105398665, CN103402878, CN103097253, CN103097253, CN102826288, CN102180302,

Abstract:

Source: US2008073382A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102); a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamper-evident band (110) frangibly connected to said skirt; the neck of a container including a tamper bead adapted to engage with tabs (122) on said tamper-evident band to facilitate separation of the band (110) from the skirt of the closure and an inwardly and downwardly sloping container neck surface beneath said tamper bead, said inwardly and downwardly sloping surface urging said separated tamper-evident band downwards away from said skirt.

Title: A TAMPER-EVIDENT CLOSURE**Priority:** GB20140001682 20140131 WO2015EP50894 20150119

Family:	Publication number	Publication date	Application number	Application date
	CN105939941 A	20160914	CN201580006669	20150119
	CO20160001431 A2	20170209	CO20160001431	20160830
	EP3099596 A1	20161207	EP20150701946	20150119
	GB201401682 A0	20140319	GB20140001682	20140131
	JP2017507086 T2	20170316	JP20160547177T	20150119
	KR20160115950 A	20161006	KR20167023290	20150119
	MX2016009649 A1	20170919	MX20160009649	20150119
	PH2016501501 A	20170206	PH20160501501	20160728
	TH165254 A	20170720	TH20161004418	20150119
	US2017137189 AA	20170518	US20150115665	20150119
	WO15113851 A1	20150806	WO2015EP50894	20150119

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):**^(std) OBRIST CLOSURES SWITZERLAND ; OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):**^(std) ALEXANDER DONALD MEIKLEM MCPHERSON ; MCPHERSON ALEXANDER DONALD MEIKLEM**Agent(s):** JAIME EDUARDO DELGADO VILLEGAS; BRYERS LLP; TOMITA HIROYUKI; HIROTA MASANORI; OZAWA SEIJI

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D41/34](#) [B65D55/02](#) [B65D55/06](#) (Advanced/Invention);
 (IPC 8-9): [B65D55/02](#) (Core/Invention)

CPC: [B65D2101/0053](#) [B65D41/34](#) [B65D55/024](#) [B65D55/06](#)[Classification Explorer](#)**Cited documents:** WO14016391 A1, WO13113435 A1, WO13079545 A1, US5740932 A, GB2302867 A1, FR546991 A, EP0711711 A1, DE4441435 A1, CN1150106 A, CN103958361 A,**Forward Citations:** WO17001533,**Abstract:**

Source: US2017137189A A tamper-evident closure (1) for a container, the closure comprising: a shell comprising a first shell part (3A) and a second shell part (3B); and a tamper-evident overcap, the overcap comprising a cap (4A) which is fixed to the exterior of the first shell part and a tamper-evident member (4B) which is releasably connected to the cap (4A) and releasably located around the exterior of at least part of the second shell part (3B), such that the first and second shell parts (3A, 3B) cannot be separated unless the member (4B) is released, and thereafter the cap (4A) is removable together with the first shell part (3A).

40) Family number: 30515210 (US2004079765A)

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Title: TAMPER-EVIDENT DISPENSER BOTTLE**Priority:** CA20032447216 20031028 EP20030256783 20031028 EP20070075625 20031028
EP20050077489 20031028 US20020283032 20021029**Family:**

Publication number	Publication date	Application number	Application date
<u>AU2003257911 AA</u>	20040520	AU20030257911	20031028
<u>AU2003257911 BB</u>	20090716	AU20030257911	20031028
<u>BRPI0304788 A</u>	20040831	BR2003PI04788	20031029
BRPI0304788 B1	20140325	BR2003PI04788	20031029
<u>CA2447216 AA</u>	20040429	CA20032447216	20031028
<u>CN100349785 C</u>	20071121	CN200310115676	20031029
<u>CN1541906 A</u>	20041103	CN200310115676	20031029
<u>DE60305839 D1</u>	20060720	DE20036005839	20031028
<u>DE60305839 T2</u>	20070614	DE20036005839T	20031028
<u>DE60332879 D1</u>	20100715	DE20036032879	20031028
<u>EP1415931 A2</u>	20040506	EP20030256783	20031028
<u>EP1415931 A3</u>	20040609	EP20030256783	20031028
<u>EP1415931 B1</u>	20060607	EP20030256783	20031028
<u>EP1632438 A2</u>	20060308	EP20050077489	20031028
<u>EP1632438 A3</u>	20060607	EP20050077489	20031028
<u>EP1847472 A2</u>	20071024	EP20070075625	20031028
<u>EP1847472 A3</u>	20080312	EP20070075625	20031028
<u>EP1847472 B1</u>	20100602	EP20070075625	20031028
<u>EP2172404 A1</u>	20100407	EP20090075573	20031028
<u>ES2269929 T3</u>	20070401	ES20030256783T	20031028
<u>ES2344024 T3</u>	20100816	ES20070075625T	20031028
<u>JP2004149223 A2</u>	20040527	JP20030367944	20031028
<u>JP4606723 B2</u>	20110105	JP20030367944	20031028
<u>KR20040038798 A</u>	20040508	KR20030075999	20031029
<u>TH65614 A</u>	20041216	TH20031004009	20031028
<u>US2004079765 AA</u>	20040429	US20020283032	20021029
<u>US6988642 BB</u>	20060124	US20020283032	20021029

Probable Assignee: JOHNSON AND JOHNSON CONSUMER INC**Assignee(s):^(std):** JOHNSON AND JOHNSON ; JOHNSON AND JOHNSON CONSUMER ; JOHNSON AND JOHNSON CONSUMER COMPANIES INC**Assignee(s):** LUND DOUGLAS M ; MEADE GARY A ; PALAIA ROCCO ; JOHNSON AND JOHNSON CONSUMER COMPANIES LLC ; JOHNSON AND JOHNSON CONSUMER INC ; JOHNSON AND JOHNSON CONSUMER CO INC ; JOHNSON AND JOHNSON CONSUMER COMPANIES ; GALLO ANTHONY B JR ; JOHNSON AND 38 JOHNSON CONSUMER COMPANIES INC**Inventor(s):^(std):** LUND DOUGLAS M ; MEADE GARY A ; PALAIA ROCCO ; ROCCO GALLO ANTHONY B LUND DOU ; ROCCO PALAIA ; GARY A MEADE ; DOUGLAS M LUND ; ANTHONY B GALLO ; GALLO ANTHONY B ; GALLO ANTHONY B JR ; GALLO JR ANTHONY B**Inventor(s):** JR ANTHONY B ; GALLO ANTHONY B LUND DOUGLAS M MEADE GARY A PALAIA**Agent(s):** SHELSTON IP PTY LTD; SHELSTON IP; SMART AND BIGGAR; MERCER CHRISTOPHER PAUL ET AL; MERCER CHRISTOPHER PAUL**Designated states:** AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

International class
(IPC 8-9): B65D41/36 B65D47/06 B65D47/20 B65D47/26 B65D50/04 B65D50/10 B65D55/02 B65D77/20 B65D77/30 B65D83/04 B65D83/06 (Advanced/Invention)

International class
(IPC 1-7): A45D33/16 B65D41/36 B65D47/06 B65D47/14 B65D47/26 B65D50/00 B65D50/02 B65D50/04 B65D50/10 B65D55/02 B65D77/20 B65D77/30 B65D83/04 B65D83/06 B67B5/00

CPC: B65D47/265 B65D50/04 B65D50/046 B65D2101/0023 B65D2101/0038 B65D83/06

European class: B65D47/26D4 B65D50/04 B65D50/04F2 B65D83/06 L65D101/00A3 L65D101/00A3C

US class: 215/235 220/253 222/153.01 222/153.14 222/153.140P 222/506 222/541.6 222/548

[Classification Explorer](#)

Cited documents: WO9723388 A1, WO9101924 A1, USD415962 S1, USD414698 S1, USD411744 S1, USD410843 S1, USD407645 S1, USD381906 S1, USD370845 S1, USD360134 S1, USD358769 S1, USD304424 S1, US6202902 BA, US6119883 A, US6112921 A, US6059134 A, US6056136 A, US6003712 A, US5975368 A, US5913435 A, US5884790 A, US5875908 A, US5865330 A, US5785213 A, US5680968 A, US5671853 A, US5551608 A, US5494200 A, US5487481 A, US5480045 A, US5464112 A, US5456374 A, US5450972 A, US5388731 A, US5356020 A, US5356018 A, US5339993 A, US5320233 A, US5292019 A, US5261548 A, US5213224 A, US5201440 A, US5183171 A, US5147054 A, US5145080 A, US5141138 A, US5123561 A, US5111947 A, US5100011 A, US5040692 A, US4984700 A, US4969574 A, US4941592 A, US4828127 A, US4782964 A, US4763804 A, US4723391 A, US4648520 A, US4613063 A, US4567991 A, US4557398 A, US4555038 A, US4548331 A, US4524876 A, US4487324 A, US4467931 A, US4437593 A, US4434903 A, US4299339 A, US4113103 A, US4022464 A, US3990615 A, US3990603 A, US3946896 A, US3666138 A, US3342385 A, US3260423 A, US3260422 A, US3237819 A, US3194455 A, US2870935 A, US2131078 A, JPS6122752 U, JPS5497344 U, JPS54176542 U, JPS54109757 U, JP61022752 U1, JP54176542 U1, JP54109757 U1, JP54097344 U1, JP2025456 U1, JP11508520 T2, GB2142323 A1, EP1114781 A2, DE7540150 U, DE29508769 U1, DE2950876, CA85834 A, CA75098 S, CA74903 S, CA74902 S, CA74898 S, CA74897 S, CA74896 S, CA2261017 AA, CA2235250 AA, CA2229928 AA, CA2160429 AA, CA2118622 AA, CA2106884 AA, CA2099145 AA, CA2047916 AA, CA2037417 AA, CA1321775 A1, CA1319334 A1, CA1303521 A1, CA1284128 A1, CA1258657 A1,

Forward Citations: WO14073917, WO13116204, WO11004202, WO10104304, WO10104304, WO09003563, USD726367, USD655792, USD615862, USD604161, USD604160, USD599203, USD587581, USD558583, USD548607, USD548086, USD540171, USD539651, US9771190, US9764882, US9758989, US9578949, US9573743, US9452872, US9278789, US9199773, US9181005, US8985369, US8931652, US8784377, US8662330, US8561857, US8550281, US8424705, US8353869, US8286817, US8281961, US8251263, US8201705, US7841349, US7703617, US7600427, US7494030, US2014376984, US2012103986, US2011049079, US2010176080, US2010145270, US2009320590, US2009236305, US2009152277, US2009101645, US2009064921, US2008190444, US2007278439, US2007144997, US2007108210, US2007090111, US2007084886, US2006278665, US2006228794, US2005224495, US2005029264, KR20100040887, KR101603348, KR101289406, JP2010531781, GB2413788, EP1925562, CN104797505, CN104797505, CN103625785, CN103625785, AU2009101204, AT515768, AT515768,

Abstract:

Source: US2004079765A A dispenser bottle and associated closure has a sifter disposed in the neck thereof, either in the form of castellated vents formed in the interior peripheral edge of the neck or a separate sifter element. A rotatable cap is positioned over the sifter. The cap has holes that align with the vents or holes in the sifter to dispense material from the bottle. A removable lock ring is removeably conjoined to the cap to evidence tampering. One embodiment employs a squeeze tab that is depressed to open the bottle thereby increasing the dexterity required for opening. Another embodiment employs a rotatable sifter that must be held by one hand while the cap is held and rotated relative to the sifter by the other hand. A detent provides resistance to opening.

0) US4682702A – TAMPER INDICATING CLOSURE

41) Family number: 2969313 (US4682702A)

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Title: Tamper indicating closure

Priority: US19860879487 19860627 US19870023832 19870309 US19870026206 19870316

Family:

Publication number	Publication date	Application number	Application date
AU198768171 A1	19880107	AU19870068171	19870130
AU198774250 A1	19880908	AU19870074250	19870615
AU198776199 A1	19880915	AU19870076199	19870728
AU586390 B2	19890706	AU19870074250	19870615
AU586772 B2	19890720	AU19870068171	19870130
DE3715965 A1	19880114	DE19873715965	19870513
DE3727965 A1	19881006	DE19873727965	19870821
FR2600630 A1	19871231	FR19870004803	19870406
FR2612159 A1	19880916	FR19870009933	19870715
FR2612159 B3	19890623	FR19870009933	19870715
FR2612495 A1	19880923	FR19870013119	19870923
FR2612495 B1	19910322	FR19870013119	19870923
GB2192179 A1	19880106	GB19870011140	19870512
GB2193196 A1	19880203	GB19870014628	19870623
GB2193196 B2	19900718	GB19870014628	19870623
GB2202215 A1	19880921	GB19870028807	19871209
GB2202215 B2	19910109	GB19870028807	19871209
GB8711140 A0	19870617	GB19870011140	19870512
GB8714628 A0	19870729	GB19870014628	19870623
GB8728807 A0	19880127	GB19870028807	19871209
JP63012462 A2	19880119	JP19870122679	19870521
JP63232153 A2	19880928	JP19870271970	19871029
JP63232156 A2	19880928	JP19870241042	19870928
NZ221271 A	19890106	NZ19870221271	19870730
US4682702 A	19870728	US19860879487	19860627
US4727999 A	19880301	US19870023832	19870309
US4747498 A	19880531	US19870026206	19870316
ZA8700627 A	19870930	ZA19870000627	19870128
ZA8704211 A	19880224	ZA19870004211	19870611
ZA8705607 A	19890329	ZA19870005607	19870729

Probable Assignee: SUNBEAM PLASTICS CORP

Assignee(s):^(std): SUNBEAM PLASTICS CORP

Assignee(s): SUNBEAM PRODUCTS INC ; FLEET NATIONAL BANK ; SUNBEAM PLASTIC CORP ; SUNBEAM PLASTICS 3245 KANSAS ROAD EVANSVILLE IN 47

Inventor(s):^(std): GACH P P ; GACH PETER P ; PIITAA PII GATSUCHI ; PETER P GACH

Inventor(s): P GACH PETER ; GACH PETER PAUL

Agent(s): GRIFFITH HACK

International class B65D17/40 B65D41/04 B65D47/08 B65D47/10 B65D47/36 B65D51/20
^{(IPC 8-9):} B65D55/08 (Advanced/Invention);
B65D41/04 B65D47/08 (Advanced/Non-invention);
B65D47/00 B65D47/06 B65D51/18 (Core/Invention)

International class B65D101/00 B65D17/40 B65D41/04 B65D41/32 B65D41/34 B65D47/04 B65D47/08 B65D47/36 B65D51/18 B65D51/20 B65D53/02 B65D55/02 B65D55/06 B65D55/08 B65D55/12 B65D85/84

CPC: B65D47/103 B65D51/20 B65D2251/0025 B65D2251/0087 B65D47/0885 B65D2255/20

European class: B65D47/08D4C1 B65D47/10A B65D51/20 L65D251/00Y2J L65D251/00Y6J L65D255/20

US class: 215/232 215/235 215/250 215/254 215/346 220/258.2 220/270 222/541 222/541.9 222/556

[Classification Explorer](#)

Cited documents: US4570811 A, US4558794 A, US4537318 A, US4533058 A, US4519517 A, US4512486 A, US4461394 A, US4453646 A, US4452382 A, US4442949 A, US4361244 A, US4356939 A, US4333578 A, US4310105 A, US4270664 A, US4230230 A, US4022357 A, US3907146 A, US3866782 A, US3734333 A, US3604585 A, US3483355 A, US3459315 A, US3434620 A, US3419181 A, US3285451 A, US3282477 A, US3269617 A, US3223298 A, US3125237 A, US3034680 A, US2869747 A, US2124874 A, GB2192179 A1, GB2189475 A1, GB2166123 A1, GB2068911 A1, GB1503121 A, GB1217145 A, FR2565208 A1, FR1475639 A, FR1126495 A, EP0109593 A2, CH386270 A, BE553753 A, AU6817187 A1, AU6817087 A1, AU6816987 A1,

Forward Citations: WO9528327, WO9319994, WO14101342, WO10044805, WO04087240, WO0230777, WO0154999, WO0024642, USD782696, USD733320, USD682415, USD655807, USD579541, USD576267, USD554253, USD548605, USD548097, USD530603, USD526409, USD509738, USD489624, USD480004, USD476574, US9795165, US9663277, US9505522, US9445631, US9387963, US9321567, US8967428, US8910781, US8857645, US8827094, US8801688, US8746476, US8733600, US8672165, US8627981, US8573423, US8556070, US8511499, US8469223, US8458996, US8448800, US8365933, US8308008, US8221355, US8172805, US8162892, US8152771, US8113374, US8062250, US7967167, US7963409, US7958703, US7942286, US7931163, US7926674, US7878352, US7867200, US7867199, US7832580, US7832579, US7802824, US7721901, US7694845, US7654484, US7648494, US7648038, US7621413, US7621395, US7594909, US7510095, US7481794, US7413097, US7258680, US7243807, US7147623, US7115112, US7070580, US6776314, US6622895, US6530493, US6467638, US6464096, US6457613, US6431381, US6415936, US6394323, US6378716, US6360909, US6253937, US6142334, US6095354, US6089419, US6082568, US6056142, US6045004, US6006960, US6003728, US5992668, US5992659, US5927549, US5853109, US5829610, US5826737, US5769277, US5755360, US5531363, US5462183, US5417350, US5373872, US5348201, US5328058, US5318198, US5246145, US5145646, US5133486, US5072860, US5065911, US5052568, US5000332, US4984716, US4974735, US4942974, US4915290, US4903870, US4872597, US4863061, US4852751, US4819819, US4815618, US4813560, US2017088321, US2014217098, US2013075403, US2012187158, US2012111883, US2011233211, US2011209322, US2011192818, US2011186570, US2010308066, US2010308044, US2010180553, US2010137777, US2010108670, US2010089860, US2009277859, US2009057326, US2008290091, US2008272084, US2008237178, US2008223815, US2008208150, US2008186901, US2008179276, US2008149639, US2008078775, US2007284331, US2007278232, US2007267383, US2007257005, US2007145001, US2007075083, US2007062947, US2007029353, US2007021729, US2006289376, US2006186256, US2006054584, US2005242095, US2005207680, US2005040131, US2004238480, US2004217083, US2004158202, US2003150191, TWI433799, SG100724, RU2485035, JP5875305, JP2013063784, JP2012030849, GB2404916, GB2404916, GB2374068, GB2374068, GB2358626, GB2261426, GB2261426, GB2254071, GB2202215, GB2193196, FR2883261, FR2650253, EP2361197, EP1781550, EP1702859, EP1702859, EP1656306, EP1125852, EP1026100, EP1026100, EP1013562, EP0911273, EP0410913, DE29512058, DE102004063280, DE10131446, CN105129219, CN102951358, AU781402, AU2005266155, AU2001291167,

Abstract:

Source: US4682702A A dispensing closure having a base cap with a top containing a dispensing orifice and a skirt adapted to be attached to a container so that dispensing of the container contents can take place only through the cap orifice. The orifice is sealed with an integrally molded removable disc having a spiral weakening groove which defines a tear strip. Lifting a pull ring attached to the tear strip removes the sealing disc as a spiral strip so that any attempt to hide a previous partial opening by pushing the lifted portion of the strip back in the plane of the disc will be easily detected. A lid attached to the base cap provides easy access to the seal for detecting tampering and removal for use as well as acting to close the orifice after removal of the sealing disc.

42) Family number: 2219860 (US4609115A)

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Title: TAMPER-EVIDENT CLOSURE AND BOTTLE ASSEMBLY**Priority:** CA19860500649 19860130 US19850734580 19850515

Family:	Publication number	Publication date	Application number	Application date
	AU198657316 A1	19861120	AU19860057316	19860509
	AU577015 B2	19880908	AU19860057316	19860509
	CA1282734 A1	19910409	CA19860500649	19860130
	DE3671200 D1	19900621	DE19863671200	19860219
	EP0202728 A2	19861126	EP19860301126	19860219
	EP0202728 A3	19871119	EP19860301126	19860219
	EP0202728 B1	19900516	EP19860301126	19860219
	US4609115 A	19860902	US19850734580	19850515

Probable Assignee: PHOENIX CLOSURES**Assignee(s):**^(std): PHOENIX CLOSURES ; PHOENIX CLOSURES INC**Assignee(s):** PHOENIX CLOSURES INC NAPPERVILLE US ; ZEMLO BRIDGETT ; MOORE DAVID N**Inventor(s):**^(std): MOORE DAVID N ; ZEMLO BRIDGETT**Inventor(s):** ZEMLO BRIDGETT GLENDALE HEIGHTS ILLINOIS 60139 US ; MOORE DAVID N PLAINFIELD ILLINOIS 60544 US ; BRIDGETT ZEMLO ; DAVID N MOORE**Agent(s):** SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; MACRAE AND CO**Designated states:** BE DE FR GB IT NL**International class**
(IPC 8-9): [B65D41/34](#) [B65D55/10](#) (Advanced/Invention);
[B65D41/34](#) (Core/Invention)**International class**
(IPC 1-7): [B65D41/34](#) [B65D55/10](#) [B65D55/12](#)**CPC:** [Y10S215/901](#) [B65D41/3409](#)**European class:** [B65D41/34A1](#)**US class:** [215/252](#) [215/31](#) [215/44](#) [215/901](#)[Classification Explorer](#)**Cited documents:** US4062466 A, US3874540 A, US3504818 A, GB1159029 A, AU8744282 A1, AU6461680 A1, AU1198383 A1,**Forward Citations:** WO9101924, WO15065481, WO02076839, WO02076839, USD534802, USD526565, USD518717, US9611079, US9054478, US8596477, US8517194, US8353413, US8056744, US7581652, US7527160, US6871752, US6640988, US6637611, US6557714, US6491175, US6439412, US6325227, US5593055, US5450972, US5346082, US5318192, US5314085, US5115932, US4871077, US4848613, US4813563, US4771904, US2008169262, US2008164235, US2007187352, US2007034591, US2005269282, US2005252878, US2005199574, US2005103741, US2004055991, US2003146183, EP0281284, AU600846,**Abstract:**

Source: US4609115A A tamper-evident container closure and container assembly with tamper-evident ring which breaks away from the cap as the cap is unscrewed. The cap includes a pawled ring with a plurality of breakable connectors and connection of the pawl tips to the cap providing coupling of the ring to the cap. During assembly, the pawls ride over ratchet teeth on the container breaking the pawl connections to the container. When the cap is removed, the pawls interlock with the ratchet teeth breaking the breakable connectors. The ratchet teeth may be arranged in two sets of teeth offset from one another to provide reduced back-off and reduced back-off torque.

43) Family number: 34143170 (US2007051690A)

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Title: CAP WITH VISIBLE TAMPER-INDICATING SEAL
Priority: US20050222429 20050908 US20050273334 20051114
Family:

Publication number	Publication date	Application number	Application date
GB200622677 A0	20061227	GB20060022677	20061114
<u>GB2432152 A1</u>	20070516	GB20060022677	20061114
<u>US2007051690 AA</u>	20070308	US20050222429	20050908
<u>US2007051691 AA</u>	20070308	US20050273334	20051114

Probable Assignee: BLACKHAWK MOLDING CO INC
Assignee(s):^(std): BLACKHAWK MOLDING CO INC ; HIDDING DOUGLAS J
Assignee(s): BLACKHAWK MOLDING CO
Inventor(s):^(std): HIDDING DOUGLAS J
Inventor(s): DOUGLAS J HIDDING ; HIDDING DOUGLAS
Agent(s): DAVID I ROCHE BAKER AND MCKENZIE LLP; DANIEL A TALLITSCH BAKER AND MCKENZIE LLP
International class
 (IPC B-9): B65D41/00 B65D51/00 B65D51/18 B65D51/20 B65D55/02 (Advanced/Invention);
B65D41/00 B65D51/00 B65D51/18 (Core/Invention)
CPC: B65D55/066 B65D41/045 B65D41/3409 B65D41/46 B65D51/20 B65D2203/02
B65D2251/0015 B65D2251/0093 B65D51/18 B65D55/02 B65D55/024 B65D55/026
European class: B65D41/04D2 B65D41/34A1 B65D41/46 B65D51/18 B65D51/20 B65D55/02 B65D55/02F
B65D55/02G B65D55/06D L65D203/02 L65D251/00Y2D L65D251/00Y6M
US class: 215/232 215/232S 215/252 220/258.1 220/258.100S
[Classification Explorer](#)
Cited documents: US6749078 BB, US6523710 BA, US6152529 A, US5896686 A, US5720392 A, US5704501 A, US5112628 A, US5092477 A, US5005719 A, US4984700 A, US4840281 A, US4822326 A, US4775184 A, US4747500 A, US4747499 A, US4747497 A, US4721217 A, US4666052 A, US4603785 A, US4602785 A, US4576297 A, US4553678 A, US4544073 A, US4526752 A, US4502605 A, US4069935 A, US3758608 A, US3548810 A, US3433380 A, US3019052 A, US2004020889 AA, US1985131 A, US1241171 A, GB2379656 A1, GB1442859 A,
Forward Citations: WO16182217, WO12018994, WO10132767, WO08112221, US9311589, US9181001, US8523024, US8120484, US7967167, US7922961, US7850893, US7694845, US7388506, US2013287905, US2012031871, US2011209322, US2011204099, US2011100947, US2010288721, US2010180553, US2010043910, US2008309495, US2008223813, US2008110774, US2007182564, US2007145001, KR101648361, GB2443185,

Abstract:

Source: US2007051690A The inventions disclosed herein include a clear cap and tamper-indicating seal combination for containers. The preferred cap is at least partially non-opaque to allow a customer to perceive the tamper-indicating seal through the cap at the point of purchase. In a first embodiment, the tamper-indicating seal serves as a label, wherein the customer can perceive, through the cap, information such as printing which is indicative of the contents of the container. In a second embodiment, the tamper-indicating seal serves as a tamper evident seal, wherein the customer can perceive, through the cap, at the point of purchase, whether the seal has been breached. In a third embodiment, the tamper-indicating seal serves as both a label and a seal, wherein the tamper-indicating seal creates a liquid resistant seal between the cap and the opening of the container. In a forth embodiment, the tamper-indicating seal serves as both a label and a tamper evident seal.

44) Family number: 28276447 (US2002134747A)

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Title: TAMPER-EVIDENT PACKAGE**Priority:** US20010815120 20010322 WO2002US08672 20020321

Family:	Publication number	Publication date	Application number	Application date
	AU2002336000 AA	20021008	AU20020336000	20020321
	US2002134747 AA	20020926	US20010815120	20010322
	US6557714 BB	20030506	US20010815120	20010322
	WO02076839 A2	20021003	WO2002US08672	20020321
	WO02076839 A3	20030109	WO2002US08672	20020321

Probable Assignee: CLOSURE SYSTEMS INT INC**Assignee(s):**^(std): ALCOA CLOSURE SYSTEMS INT INC ; BABCOCK DAVID E ; GRAHAM PACKAGING CO L P ; GRAHAM PACKAGING CO ; GRAHAM PACKAGING COMPANY ; SMEYAK LAWRENCE ; HEARLD COY ; SMEYAK LAWRENCE M**Assignee(s):** GRAHAM PACKAGING COMPANY L P ; REYNOLDS GROUP HOLDINGS INC ; ALCOA CLOSURE SYSTEMS INT ; DEUTSCHE BANK CAYMAN ISLANDS BRANCH AG ; DEUTSCHE BANK CAYMAN ISLANDS BRANCH SECOND LIEN CO ; DEUTSCHE BANK CAYMAN ISLANDS BRANCH SECOND LIEN COLLATERAL AGENT AG AS ; CREDIT SUISSE SYDNEY BRANCH ; CLOSURE SYSTEMS INT ; CLOSURE SYSTEMS INT INC ; GRAHAM PACKAGING CO LP ; DEUTSCHE BANK AG ; BANK OF NEW YORK MELLON ; ALCOA CLOSURE SYSTEMS INTERNATIONAL INC ; ALCOA CLOSURE SYSTEMS INTIONAL**Inventor(s):**^(std): BABCOCK DAVID E ; HEARLD COY ; SMEYAK LAWRENCE ; SMEYAK LAWRENCE M**Inventor(s):** LAWRENCE M SMEYAK ; COY HEARLD ; DAVID E BABCOCK**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW**International class**
^(IPC 8-9): [B65D1/02 B65D41/34](#) (Advanced/Invention);
[B65D1/02 B65D41/34](#) (Core/Invention)**International class**
^(IPC 1-7): [B65D1/02 B65D41/34](#)**CPC:** [B65D1/023 B29B2911/1444 B65D41/3409](#)**European class:** [B65D1/02D1 B65D41/34A1](#)**US class:** [215/252 215/258](#)[Classification Explorer](#)**Cited documents:** WO02076839 A2, US6112923 A, US6109465 A, US6085921 A, US6056136 A, US6044992 A, US5950850 A, US5915579 A, US5860542 A, US5829611 A, US5480045 A, US5346082 A, US5314085 A, US5307946 A, US5205426 A, US5190177 A, US4978017 A, US4818828 A, US4813561 A, US4638917 A, US4635808 A, US4630743 A, US4609115 A, US4592476 A, US4534480 A, US4497765 A, US4423820 A, US4418828 A, US4345691 A, US4345690 A, US4180175 A, US3904061 A, US3415403 A, US3199702 A, US2423582 A, PCTUS0208672, GB2311060 A1, GB2304337 A1, GB2068912 A1, GB1054308 A, GB1052734 A, EP0330964 A2, EP0008190 A1,**Forward Citations:** WO09154666, WO08095842, WO07085896, WO07033722, USD791591, USD790344, USD760081, USD756777, USD734155, USD723370, USD703057, USD690599, USD644536, USD634200, USD634199, USD633386, USD576877, USD534802, USD518717, US9738409, US9731869, US9586738, US9533802, US9522759, US9403310, US9399534, US9309032, US9211967, US9181001, US8807360, US8763830, US8672158, US8517194, US8317042, US8231020, US8123056, US8091724, US7891510, US7703617, US7637384, US7575123, US7451898, US6557714, US2013313287, US2013075354, US2012091134, US2012031871, US2011024423, US2011011736, US2010326947, US2010288765, US2010178148,

US2010126990, US2010116771, US2009152229, US2009045158, US2008302799,
US2008264894, US2008017642, US2007034590, US2006163189, US2005252878,
US2005199574, US2005167389, US2005072751, US2004168999, US2004155006,
US2004094501, US2004060385, US2004045925, TWI572534, EP2670674,
AU2012213170, AU2012213170,

Abstract:

Source: US2002134747A A tamper-evident package includes a plastic closure having a top wall portion, a depending annular skirt portion, and a tamper band at least partially detachably connected to the skirt portion. The package further includes a container having a neck portion configured for tamper-indicating cooperation with the projections on the tamper band. The container includes a plurality of circumferentially spaced ratchet-like locking teeth, each of which presents a locking surface for interfering engagement with a respective one of the projections of the closure tamper band. The arrangement is particularly configured to promote rapid tamper-indication attendant to relatively little rotation of the closure relative to the container.

0) US2009200259A – PLASTIC PLUG WITH OVERCAP, INCLUDING WRENCH AND...

45) Family number: 43607179 (US2009200259A)

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Title: PLASTIC PLUG WITH OVERCAP, INCLUDING WRENCH AND METHOD

Priority: US20080028341 20080208 US20100868035 20100825

Family:	Publication number	Publication date	Application number	Application date
	AU2009200351 AA	20090827	AU20090200351	20090130
	CA2651149 AA	20090808	CA20092651149	20090122
	EP2088089 A1	20090812	EP20090250253	20090130
	MX2009001010 A1	20090828	MX20090001010	20090126
	US2009200259 AA	20090813	US20080028341	20080208
	US2010314391 AA	20101216	US20100868035	20100825
	US8061543 BB	20111122	US20080028341	20080208
	US8066139 BB	20111129	US20100868035	20100825

Probable Assignee: RIEKE CORP

Assignee(s):^(std): RIEKE CORP ; BAUGHMAN GARY M

Assignee(s): CEQUENT CONSUMER PRODUCTS INC ; CEQUENT PERFORMANCE PRODUCTS INC SUCCESSOR TO CEQUENT ELECTRICAL PRODUCTS INC CEQUENT TOWING PRODUCTS INC CEQUENT TRAILER PRODUCTS INC FULTON PERFORMA ; COMPAC CORP ; ARMINAK AND ASSOCIATES LLC ; ARROW ENGINE CO ; TRIMAS CORP ; JPMORGAN CHASE BANK NA COLLATERAL AGENT AS ; INNOVATIVE MOLDING ; LAMONS GASKET CO ; MONOGRAM AEROSPACE FASTENERS INC ; NI IND INC ; NORRIS CYLINDER CO ; RIEKE ARMINAK CORP ; RIEKE LEASING CO INC ; TRIMAS CO LLC ; TRIMAS INT HOLDINGS LLC ; TRIMAS SUCCESSOR TO MASCO TECH INC CORP

Inventor(s):^(std): BAUGHMAN GARY M

Inventor(s): GARY M BAUGHMAN

Agent(s): SPRUSON AND FERGUSON; WILLIAMS MICHAEL IAN; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP TRIMAS CORP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK TR

International class
(IPC 8-9): [B25G3/00 B65B7/28 B65D39/00 B65D39/08 B65D41/34 B65D43/00 B65D50/00 B65D51/18 B65D55/02 B67B7/18](#) (Advanced/Invention);
[B25G3/00 B65B7/00 B65B7/28 B65D39/00 B65D41/34 B65D43/00 B65D50/00 B65D51/00 B65D51/18 B65D55/00 B65D55/02](#) (Core/Invention)

CPC: [B65D39/082 B65D2101/0023](#)

European class: [B65D39/08A L65D101/00A3](#)

US class: [215/217 215/228 215/230 215/230S 215/254 215/254S 215/364 215/364S 220/212 220/254.1 220/254.2 220/254.200P 220/254.8 220/288 220/288S 53/490 53/490S 81/3.29](#)

[Classification Explorer](#)

Cited documents: WO9961334 A1, WO04496656 A1, WO04096656 A1, WO0138177 A2, WO0050311 A1, USD533329 S1, USD315309 S1, US6968968 BB, US6726048 BB, US6360908 BA, US6247605 BA, US5996833 A, US5971195 A, US5971189 A, US5971183 A, US5875907 A, US5862936 A, US5829611 A, US5823377 A, US5735419 A, US5680953 A, US5215220 A, US5080245 A, US5005718 A, US4948006 A, US4872570 A, US4795058 A, US4779766 A, US4711365 A, US4588103 A, US4416661 A, US4359169 A, US4310102 A, US4306357 A, US4281972 A, US4271972 A, US4236646 A, US4211333 A, US4196819 A, US4164304 A, US4105135 A, US4002259 A, US3987929 A, US3891118 A, US3845872 A, US3838785 A, US3817420 A, US3811174 A, US3744654 A, US3684125 A, US3556332 A, US3405837 A, US3187860 A, US3122261 A, US2962185 A, US2007158296 AA, US2006186077 AA, US2006102583 AA, US2006092013 AA, US2005258129 AA, US2005242018 AA, US2005133508 AA, US2005056645 AA, US2003071007 AA, US2002112867 AA, US1997203 A, US1982144

A, US1845078 A, US1656228 A, US1645675 A, GB1256081 A, FR2439721 A1, EP2017185 A2, EP0725013 A1, EP0286230 A1, DE29821764 U1, DE20105917 U1, DE1478847 A1,

Forward Citations: USD671384, USD638194, US9578765, US2014061250, US2010018737,

Abstract:

Source: US2009200259A A closure for a container opening according to one embodiment comprises a plug including a series of projections and being constructed and arranged to be received within the container opening and an overcap constructed and arranged for being attached to the plug so as to close off an interior of the plug and create an assembly. The projections being constructed and arranged for interfit with a specialized wrench socket for threadedly advancing the plug into the container opening.

Title: TAMPER EVIDENT CLOSURE**Priority:** NZ20100586982 20100723

Family:	Publication number	Publication date	Application number	Application date
	AU2011204806 AA	20120209	AU20110204806	20110718
	US2012018401 AA	20120126	US20110187069	20110720
	US8499950 BB	20130806	US20110187069	20110720

Probable Assignee: WIN CHRISTOPHER**Assignee(s):**^(std) WIN CHRISTOPHER ; WIN CHRISTOPHER CAMPBELL**Inventor(s):**^(std) WIN CHRISTOPHER CAMPBELL**Agent(s):** PIPERS; YOUNG AND THOMPSON**International class** [B28B11/08 B65D41/04 B65D41/32 B65D41/34 B65D55/00 B65D55/08](#) (Advanced/Invention)
(IPC 8-9).**CPC:** [B65D41/3428](#)**European class:** [B65D41/34C1](#)**US class:** [215/252 220/266 425/385 425/385S](#)[Classification Explorer](#)**Cited documents:** WO9426609 A1, US6325226 BA, US5979682 A, US5913437 A, US5829613 A, US5607075 A, US5346082 A, US5307945 A, US4784281 A, US4687114 A, US4337870 A, US4322012 A, US2864521 A, US2006138073 AA, US2004060893 AA, US2002033374 AA, US2001027957 AA, GB2268169 A1, GB2265890 A1,**Forward Citations:** USD756776, USD756234, USD737679, USD736634, USD727730, USD723919, KR101199710,**Abstract:**

Source: US2012018401A A tamper evident closure (TEC) includes a closure cap and at least one tamper evident ring forming a recessed space therein. The ring has a body attached by at least one frangible bridge member to the cap. The ring includes at least one protrusion member spaced there around such that the protrusion members are formed by being stamped to protrude into the recessed space. Also described is a related protrusion member forming apparatus. The apparatus including a base end and forming end, and the forming end including shaped protuberances which during use cause a stamping or deforming action with respect to a holding action on an inner ring member and outer ring member of a tamper evident ring of a tamper evident closure, to form the protrusion members in the inner ring member. There is also included a method of manufacture of a tamper evident closure TEC.

47) Family number: 2149938 (US4756438A)

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Title: Container with threaded closure and tamper-evident feature
Priority: CA19870538582 19870602 GB19860014734 19860617
Family:

Publication number	Publication date	Application number	Application date
AU198774092 A1	19871224	AU19870074092	19870610
BRPI8702993 A	19880308	BR1987PI02993	19870612
CA1294578 A1	19920121	CA19870538582	19870602
CN87104228 A	19880210	CN19871004228	19870612
DK305587 A	19871218	DK19870003055	19870616
DK305587 A0	19870616	DK19870003055	19870616
EP0250065 A2	19871223	EP19870302529	19870324
EP0250065 A3	19880330	EP19870302529	19870324
GB2191766 A1	19871223	GB19860014734	19860617
GB8614734 A0	19860723	GB19860014734	19860617
JP63022355 A2	19880129	JP19870148124	19870616
NZ220421 A	19900528	NZ19870220421	19870525
PH23726 A	19891103	PH19870035407	19870615
US4756438 A	19880712	US19870063206	19870617
ZA8703784 A	19871123	ZA19870003784	19870526

Probable Assignee: W R GRACE AND CO CONN

Assignee(s):^(std): GRACE W R AND CO

Assignee(s): GRACE WR AND CO ; RYDER GEOFFREY A ; W R GRACE AND CO ; W R GRACE AND CO CONN ; W R GRACE AND CO A CORP OF CT ; WR GRACE AND CO ; WR GRACE AND CO CONN ; GRACE AND CO W R

Inventor(s):^(std): JIEFURII ARAN RAIDAA ; RYDER GEOFFREY A ; RYDER GEOFFREY ALAN ; RYDER GEOFFREY ALLEN ; ALLEN RYDER GEOFFREY

Inventor(s): GEOFFREY ALAN RYDER ; GEOFFREY ALLEN RYDER

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SMART AND BIGGAR

Designated states: AT BE CH DE ES FR GB GR IT LI LU NL SE

International class
(IPC 8-9): [B65D41/34](#) [B65D55/06](#) (Advanced/Invention);
[B65D41/34](#) (Core/Invention)

International class
(IPC 1-7): [B65D23/00](#) [B65D41/34](#) [B65D55/02](#) [B65D55/06](#) [B65D55/08](#) [B65D55/12](#)

CPC: [B65D41/3447](#)

European class: [B65D41/34D1](#)

US class: [215/252](#)

[Classification Explorer](#)

Cited documents: US4699285 A, US4530438 A, US4448318 A, US4156490 A, US3484012 A, FR2352719 A1,

Forward Citations: US9738409, US9522759, US9403310, US9399534, US9139326, US9033168, US8857637, US8308005, US8292102, US7645414, US7235207, US6753088, US6659297, US6325227, US5967351, US5950849, US5860542, US5853097, US5819965, US5755346, US5450972, US5402901, US5271512, US5137163, US5074425, US4923073, US4805791, US2010178148, US2009188888, US2008314856, US2007210026, US2007181525, US2004124169, JP7000848, JP5081045, JP2604081, EP2240371, EP0801005, DE102006027097, CN104428210, CN104428210, CN104071409, CN104071408,

Abstract:

Source: US4756438A The present invention relates to a tamper-evident container having a threaded neck to receive a threaded closure having a tamper evident feature. The container has a tamper-evident feature bead for retaining the feature on the container. The bead has one or more outwardly and downwardly shaped bulges which, as the closure is twisted off, apply a localized rupturing force on the tamper-evident feature so as to tear the feature away from the closure.

48) Family number: 3123928 (US4598833A)

© PatBase

Title: Tamper-evident child-resistant closure**Priority:** CA19860515113 19860731 US19850770681 19850829

Family:	Publication number	Publication date	Application number	Application date
	CA1272984 A1	19900821	CA19860515113	19860731
	DE3683570 D1	19920305	DE19863683570	19860512
	EP0214711 A1	19870318	EP19860303610	19860512
	EP0214711 B1	19920122	EP19860303610	19860512
	US4598833 A	19860708	US19850770681	19850829

Probable Assignee: KERR GROUP INC**Assignee(s):^(std):** KERR GLASS MFG CORP**Assignee(s):** KERR GLASS MFG CORP LOS ANGELES CALIF US ; KERR GROUP INC ; NATIONSBANK NA ; WELLS FARGO BANK NATIONAL ASSOCIATION ; SAFFRON ACQUISITION CORP ; SUN COAST IND ; PLASTICS FUNDING CORP ; SETCO LLC ; TUBED PRODUCTS LLC ; BERRY PLASTICS CORP ; DEUTSCHE BANK TRUST CO ; HERR JAMES ELLIS ; KERR GLASS MFG**Inventor(s):^(std):** HERR JAMES E ; HERR JAMES ELLIS**Inventor(s):** HERR JAMES ELLIS EAST PETERSBURG PENNSYLVANIA 1752 ; HERR JAMES ELLIS EAST PETERSBURG PENNSYLVANIA...**Agent(s):** MACRAE AND CO**Designated states:** DE GB**International class** [B65D41/34](#) [B65D50/04](#) [B65D55/02](#) ^(Advanced/Invention) ;
^(IPC 8-9) [B65D41/34](#) [B65D50/00](#) ^(Core/Invention)**International class** [B65D55/02](#)
^(IPC 1-7) :**CPC:** [B65D41/3423](#) [B65D50/041](#)**European class:** [B65D41/34C](#) [B65D50/04B](#)**US class:** [215/220](#) [215/258](#)[Classification Explorer](#)**Cited documents:** WO8501271 A1, US4546892 A, US4527701 A, US4506795 A, US4474301 A, US4470513 A, US4330067 A, US4165813 A, US3968894 A, US3926326 A, US3863796 A, US3776407 A, GB2142612 A1, GB2141697 A1, EP0137352 A2, EP0049876 A1,**Forward Citations:** WO9106486, WO9106486, WO16162777, WO12154891, WO12154891, WO12154887, USD747201, US9630753, US9624004, US9604760, US9586738, US9550610, US9045265, US8777030, US8534476, US8231025, US8109396, US8056742, US7882977, US7611025, US7344039, US7207976, US6929137, US6673298, US6382444, US6371317, US6029834, US5813553, US5749484, US5609262, US5477972, US5280842, US4981230, US4771923, US2013026126, US2012085725, US2011155758, US2011139742, US2010288765, US2010126996, US2009032486, US2009014404, US2007181578, US2007017891, US2005189312, US2005173367, US2005116382, US2004262251, US2004243072, FR2687378, EP2722288, EP1863724, EP0454295, EP0307169, EP0299170, CN104309919,**Abstract:**

Source: US4598833A A child-resistant, tamper-evident closure having nested inner and outer caps with ratchet teeth on the interfacing skirt walls of the respective caps to cooperate to fasten the closure onto the container, and ratchet teeth on the interfacing top walls of the respective caps for removal of the closure upon simultaneous application of torque and a downward force. The inner cap further includes a tamper-indicating ring depending from the lower edge of its skirt, the ring including a breakable connection for detachably securing the lower portion thereof to the inner cap skirt. A plurality of tabs extending upwardly and radially inwardly from the ring engage an annular shoulder on the container during the removal of the closure to break the ring away from the inner cap skirt.

49) Family number: 13136187 (US5667088A)

© PatBase

Title: Container closures
Priority: GB19930020389 19931004

Family:	Publication number	Publication date	Application number	Application date
	GB2282367 A1	19950405	GB19940019968	19941004
	GB2282367 B2	19970507	GB19940019968	19941004
	GB9320389 A0	19931124	GB19930020389	19931004
	GB9419968 A0	19941116	GB19940019968	19941004
	US5667088 A	19970916	US19940317999	19941004

Probable Assignee: BEESON AND SONS LTD

Assignee(s):^(std): BEESON AND SONS LTD

Assignee(s): BEESON AND SONS LIMITED

Inventor(s):^(std): KING ROGER MILNER ; KING WITNEY MILNER

Inventor(s): ROGER MILNER KING ; WITNEY MILNER KING

International class
 (IPC 8-9): [B65D41/34](#) (Advanced/Invention);
[B65D41/34](#) (Core/Invention)

International class
 (IPC 1-7): [B65D41/34](#)

CPC: [B65D41/34](#) [B65D41/3409](#) [B65D41/3447](#)

European class: [B65D41/34](#) [B65D41/34A1](#) [B65D41/34D1](#)

US class: [215/221](#) [215/252](#) [215/334](#) [215/44](#)

[Classification Explorer](#)

Cited documents: WO9411267 A2, WO9301098 A2, WO9118799 A2, WO9101925 A1, US5219084 A, US5213225 A, US5103991 A, US5050754 A, US4936474 A, US4905852 A, US4813562 A, US4813561 A, US4770308 A, US4746026 A, US4731512 A, US4679696 A, US4658977 A, US4591063 A, US4562931 A, US4524876 A, US4493427 A, US4469235 A, US4387822 A, US4310101 A, US4289248 A, US4273248 A, US4157144 A, US4147268 A, US3944102 A, US3941268 A, US3924769 A, US3737064 A, US3581926 A, US3347403 A, GB2262280 A1, GB2261656 A1, GB2163732 A1, GB2134873 A1, FR2572369 A1, FR2558443 A1, FR2036272 A5, EP0117948 A1, DE3605963 A1,

Forward Citations: USD525523, USD525125, USD449991, US7775386, US6227391, US6015054, US5954094, US5915579, US5860542, US5819965, US2008142469, US2006021959, GB2379656, FR2779702, EP1122183,

Abstract:

Source: US5667088A A container closure assembly comprises a container neck, a closure for the neck and a tamper evident ring frangibly coupled to the closure and retained on the neck when the closure is removed from the neck, wherein the tamper-evident ring has a generally non-circular shape. Preferably, the tamper-evident ring is substantially polygonal, e.g. substantially square, with outwardly curved sides and arcuate corners. The tamper-evident ring is retained on the neck by hooks that abut against a shoulder on the container neck.

50) Family number: 2026415 (US4546893A)

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Title: Tamper-evident closure cap construction
Priority: CA19850489501 19850827 GB19850020466 19850815 US19840663549 19841022
Family:

Publication number	Publication date	Application number	Application date
CA1284129 A1	19910514	CA19850489501	19850827
GB2165825 A1	19860423	GB19850020466	19850815
GB2165825 B2	19890601	GB19850020466	19850815
GB2206568 A1	19890111	GB19880009066	19880418
GB2206568 B2	19890524	GB19880009066	19880418
GB8520466 A0	19850918	GB19850020466	19850815
GB8809066 A0	19880518	GB19880009066	19880418
US4546893 A	19851015	US19840663549	19841022

Probable Assignee: LASALLE NATIONAL BANK

Assignee(s):^(std): STULL G ; STULL GENE

Assignee(s): STULL TECHNOLOGIES INC ; GENE STULL ; LASALLE NATIONAL BANK ; LASALLE NATIONAL BANK A NATIONAL BANKING ASSOCIATI

Inventor(s):^(std): STULL GENE

Inventor(s): GENE STULL

Agent(s): SMART AND BIGGAR

International class [B65D1/02](#) [B65D41/34](#) [B65D55/02](#) (Advanced/Invention);
^{(IPC 8-9):} [B65D41/34](#) (Core/Invention)

International class [B65D1/02](#) [B65D55/02](#)
^{(IPC 1-7):}

CPC: [B65D41/3447](#)

European class: [B65D41/34D1](#)

US class: [215/252](#) [215/253](#) [215/256](#) [D9/454](#)

[Classification Explorer](#)

Cited documents: US4513870 A, US4494663 A, US4485934 A, US4478343 A, US4402415 A, US4385708 A, US4352436 A, US3673761 A, US3650428 A, US3465906 A, US2987206 A, US2125788 A, GB1511582 A,

Forward Citations: US7228979, US6793082, US6422866, US6170720, US6039218, US5685444, US5680965, US5456374, US5121859, US5088613, US5046646, US5009323, US5005720, US2004076918, KR101125822,

Abstract:

Source: US4546893A A tamper-evident plastic closure cap construction which is intended to provide to the consumer a distinctive visual alerting indication in the event that the container has been previously opened or tampered with, comprising a closure portion and a base portion, the latter being snapped into position on the container and held permanently thereon by means of cooperable retainer shoulders. The closure portion seals off the dispensing orifice of the container in a usual manner. Joining the closure portion to the base portion are multiple frangible webs associated with an indicator ring which normally occupies a first or depressed position prior to opening of the container. When the closure portion is initially turned or otherwise disturbed, the frangible webs break, and their resilience causes the ring to shift laterally by a significant amount to a second or raised position, which attracts the attention of one handling the container. The ring thus provides a more pronounced indication of possible tampering than all previous constructions which depended solely on breakage of one or more relatively small webs to reveal tampering.

Title: TAMPER–EVIDENT CLOSURE**Priority:** GB20110019311 20111108 WO2012GB52780 20121108

Family:	Publication number	Publication date	Application number	Application date
	CN103906689 A	20140702	CN201280054548	20121108
	CN103906689 B	20160217	CN201280054548	20121108
	CO6950457 A2	20140520	CO20140097912	20140507
	EP2776335 A1	20140917	EP20120805730	20121108
	GB201119311 A0	20111221	GB20110019311	20111108
	JP2014534136 T2	20141218	JP20140539412T	20121108
	JP6068489 B2	20170125	JP20140539412T	20121108
	MX2014005511 A1	20140709	MX20140005511	20121108
	PE20332014 A1	20150110	PE20140000653	20121108
	RU2014115230 A	20151220	RU20140115230	20121108
	RU2636376 C2	20171122	RU20140115230	20121108
	US2014048537 AA	20140220	US20120824981	20121108
	US9033169 BB	20150519	US20120824981	20121108
	WO13068750 A1	20130516	WO2012GB52780	20121108

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH ; OBRIST KLOUZHES SVITTSERLAND GMBKH**Inventor(s):^(std):** MCPHERSON ALEXANDER DONALD MEIKLEM**Inventor(s):** ALEXANDER DONALD MEIKLEM MCPHERSON ; MAKFERSON ALEKSANDR DONALD MEJKLEM**Agent(s):** JAIME EDUARDO DELGADO VILLEGAS; LICHOTA CATHERINE MARGARET TIMMIS; OZAWA SEIJI; HIROTA MASANORI; PATENTIKA; ALLEMAN HALL MCCOY RUSSELL AND TUTTLE LLP; BRYERS LLP ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B65D41/34](#) [B65D41/48](#) [B65D41/62](#) [B65D47/12](#) [B65D47/14](#) [B65D47/36](#) [B65D49/04](#) [B65D51/18](#) [B65D55/02](#) (Advanced/Invention)**CPC:** [B65D41/3428](#) [B65D49/04](#) [B65D51/18](#) [B65D55/02](#) [B65D2101/0023](#) [B65D2101/0038](#) [B65D47/123](#)**US class:** [215/256](#) [220/276](#)[Classification Explorer](#)**Cited documents:** WO09141581 A1, WO09128095 A1, WO09010722 A1, WO08110917 A1, WO06117505 A1, WO05049449 A1, WO03104100 A1, WO02096771 A1, US7703642 BB, US6908013 BB, US6321924 BA, US5738231 A, US5711443 A, US5711443, US3871545 A, US2007090110 AA, US2007090110, US20070090110, US05711443, JP59109648 A2, JP59109648, GB2450940 A1, GB2158424 A1, GB1408797 A, FR2722478 A1, EP2178771 B1, EP2178771 A1, EP1717160 A1, CN1616312 A, CN101743176 A,**Forward Citations:** WO17150569, WO17115193, US9815598, US2016347520, US2016214770, CN104210755, CN104210755, CN104210754, CN104210754,

Abstract:

Source: US2014048537A A tamper-evident closure for a container comprises a first portion and a second portion, the first portion being connected or connectable to the second portion and removable therefrom. The closure is movable upon a first opening from a first position in which the portions are in a first relative relation to a second position in which they are in a second relative relation. The closure comprises means for preventing the portions from returning to the first position. The closure comprises a removable retention member which attaches the first and second portions together such that the member must be removed before the portions can be separated from each other.

52) Family number: 2144149 (US4487324A)

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Title: Tamper-evident dispensing closure

Priority: CA19840467735 19841114 US19840578026 19840208

Family:

Publication number	Publication date	Application number	Application date
<u>AU198435654 A1</u>	19850815	AU19840035654	19841119
<u>CA1224440 A1</u>	19870721	CA19840467735	19841114
<u>EP0151242 A2</u>	19850814	EP19840113820	19841114
<u>EP0151242 A3</u>	19870527	EP19840113820	19841114
<u>MX161954 A</u>	19910308	MX19840203453	19841121
<u>US4487324 A</u>	19841211	US19840578026	19840208

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s):^(std): PITTWAY CORP ; SEAQUIST CLOSURES

Assignee(s): SEAQUIST CLOSURES A DIV OF PITWAY CORP ; SEAQUIST CLOSURES FOREIGN INC ; APTARGROUP INC ; OSTROWSKY EFREM M

Inventor(s):^(std): OSTROWSKY EFREM M

Inventor(s): EFREM M OSTROWSKY

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; FETHERSTONHAUGH AND CO

Designated states: DE FR GB IT NL

International class
(IPC 8-9): B65D47/08 B65D55/02 (Advanced/Invention);
B65D47/08 (Core/Invention)

International class
(IPC 1-7): B65D47/08 B65D55/02 B65D55/06

CPC: B65D47/0814 B65D2101/0038 B65D2255/20

European class: B65D47/08B1A L65D101/00A3C L65D255/20

US class: 215/225 215/235 215/253

[Classification Explorer](#)

Cited documents: US4420089 A, US4377247 A, US4345691 A, US4220248 A, US4170315 A, US3877598 A, US3441161 A, US2950834 A, US2913134 A, FR1453863 A, EP0141591 A2, DE2649218 A1,

Forward Citations: WO9857864, WO9426610, WO9319994, WO12034175, WO10004195, WO10004195, WO06026836, WO02062675, WO0076875, WO0041943, WO0018654, USD747201, USD737684, USD713724, USD711230, USD644741, USD637731, USD634441, USD632402, USD440494, US9650185, US9650184, US9630753, US9546027, US9511906, US9475619, US9090386, US8777030, US8733566, US8302793, US8256643, US7837052, US7766197, US7611025, US7556162, US7513399, US7510095, US7370773, US7299937, US7243807, US7044317, US6988642, US6971531, US6655553, US6644487, US6631820, US6564958, US6530493, US6419101, US6405885, US6347716, US6253938, US6253937, US5992659, US5875907, US5863791, US5829610, US5813553, US5785209, US5588546, US5497906, US5464112, US5462183, US5460282, US5437383, US5435456, US5427260, US5407087, US5392938, US5386918, US5368176, US5356018, US5320235, US5257708, US5238134, US5201440, US5145646, US5143234, US5127537, US5123561, US5115931, US5083671, US5067624, US5012940, US4984716, US4974735, US4852770, US4848612, US4832219, US4813560, US4793502, US4787525, US4722449, US4717033, US4709823, US4696408, US4621744, US2016052695, US2015266632, US2014367352, US2014312038, US2013087523, US2013068765, US2011108509, US2011017740, US2011000871, US2010122254, US2009166361, US2009071927, US2009032534, US2008302802, US2008203106, US2008073311, US2008011704, US2007199962, US2007199959, US2007170193, US2007102390, US2007102389, US2006186079, US2006186078, US2006043052, US2005173368, US2005173367, US2005116382, US2005051508,

US2005045495, US2005040131, US2004245206, US2004118848, US2004079765,
US2003205549, ITRE20110089, GB2362878, GB2189475, FR2933386, FR2720722,
FR2610599, EP2586722, EP1955963, EP1932658, EP1847469, EP1834892,
EP1799574, EP1786695, EP1292508, EP1140646, EP0685406, EP0657700,
EP0569747, EP0328809, EP0210138, EP0141591, DE8705035, DE3906570,
DE19645892, DE19645892, CN103201184, CN102951354, CN102941970,
CN102582946, CN102582946, AU704162, AU2005282233,

Abstract:

Source: US4487324A A dispensing package having a tamper-evident dispensing closure. A tamper-indicating removable strip is integrally formed with the closure and is secured to one of the closure body and closure cover via frangible bridging means. The closure hingedly connects the cover and body. The body defines a dispensing orifice and the cover seals the orifice. The strip defines spaces and the other one of the body and cover defines projections which extend into the spaces to resist relative movement of the body and cover unless the frangible bridging means are severed and thereby shows that access has been gained to the dispensing orifice. The closure is preferably generally circular and the tamper-indicating means are preferably within the perimeter of the closure.

53) Family number: 20582854 (WO9735773A3)

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Title: SNAP-ON, TWIST-OFF CONTAINER CLOSURE ASSEMBLIES
Priority: GB19960006041 19960322 WO1997GB00798 19970321
Family:

Publication number	Publication date	Application number	Application date
AU199720378 A1	19971017	AU19970020378	19970321
GB2311285 A1	19970924	GB19960006041	19960322
GB9606041 A0	19960522	GB19960006041	19960322
WO9735773 A2	19971002	WO1997GB00798	19970321
WO9735773 A3	19971231	WO1997GB00798	19970321

Probable Assignee: BEESON AND SONS LTD

Assignee(s):^(std): BEESON AND SONS LTD ; KING ROGER MILNER

Assignee(s): BEESON AND SONS LIMITED

Inventor(s):^(std): KING ROGER MILNER ; ROGER MILNER KING

Designated states: AL AM AT AU AZ BA BB BE BF BG BR BY CA CH CN CU CZ DE DK EE ES FI FR GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN YU

International class
 (IPC 8-9): [B65D41/04 B65D41/17 B65D41/34](#) (Advanced/Invention);
[B65D41/02 B65D41/04 B65D41/34](#) (Core/Invention)

International class
 (IPC 1-7): [B65D41/04 B65D41/17 B65D41/34](#)

CPC: [B65D41/0414 B65D41/0421 B65D41/045 B65D41/0471 B65D41/17 B65D41/3447](#)

European class: [B65D41/04B1 B65D41/04B1A B65D41/04D2 B65D41/04E B65D41/17 B65D41/34D1](#)

[Classification Explorer](#)

Cited documents: WO9420380 A1, WO9411267 A2, WO9307070 A1, WO9301098 A2, US5553727 A, US5190178 A, US5057365 A, US4818577 A, US3901404 A, US3568871 A, GB2290782 A1, GB2277080 A1, GB2166422 A1, GB2136408 A1, EP0565130 A1,

Forward Citations: WO9903747, WO07031162, WO03076294, WO03045806, WO03045805, WO0155000, US8141793, US7246713, US7182213, US7114625, US7114625, US6991123, US6527132, FR2837173, EP1534595, EP1282562, CN104071409, CN104071408, AU731348, AU2002343032,

Abstract:

The invention provides snap-on, twist-off container closure assemblies including one or more of the following features: (1) a sealing plug on the closure for insertion into the container neck, said plug having an outer annular sealing recess or sealing rib for engagement with an annular sealing rib or sealing recess on the inside of the container neck to form a seal; (2) complementary first and second locking elements on the container neck and the closure which engage to resist twisting-off of the closure from the neck until a predetermined minimum opening torque is applied to the closure, the assembly further comprising an alignment means to align the first and second locking elements when the closure is snap-fitted onto the container neck; and (3) ramped first and second thread segments on the container neck and the closure to reduce the axial force required to snap the closure onto the container neck relative to the axial force required to snap the closure off the container neck; and (4) a sealing web on the container neck and a compressible sealing wad in the base of the closure to form a seal with the container neck after removal of the sealing web.

54) Family number: 2901292 (US4813563A)

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Title: Tamper resistant, tamper evident leak proof container
Priority: CA19880565083 19880426 US19870043904 19870427 US19880176529 19880401
Family:

Publication number	Publication date	Application number	Application date
CA1314840 A1	19930323	CA19880565083	19880426
EP0357666 A1	19900314	EP19880904128	19880425
EP0357666 A4	19900627	EP19880904128	19880425
US4813563 A	19890321	US19870043904	19870427
US4871077 A	19891003	US19880176529	19880401
WO8808396 A1	19881103	WO1988US01266	19880425

Probable Assignee: DOXTECH INC
Assignee(s):^(std): DIXON WILLIAM C ; DOXTECH INC ; OGDEN STANLEY D
Assignee(s): DOXTECH INC FRESNO
Inventor(s):^(std): DIXON WILLIAM C ; OGDEN STANLEY D
Agent(s): SMART AND BIGGAR
Designated states: DE DK FR GB IT JP KR NL NO SE
International class [B65D17/40 B65D39/00 B65D39/08 B65D39/10 B65D47/36 B65D55/02](#) (Advanced/Invention);
 (IPC 8-9): [B65D39/00 B65D47/00](#) (Core/Invention)
International class [B65D17/40 B65D39/00 B65D39/08 B65D39/10 B65D55/02](#)
 (IPC 1-7):
CPC: [B65D39/0076 B65D47/36 B65D2101/0023 B65D2539/005](#)
European class: [B65D39/00G4 B65D47/36 L65D101/00A3 L65D339/04 L65D539/00Y4](#)
US class: [215/253 215/307 215/355 215/365 215/366 220/254 220/254.1 220/266](#)

[Classification Explorer](#)

Cited documents: US4630743 A, US4609115 A, US4597500 A, US4592476 A, US4592475 A, US4588100 A, US4548329 A, US4541536 A, US4534480 A, US4461391 A, US4452364 A, US4399920 A, US4231486 A, US4098422 A, US3898046 A, US3629873 A, US3567061 A, US3374911 A, US3348719 A, FR1208746 A, FR1131300 A, FR1007350 A,

Forward Citations: WO16200361, WO08055955, WO05115869, USRE43077, USD537675, USD509135, USD507934, USD494470, US9586733, US9586533, US9409176, US9254929, US9010568, US8894951, US8865458, US8827107, US8695841, US8556106, US8394626, US7806044, US7789264, US7789263, US7674248, US7585292, US7560272, US7309010, US7243814, US7115115, US6948631, US6783020, US6725589, US6673055, US6672477, US6626877, US6619790, US6494869, US6368310, US6358232, US6244311, US6233856, US6088561, US6073373, US6000566, US5937554, US5918443, US5892174, US5611429, US5554151, US5520041, US5501839, US5489034, US5429268, US5310261, US5188253, US5147054, US5110004, US2016185305, US2016016704, US2011284535, US2011178424, US2011036852, US2011000910, US2010133285, US2010028981, US2009056556, US2008173654, US2008125673, US2008112847, US2007209331, US2006091669, US2005150858, US2005127076, US2005101922, US2004204693, US2004143228, US2004132091, US2004117060, US2004094552, US2004094549, US2004059303, US2002179615, GB2349631, GB2240330, FR2804094, EP1120091, EP1120091, DE4343816,

Abstract:

Source: US4813563A A tamper resistant, tamper evident container is formed of a vial having a barb or hook formed inside the open upper end, a cap adapted for insertion into the vial having a mating hook formed about the lower edge, and sealing rings formed on the outer surface thereof for providing tamper-resistant, leak-proof sealing between the enclosure and the vial. The enclosure or cap also includes a spout which may extend inwardly into the enclosure or outwardly, away from the enclosure. In a preferred embodiment, the spout has an integral seal member defined at the top or bottom thereof by a circumferential line of reduced thickness for

facilitating separation of the seal member from the spout. Preferably, a liquid-proof identification label is used which is placed inside the vial prior to closure. This label may include temperature sensitive indicia which change colors at selected temperatures, for example, above and below the normal body temperature, for providing additional proof of non-tampered, strictly human-origin contents.

55) Family number: 43121238 (US2012037589A)

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Title: CONTAINER CLOSURE ASSEMBLY WITH PRESSURE SEAL**Priority:** EP20100703089 20100128 GB20090001572 20090130 WO2010GB00140 20100128
US20110146782 20111014 US20160299294 20161020**Family:**

Publication number	Publication date	Application number	Application date
<u>AU2010209515 AA</u>	20100805	AU20100209515	20100128
<u>AU2010209515 BB</u>	20160505	AU20100209515	20100128
<u>BRPI1007158 A2</u>	20160223	BR2010PI07158	20100128
<u>CA2750878 AA</u>	20100805	CA20102750878	20100128
<u>CN102333705 A</u>	20120125	CN201080005867	20100128
<u>CY1114828 T1</u>	20161214	CY20131100970T	20131101
<u>DE602010010524 D1</u>	20131121	DE201060010524T	20100128
<u>DK2391555 T3</u>	20131021	DK20100703089T	20100128
<u>EP2391555 A1</u>	20111207	EP20100703089	20100128
<u>EP2391555 B1</u>	20130925	EP20100703089	20100128
<u>ES2438500 T3</u>	20140117	ES20100703089T	20100128
GB200901572 A0	20090311	GB20090001572	20090130
<u>GB2467355 A1</u>	20100804	GB20090001572	20090130
<u>HK1163635 A1</u>	20140516	HK20120104509	20120509
<u>JP2012516272 T2</u>	20120719	JP20110546950T	20100128
<u>JP5683492 B2</u>	20150311	JP20110546950T	20100128
<u>MX2011007935 A1</u>	20110906	MX20110007935	20100128
<u>PT2391555 I</u>	20131209	PT20100703089T	20100128
<u>RU2011135981 A</u>	20130310	RU20110135981	20100128
<u>RU2513775 C2</u>	20140420	RU20110135981	20100128
<u>US2012037589 AA</u>	20120216	US20100146782	20100128
<u>US2017036824 AA</u>	20170209	US20160299294	20161020
<u>WO10086609 A1</u>	20100805	WO2010GB00140	20100128

Probable Assignee: BEESON and SONS LTD**Assignee(s):^(std):** BEESON and SONS LTD ; BISAN EHND SANZ LTD ; KING ROGER MILNER**Assignee(s):** BEESON AND SONS LTD STOKE POGES ; BEESON AND SONS LIMITED**Inventor(s):^(std):** KING RODZHER MILNER ; KING ROGER MILNER ; MILNER KING ROGER**Inventor(s):** ROGER MILNER KING**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; NORTON ROSE OR SENCRL SRL LLP; MUELLER BORE AND PARTNER PATENTANWALTE PARTG MBB; JAMES ANTHONY CHRISTOPHER WP; IZQUIERDO JOSE; OHSHIMA MASATAKA; JAMES ANTHONY CHRISTOPHER W P**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): B65D1/02 B65D41/04 B65D41/34 (Advanced/Invention);
B65D41/04 (Core/Invention);
B65D (Subclass/Invention)**CPC:** B65D41/0421 B65D41/0471 B65D2101/003 B65D1/0246

European class: B65D41/04B1A B65D41/04E L65D101/00A3B

US class: 215/329 426/590

[Classification Explorer](#)

Cited documents: WO9944896 A2, WO9919228 A1, WO9835881 A1, WO9721602 A2, WO9505322 A1, WO9411267 A2, WO9301098 A2, WO9118799 A2, WO200757706, WO08012426 A2, WO07132254 A1, WO07057706 A1, WO07057706, WO05058720 A1, WO0242171 A1, US7055710 BB, US5871111 A, US2004060893 AA, US2002158037 AA, US2002074306 AA, US2001027957 AA, JP60120936 U1, JP60120936 U, JP60120936 U, JP2002173157 A2, JP2002173157, JP2001511744 T2, JP2001511744, GB2432360 A1, GB2131774 A1, EP1627821 A1, EP0076778 A1,

Forward Citations: WO15061892, WO14184597, WO13147599, US9611079, US9428292, US9145237, US8998012, US2011031734, NL2008558, JP6198392, JP2014125250, AT517990,

Abstract:

Source: US2012037589A A container closure assembly includes a container neck having an opening at one end, a lip extending around the opening; a cap for said neck, the cap having a base portion and a threaded skirt; a screw thread on the neck; a screw thread on an inner surface of the threaded skirt of the cap; the screw threads enabling a user to secure, remove and resecure the cap into a sealing position on the neck; an olive sealing plug extending from the cap inside and substantially concentric with said threaded skirt portion of the cap, the sealing plug forming a seal against an inside surface of the neck; and a sealing skirt extending from said base of the cap intermediate said sealing plug and said threaded skirt portion of the cap and concentric with said sealing plug and said threaded skirt portion of the cap, wherein said cap can be displaced towards said neck from said sealing position by application of an axial force without rotation of the cap on the neck and substantially without plastic deformation of the cap.

56) Family number: 3783668 (US4625875A)

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Title: Tamper-evident closure**Priority:** CA19860500943 19860203 US19850697795 19850204

Family:	Publication number	Publication date	Application number	Application date
	<u>CA1285242 A1</u>	19910625	CA19860500943	19860203
	<u>US4625875 A</u>	19861202	US19850697795	19850204

Probable Assignee: CLAYTON CORP**Assignee(s):^(std):** CARR JOSEPH J ; ANGELINI THOMAS J**Assignee(s):** BERRY PLASTICS CORP ; CARR JOSEPH J 1503 BEL AIRE COURT W POINT PLEASANT ; CLAYTON CORP ; VENTURE SALES CO INC ; VENTURE SALES CO INC A CORP OF**Inventor(s):^(std):** ANGELINI THOMAS J ; CARR JOSEPH J**Agent(s):** SMART AND BIGGAR**International class**
(IPC 8-9): B65D41/34 B65D55/06 (Advanced/Invention);
B65D41/34 (Core/Invention)**International class**
(IPC 1-7): B65D41/34 B65D55/06**CPC:** B65D41/3452**European class:** B65D41/34D1A**US class:** 215/232 215/252[Classification Explorer](#)**Cited documents:** US4523689 A, US4505401 A, US4479586 A, US4461391 A, US4180175 A, US3632004 A, CA500032 A,**Forward Citations:** WO9957033, WO9923002, WO9741042, WO9623699, WO03055763, WO0226582, WO0155000, USRE33886, US9181001, US8650839, US8251236, US8231025, US8113367, US8109396, US8100277, US7882977, US7832580, US7798359, US7780024, US7766178, US7644902, US7588155, US7431168, US7413097, US7228979, US7168581, US7097790, US7007817, US6948630, US6726042, US6637611, US6497336, US6464096, US6439412, US6253940, US6173853, US6073809, US5891380, US5862953, US5858141, US5813553, US5810184, US5699924, US5690243, US5655685, US5560504, US5553727, US5514442, US5477972, US5456376, US5433992, US5415306, US5372268, US5267661, US5213224, US5190178, US5012946, US5009323, US5004111, US4961986, US4934544, US4919286, US4907618, US4863061, US4801029, US4749095, US2011174761, US2011155758, US2009283492, US2007272647, US2007181578, US2006054584, US2005269282, US2005062183, US2005061766, US2004055992, US2004055991, US2003116522, US2002162818, GB2310201, GB2310201, FR2646651, EP0914280, EP0914280,**Abstract:**

Source: US4625875A There is disclosed a tamper-evident closure including a depending tamper-evident skirt member capable of being positioned by longitudinal force (i.e. pushed on) onto a neck of a container including a skirt collar wherein the closure is formed with an internal thread and the neck of the container is formed with an external thread and wherein the tamper-evident depends by angularly-formed arm members from the closure, and wherein the threads are of multiple courses and wherein a groove of the skirt member of the closure engages the skirt collar of the container in an assembled relationship of the closure to the container.

0) US2001017817A – PRODUCT LABELING METHOD AND APPARATUS

57) Family number: 28313446 (US2001017817A)

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Title: PRODUCT LABELING METHOD AND APPARATUS

Priority: CA19972225353 19971219 US19960033491P 19961220 US19980007290 19980114
 US19970834634 19970414 US19970832613 19970328 US19970955475 19971021
 US19980200881 19981130 US19980170169 19981013 US19980168783 19981008
 US19980096269P 19980812 US19990426553 19991022 US19980185137 19981103
 US19980185137 19981103 US19980185132 19981103 US20010004941 20011203
 US20010007970 20011113 US20020253963 20020924 US20020127734 20020422
 US20040899520 20040726 US20070800792 20070507 US20090463257 20090508
 US20010833258 20010412 US20000596715 20000619 US20000627987 20000728
 US20030649805 20030826 US20010832770 20010411 US20110085670 20110413
 US20110151057 20110601 US20110103740 20110509 US20010833358 20010412
 WO1999US25875 19991102

Family:

Publication number	Publication date	Application number	Application date
AU200018118 A1	20000522	AU20000018118	19991102
AU200018118 A5	20000522	AU20000018118	19991102
CA2225353 AA	19980620	CA19972225353	19971219
CA2349192 AA	20010503	CA19992349192	19991102
US2001017817 AA	20010830	US20010833258	20010412
US2001028308 AA	20011011	US20010832770	20010411
US2002038392 AA	20020328	US20010004941	20011203
US2002084904 AA	20020704	US20010007970	20011113
US2002116509 AA	20020822	US20020127734	20020422
US2003099158 AA	20030529	US20020253963	20020924
US2004039481 AA	20040226	US20030649805	20030826
US2005091338 AA	20050428	US20040899520	20040726
US2007204497 AA	20070906	US20070800792	20070507
US2009294521 AA	20091203	US20090463257	20090508
US2011196306 AA	20110811	US20110085670	20110413
US2011231204 AA	20110922	US20110151057	20110601
US2011307592 AA	20111215	US20110103740	20110509
US5852590 A	19981222	US19970832613	19970328
US5883576 A	19990316	US19980007290	19980114
US5960085 A	19990928	US19970834634	19970414
US6032155 A	20000229	US19970955475	19971021
US6098356 A	20000808	US19980185132	19981103
US6255951 BA	20010703	US19980200881	19981130
US6259654 BA	20010710	US19980185137	19981103
US6346886 BA	20020212	US20000596715	20000619
US6408330 BA	20020618	US19980170169	19981013
US6529446 BA	20030304	US20000627987	20000728
US6611733 BA	20030826	US19980168783	19981008
US6779024 BB	20040817	US20020127734	20020422
US7006894 BB	20060228	US20030649805	20030826
US7061831 BB	20060613	US20010833258	20010412
US7216802 BA	20070515	US19990426553	19991022
US7715277 BB	20100511	US20020253963	20020924
US7922073 BB	20110412	US20070800792	20070507
US7933780 BB	20110426	US20010004941	20011203

<u>US7941534 BB</u>	20110510	US20040899520	20040726
<u>US7978564 BB</u>	20110712	US20010832770	20010411
<u>US8391104 BB</u>	20130305	US20090463257	20090508
<u>US9750872 BB</u>	20170905	US20110085670	20110413
<u>US9757509 BB</u>	20170912	US20110151057	20110601
<u>WO0025720 A2</u>	20000511	WO1999US25875	19991102
<u>WO0025720 A3</u>	20000908	WO1999US25875	19991102
<u>WO0025720 B1</u>	20001026	WO1999US25875	19991102
<u>WO0025720 C2</u>	20010201	WO1999US25875	19991102

Probable Assignee: B BRAUN MEDICAL INC

Assignee(s):^(std): GRAHAM SAMUEL E ; SORKIN FELIX L ; TELARIC L L C ; HUERGA CARLOS DE LA ; HUERGA CARLOS DE ; SMITH ROBERT M ; MCLARTY GEORGE C ; HURSEY W RANDOLPH ; CHILD ANDREW D ; DE LA HUERGA CARLOS ; DE LA HUERGA CARLOS A ; TELARIC LLC ; POMPAE TECHNOLOGIES INC ; B BRAUN MEDICAL INC

Assignee(s): CARLOS DE LA HUERGA ; SOUTHWEST TECHNOLOGY INNOVATIONS LLC ; SOUTHWEST TECHNOLOGY INNOVATIONS LLC ; DELAHUERGA CARLOS ; DLH TECHNOLOGY LLC ; POMPAE TECHNOLOGIES LLC

Inventor(s):^(std): SORKIN FELIX L ; HUERGA CARLOS DE LA ; DELAHUERGA CARLOS ; DE LA HUERGA CARLOS ; DE LA HUERGA CARLOS A

Inventor(s): CARLOS DE LA HUERGA

Agent(s): MBM AND CO; MOFFAT AND CO; QUARLES AND BRADY LLP; ANDRUS SCEALES STARKE AND SAWALL LLP; QUARLES AND BRADY; RATNERPRESTIA

Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

International class
(IPC 8-9): A61B5/00 A61J1/00 A61J1/03 A61J1/14 A61J7/00 A61J7/04 A61M5/14 A61M5/142 A61M5/168 B42D15/00 B65B59/00 B65C3/08 B65D85/00 E04C5/12 G04B37/00 G04B47/00 G04G15/00 G04G21/04 G06F1/00 G06F13/00 G06F15/173 G06F17/00 G06F17/60 G06F19/00 G06F21/00 G06K5/00 G06Q50/00 G06Q50/22 G06Q50/24 G07C9/00 G07F11/00 G07F17/00 G08B13/14 G09F3/00 G09F3/04 H04L29/06 (Advanced/Invention); A61M37/00 G06F19/00 G06K17/00 (Advanced/Non-invention); A61J1/00 A61J1/14 A61J7/00 A61M5/142 A61M5/168 B65C3/00 E04C5/12 G04B47/00 G04G1/00 G04G15/00 G06F1/00 G06F17/00 G06F21/00 G06K5/00 G07C9/00 G07F11/00 G07F17/00 G08B13/14 G09F3/00 G09F3/04 (Core/Invention); G06K17/00 (Core/Non-invention)

International class
(IPC 1-7): A61J7/04 E04C5/12 G04B37/00 G04B47/00 G06F13/00 G06F15/16 G06F17/00 G06F17/30 G06F3/00 G08B13/14 G08B23/00 H04L9/00 H04L9/30 H04L9/32

CPC: Y10S707/99945 Y10S707/99948 G04R60/04 A61J2205/20 A61J2205/50 A61J2200/70 G06K2017/009 G04G15/006 G09F3/005 G04G21/04 G06F19/322 G06F19/326 G06F19/327 G06F19/3418 H04L63/0492 H04L63/0853 H04L63/105 H04L63/108 A61J2200/30 G06F21/35 G06F2221/2111 G07C9/00111 E04C5/12 A61J1/03 A61J1/1437 G06K19/07762 A61J7/0046 A61J7/04 A61J7/0481 A61J1/035 A61J7/0084 A61J7/0418 A61J7/0436 A61J7/0445 A61J7/0454 Y10T24/44077 Y10T24/44034 Y10T24/3909 G07C9/00182 G06F19/3462 G06F19/366 B65C9/46 B41J3/4075 G01N2035/00861 B01L3/545 A61M37/00 A61M5/14212 A61J2205/10 A61J2205/30 A61J2205/60 A61J2205/70 A61M5/16827 A61M2205/3561 A61M2205/3569 A61M2205/3592 A61M2205/60 A61M2205/6063 A61M2205/6072 G06F19/323 G06F19/3468 G06Q50/22 G06Q50/24

European class: A61J1/00C10 A61J1/03B A61J1/14D A61J7/00F1 A61J7/04B3 A61M5/142G A61M5/168A11 E04C5/12 G04G1/00D2 G04G15/00C G04G21/04 G06F1/00N5A2D G06F19/00A G06F19/32C G06F19/32C1 G06F19/32E3 G06F19/32G G06F19/34C G06F19/34L1 G06F19/34L3 G06F19/36C G06F21/35 G06K19/077T3D G06Q50/22 G06Q50/24 G07C9/00B10 G07C9/00E2 G09F3/00B H04L29/06C6C2 H04L63/04B16 H04L63/08E H04L63/10F K61J200/30 K61J205/10 K61J205/30 K61J205/60 K61J7/00F1 K61J7/04B1B K61J7/04B1D2 K61J7/04B1D4 K61J7/04B1G K61M205/35R2 K61M205/35R3 K61M205/35T2 K61M205/60 K61M205/60P K61M205/60P2 S06F19/32C S06F19/32C1 S06F19/34C S06F19/34L1 S06F19/36C S06F221/2111 S06K17/00W34

US class:

1/1 156/42S 206/459.5 221/129 221/15 221/2 221/2S 221/9 221/9S 222/1 222/1S 235/375
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 442/401S 52/223.13 52/223.6 604/151 604/151P 604/93.01 604/93.010S 700/234 700/235
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 726/9

[Classification Explorer](#)

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US2003139701, US2003125017, US2003120384, US2003117281, US2003103414,
US2003099158, US2003091217, US2003091216, US2003089733, US2003088771,
US2003086338, US2003078805, US2003076792, US2003074575, US2003074222,
US2003069796, US2003065537, US2003063524, US2003055685, US2003052788,
US2003052135, US2003048173, US2003044267, US2003036683, US2003030542,
US2003028859, US2003023146, US2003011476, US2003009395, US2003004608,
US2003001722, US2002194131, US2002190869, US2002188466, US2002188259,
US2002178190, US2002178031, US2002169721, US2002167939, US2002165733,

US2002162019, US2002162009, US2002162004, US2002162002, US2002161999, US2002161882, US2002161795, US2002161454, US2002158904, US2002152400, US2002147912, US2002147653, US2002146146, US2002145745, US2002145632, US2002142765, US2002138731, US2002138305, US2002133376, US2002125996, US2002120676, US2002118394, US2002116227, US2002114467, US2002111833, US2002109578, US2002105410, US2002102974, US2002099960, US2002099334, US2002097282, US2002095357, US2002095315, US2002095222, US2002091596, US2002087362, US2002087360, US2002083014, US2002078372, US2002078367, US2002078363, US2002065905, US2002065685, US2002059257, US2002057188, US2002056082, US2002055987, US2002052760, US2002041234, US2002038392, US2002038298, US2002028007, US2002023216, US2002016923, US2002013905, US2002004727, US2001056386, US2001054147, US2001053986, US2001044899, US2001044731, US2001041869, US2001032278, US2001028308, US2001022615, US2001022279, US2001018329, US2001005682, TWI588675, TWI478068, TWI393558, TWI324875, RU2636531, RU2481630, NL2012860, NL1027806, NL1015369, KR101782306, KR101529772, KR101122439, KR100808693, JP6145044, JP6085479, JP5743991, JP5345319, JP5230205, JP2014507963, JP2013517817, JP2012527925, JP2012250101, JP2010535543, JP2010533342, JP2010530781, JP2010508926, JP2010228813, JP2010176679, JP2008539964, JP2008529670, JP2008521500, JP2008514332, JP2007535036, JP2005178899, JP2004503271, ITPG20120032, ITFI20080147, GB2503623, GB2503623, GB2492851, GB2465849, GB2465764, GB2464446, GB2464446, GB2448244, GB2448244, GB2446987, GB2446923, GB2437228, GB2437228, GB2426616, GB2397417, GB2391857, GB2391857, GB2385846, GB2385846, GB2385845, GB2369898, GB2352841, FR3049854, FR2987997, FR2915105, FR2908915, FR2871603, FR2866459, FR2825489, FR2822255, FR2787317, EP3226362, EP3128095, EP3091456, EP3021245, EP2987517, EP2898446, EP2897085, EP2896022, EP2863971, EP2680178, EP2680177, EP2653150, EP2653150, EP2622508, EP2589011, EP2560603, EP2436361, EP2436361, EP2378748, EP2335758, EP2335758, EP2330524, EP2318965, EP2284743, EP2206487, EP2161701, EP2123318, EP2049009, EP2043502, EP2026298, EP1967128, EP1965325, EP1946787, EP1945169, EP1938770, EP1920752, EP1872814, EP1852810, EP1852810, EP1850826, EP1850254, EP1850254, EP1840301, EP1825877, EP1806902, EP1806902, EP1782853, EP1759360, EP1755729, EP1744262, EP1736133, EP1736133, EP1731089, EP1731089, EP1707231, EP1707231, EP1684203, EP1634560, EP1618852, EP1618852, EP1617895, EP1604631, EP1579884, EP1579884, EP1576972, EP1537024, EP1535231, EP1535208, EP1526484, EP1499372, EP1495746, EP1495746, EP1485856, EP1485856, EP1450640, EP1449586, EP1436029, EP1420325, EP1392944, EP1363579, EP1307788, EP1304658, EP1257913, EP1257913, EP1223532, EP1223532, EP1223495, EP1210052, EP1152318, EP1115054, EP1115054, EP1103793, EP1016399, EA026241, DE102011008856, DE102008012989, DE102006007793, CN105249924, CN105106018, CN104919441, CN104838389, CN104838389, CN104823193, CN104685525, CN104453358, CN104379088, CN104146872, CN104146872, CN103893857, CN103871764, CN103871764, CN103685153, CN103559767, CN103558750, CN103558749, CN103558749, CN103501753, CN103443595, CN103430182, CN103371673, CN103279911, CN102822830, CN102781495, CN102768707, CN102725011, AU783204, AU2012299169, AU2011208652, AU2010323215, AU2010212436, AU2009212560, AU2008338449, AU2008318742, AU2008275054, AU2007351001, AU2007351001, AU2007316749, AU2007316749, AU2006244085, AU2006213718, AU2006212698, AU2005249898, AU2004309424, AU2004209134, AU2004209120, AU2003261422, AU2003261422, AU2003241480, AU2003231776, AU2003228727, AU2003212498, AU2002226231, AU2001232049, AT513089,

Abstract:

Source: US2001017817A A method and apparatus for configuring indicating configurations for containers wherein at least a subset of indicating configurations include an enhanced indicating device such as an electronic storage device, the containers to include enhanced devices being a function of whether or not the end user uses an interacting device capable of receiving information from the enhanced devices, the method and system indicating whether or not standard or enhanced containers should be used for specific prescriptions or orders and, in some cases, automatically providing the correct container and specifying (i.e., printing and writing) information to the containers.

Title: TAMPER-EVIDENT CLOSURE**Priority:** GB20110020522 20111128 WO2012EP73859 20121128**Family:**

Publication number	Publication date	Application number	Application date
CN103958361 A	20140730	CN201280058132	20121128
CN103958361 B	20161109	CN201280058132	20121128
CO6960523 A2	20140530	CO20140111810	20140523
EP2785606 A1	20141008	EP20120805963	20121128
GB201120522 A0	20120111	GB20110020522	20111128
JP2015501767 T2	20150119	JP20140542891T	20121128
MX2014006258 A1	20140709	MX20140006258	20121128
MX345021 B	20170113	MX20140006258	20121128
PE20732014 A1	20150110	PE20140000742	20121128
RU2014115229 A	20160127	RU20140115229	20121128
RU2623910 C2	20170629	RU20140115229	20121128
US2014054288 AA	20140227	US20120824919	20121128
US9038841 BB	20150526	US20120824919	20121128
WO13079545 A1	20130606	WO2012EP73859	20121128

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND ; OBRIST KLOUZHES SVITTSERLAND GMBKH**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** ALEXANDER DONALD MEIKLEM MCPHERSON ; MCPHERSON ALEXANDER DONALD MEIKLEM ; MAKFERSON ALEKSANDR DONALD MEJKLEM**Agent(s):** JAIME EDUARDO DELGADO VILLEGAS; LICHOTA CATHERINE MARGARET TIMMIS; OZAWA SEIJI; HIROTA MASANORI; ALLEMAN HALL MCCOY RUSSELL AND TUTTLE LLP; BRYERS LLP ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [B65D41/34](#) [B65D43/02](#) [B65D49/02](#) [B65D55/02](#) (Advanced/Invention)
(IPC 8-9):**CPC:** [B65D43/0283](#) [B65D41/34](#) [B65D49/02](#) [B65D55/026](#) [B65D2101/0023](#) [B65D55/028](#)**US class:** [220/255.1](#)[Classification Explorer](#)**Cited documents:** WO11133067 A1, WO06117505 A1, WO05049449 A1, WO04011347 A2, WO02096771 A1, US6908013 BB, US6059131 A, US5829611 A, US5738231 A, US5680965 A, US4540100 A, US3415403 A, US2011259844 AA, US2005258128 AA, JP2009040442 A2, GB2450939 A1, GB2390086 A1, CN1524053 A,**Forward Citations:** WO15113851, US2016347520, CN105939941,**Abstract:**

Source: US2014054288A A tamper-evident closure for a container comprises two or more parts and is movable from a first position to a second position in an opening event, the movement to the second position generating two or more gaps between and/or within the parts, the closure further comprising means for preventing closing of the gaps whereby to confirm the opening event has occurred.

59) Family number: 10934377 (US5005718A)

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Title: Tamper-evident child resistant closure device

Priority: US19880228294 19880804 US19890409276 19890919 WO1989US03343 19890802

Family:

Publication number	Publication date	Application number	Application date
EP0387323 A1	19900919	EP19890909315	19890802
EP0387323 A4	19901227	EP19890909315	19890802
JP3502088 T2	19910516	JP19890508816T	19890802
US5005718 A	19910409	US19890409276	19890919
WO9001451 A1	19900222	WO1989US03343	19890802

Probable Assignee: BLARCOM CLOSURES

Assignee(s):^(std): BLARCOM CLOSURES ; BLARCOM CLOSURES INC VAN

Assignee(s): VAN BLARCOM CLOSURES INC

Inventor(s):^(std): BUONO CAETANO

Designated states: AT BE CH DE FR GB IT JP LI LU NL SE

International class
(IPC 8-9): [B65D50/04](#) [B65D51/18](#) [B65D55/08](#) (Advanced/Invention);
[B65D50/00](#) [B65D51/18](#) [B65D55/02](#) (Core/Invention)

International class
(IPC 1-7): [B65D50/02](#) [B65D51/18](#) [B65D55/02](#)

CPC: [B65D50/041](#) [B65D55/089](#)

European class: [B65D50/04B](#) [B65D55/08F](#)

US class: [215/220](#) [215/251](#)

[Classification Explorer](#)

Cited documents: US4801028 A, US4673095 A, US4669620 A, US4632264 A, US4570809 A, US4527701 A, US4526283 A, US4523688 A, US4474301 A, US4454955 A, US4371088 A, US4165813 A, US4069935 A, US3946890 A, US3946889 A, US3690495 A, GB2141697 A1, EP0120644 A2,

Forward Citations: WO11022756, USD747201, US9586738, US9051094, US8631966, US8627968, US8316622, US8205761, US8066139, US8061543, US7796472, US7611025, US7401707, US6206216, US6029834, US5749484, US5609262, US5579932, US5477972, US5370251, US5316161, US5197616, US2011147334, US2010314391, US2010313527, US2010288765, US2010264108, US2010126997, US2010126996, US2009200259, US2009173739, US2009078670, US2009014404, US2007045320, US2007039914, US2006108313, US2005173367, US2005150857, US2005116382, KR101403496, GB2433495, EP2222571,

Abstract:

Source: US5005718A A tamper-evident child resistant closure device is provided. The tamper-evident child resistant closure device includes an inner cap having a first set of teeth, an outer cap which fits movably over the inner cap and has a second set of teeth adapted to operatively engage the first set of teeth to facilitate removal of the closure device and inactivatable engagement prevention means for preventing engagement of the first and second sets of teeth. The engagement prevention means functions independently of the configuration of a container on which the closure is used and prevents the removal of the closure device from the container. Once the engagement prevention means are inactivated, the first set of teeth on the inner cap can engage the second set of teeth on the outer cap when the outer cap is displaced axially downwardly with respect to the inner cap. The closure device can be taken off a bottle when the teeth are engaged. The inactivation of the engagement preventing means provides a visual indication that the container has been previously opened or tampered with.

0) WO07015648A1 – HINGED TAMPER EVIDENT CLOSURE MOULDED AS A UNIT...

60) Family number: 34194395 (WO07015648A1)

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Title: HINGED TAMPER EVIDENT CLOSURE MOULDED AS A UNITARY ITEM IN A CLOSED CONDITION

Priority: NZ20050541605 20050801

Family:	Publication number	Publication date	Application number	Application date
	<u>NZ541605 A</u>	20071026	NZ20050541605	20050801
	<u>WO07015648 A1</u>	20070208	WO2006NZ00193	20060726

Probable Assignee: ALTO PACKAGING LTD

Assignee(s):^(std): ALTO HOLDINGS LTD ; ALTO PACKAGING LTD ; NOONAN MICHAEL PATRICK

Assignee(s): ALTO PACKAGING LIMITED ; ALTO HOLDINGS LIMITED

Inventor(s):^(std): NOONAN MICHAEL PATRICK

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): B65D41/34 B65D41/38 B65D47/08 B65D85/72 (Advanced/Invention);
B65D41/34 B65D47/08 B65D85/72 (Core/Invention)

International class
(IPC 1-7): B65D41/34 B65D50/00

CPC: B65D47/0833 B65D2101/0038 B65D2251/105

European class: B65D47/08B4 L65D101/00A3C L65D251/10D4

[Classification Explorer](#)

Cited documents: WO0076875 A1, WO0073166 A1, US6253937 BA, US6216905 BA, US5992659 A, US5605240 A, US4919286 A, US2005116382 AA, GB2268169 A1, ES1002990 UA, ES1002990, EP0852205 B1, EP0852205, EP0561545 B1, EP0561545, EP0154611 B1, EP0154611, BE841510 A,

Forward Citations: WO14092525, US8720726, ES2294973,

Abstract:

A tamper evident flip lidded closure moulded as a closed unitary item. Removal of a tamper evident zone between the threaded skirt and a peripheral skirt of the lid enables flipping up from an re-closing down about a hinge between the threaded skirt and the peripheral skirt of the lid. At least one ratchet formation can be provided beyond the lead in of the thread of the skirt as a removal impediment. The lid option includes an annular flange to act as a stopper seal inwardly off the peripheral skirt. The flange preferably provides a bias to assist flipper.

61) Family number: 29989500 (US5957315A)

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Title: PLASTIC CONTAINER CLOSURE WITH TAMPER EVIDENT PROPERTIES
Priority: JP19960336188 19961217 US19980123408 19980728 WO1997JP04649 19971217
Family:

Publication number	Publication date	Application number	Application date
CN1106329 C	20030423	CN19971092902	19971217
CN1213348 A	19990407	CN19971092902	19971217
DE69726735 D1	20040122	DE19976026735	19971217
DE69726735 T2	20041021	DE19976026735T	19971217
EP0913334 A1	19990506	EP19970949113	19971217
EP0913334 A4	20000726	EP19970949113	19971217
EP0913334 B1	20031210	EP19970949113	19971217
JP10175656 A2	19980630	JP19960336188	19961217
JP3847868 B2	20061122	JP19960336188	19961217
KR19990082645 A	19991125	KR19980706387	19971217
US5957315 A	19990928	US19980123408	19980728
WO9826991 A1	19980625	WO1997JP04649	19971217

Probable Assignee: JAPAN CROWN CORK CO LTD

Assignee(s):^(std) CROWN CORK JAPAN ; KAIZUKA YOSHIHIRO

Assignee(s): JAPAN CROWN CORK CO ; JAPAN CROWN CORK CO LTD

Inventor(s):^(std) KAITSUKA YOSHIHIRO ; YOSHIHIRO KAIZUKA ; KAIZUKA YOSHIHIRO

Designated states: AT BE CH CN DE DK ES FI FR GB GR IE IT KR LU MC NL PT SE US

International class
^{(IPC 8-9):} [B65D41/34 B65D49/12](#) (Advanced/Invention);
[B65D41/34 B65D49/00](#) (Core/Invention)

International class
^{(IPC 1-7):} [B65D41/34 B65D49/12](#)

CPC: [B65D41/3409 B65D41/3428 B65D2101/0046 B65D2101/0053 B65D2101/0061 B65D41/34](#)

European class: [B65D41/34A1 B65D41/34C1 L65D101/00A3D L65D101/00A3E L65D101/00A3F](#)

US class: [215/252](#)

[Classification Explorer](#)

Cited documents: WO9826991 A1, WO9117090 A1, US5673809 A, US5289931 A, US5080246 A, US4744479 A, US4565295 A, US4488655 A, JPS6218421, JPS62159351, JPS5832105, JPS49100949, JP8080957 A2, JP8080957, JP62159351 U1, JP62159351 A2, JP62018421 B2, JP62018421 A2, JP6054544 U, JP6054544 A2, JP58032105 A2, JP58032103 B2, JP58032103 A2, JP49100949 U1, JP49100949 U, JP49100949 A2, JP43541198 T2, JP4311461 A2, JP4311461, JP4215965 A2, JP4215965, JP14195019 A2, GB1454091 A,

Forward Citations: WO07081656, WO04106172, WO04106172, WO0040472, WO0034133, WO0034133, US8844770, US8668097, US8596477, US8517194, US6926162, US6581792, US5957315, US2010213159, US2008173611, US2007158295, US2005284837, US2005199574, US2005092750, JP5160315, JP2009292531, EP1273524, EP1212243,

Abstract:

Source: US5957315A A plastic container closure having tamper evident properties of a type in which axial breakage means disposed in a tamper evident bottom portion is constituted from a slit continuously extending from the upper end of the tamper evident bottom portion substantially to its lower end. A first high strength bridging portion is disposed on one circumferential side of an upper end of the axial breakage means, while a second high strength bridging portion is disposed on the other circumferential side of the upper end of the axial breakage means, whereby when the container closure is mounted on a mouth-and-neck portion of a container, the tamper evident bottom portion is prevented from being enlarged at a site where its axial breakage means

exists.

62) Family number: 14930150 (US6276543B)

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Title: Vented composite closure**Priority:** US19990314507 19990519 WO2000US10023 20000413

Family:	Publication number	Publication date	Application number	Application date
	AT249980 E	20031015	AT20000923346T	20000413
	AU200043489 A1	20001205	AU20000043489	20000413
	AU200043489 A5	20001205	AU20000043489D	20000413
	DE60005333 D1	20031023	DE20006005333	20000413
	DE60005333 T2	20040401	DE20006005333T	20000413
	EP1181210 A1	20020227	EP20000923346	20000413
	EP1181210 B1	20030917	EP20000923346	20000413
	IL146554 A0	20020725	IL20000146554	20000413
	US6276543 BA	20010821	US19990314507	19990519
	WO0069742 A1	20001123	WO2000US10023	20000413

Probable Assignee: CROWN CORK AND SEAL TECHNOLOGIES**Assignee(s):^(std):** CROWN CORK AND SEAL TECH CORP ; ABBOTT LAB

Assignee(s): ABBOTT LABORATORIES ; ABBOTT LABORATORIES ABBOTT PARK ; ABBOTT LABORATORIES ABBOTT PARKCOUNTY OF LAKE ILLI ; CITICORP NORTH AMERICA INC ; CROWN CORK AND SEAL TECHNOLOGIES ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS ; CHASE MANHATTAN BANK COLLATERAL AGENT AS ; CROWN CORK AND SEAL TECHNOLOGY CORP ; CROWN CORK AND SEAL TECHNOLOGIES CORP ; DEUTSCHE BANK AG ; CROWN CORK AND SEAL TECHNOLOGIES CORP ALSIP ; DEUTSCHE BANK NEW YORK BRANCH AGENT AG AS ; CROWN PACKAGING TECHNOLOGY INC ; DEUTSCHE BANK NEW YORK BRANCH COLLATERAL AGENT AG AS

Inventor(s):^(std): VANDEWALLE A ; VANDEWALLE THOMAS A ; VANDEWALLE TOM ; WAN MILES ; WAN MIN MILES ; GERMAN GALEN

Inventor(s): MIN MILES WAN ; THOMAS A VANDEWALLE ; GALEN GERMAN

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

International class
(IPC 8-9): [B65D41/34 B65D51/14](#) (Advanced/Invention);
[B65D41/34 B65D51/00](#) (Core/Invention)

International class
(IPC 1-7): [B65D B65D39/00 B65D41/34 B65D51/14](#)

CPC: [B65D41/3409 B65D41/3428 B65D51/145](#)**European class:** [B65D41/34A1 B65D41/34C1 B65D51/14B](#)**US class:** [215/252 215/276 215/350](#)[Classification Explorer](#)

Cited documents: WO9203370 A1, WO9103404 A1, US5346082 A, US5078290 A, US5062538 A, US5031787 A, US5009324 A, US4993572 A, US4880127 A, US4813561 A, US4809858 A,

Forward Citations: WO15195933, WO14099540, WO12040008, WO08082906, WO08082906, WO08030640, WO04085268, WO03068621, WO03055763, USD534802, USD531505, USD530205, USD529804, USD518717, US9731870, US9359117, US9051088, US8807360, US8650839, US8596477, US8544666, US8251236, US8100277, US7891510, US7798359, US7784629, US7780024, US7766178, US7645414, US7644902, US7611026, US7451898, US7445130, US7431168, US7413097, US7235207, US7175039, US7168581, US7147118, US7147118, US7107783, US7083058,

US7059485, US7014060, US6981602, US6974046, US6948630, US6935510,
US6874647, US6783015, US6766916, US6662958, US6484896, US2016214767,
US2014263151, US2012067892, US2011253666, US2011024423, US2010176134,
US2008272084, US2008264894, US2008073310, US2007187352, US2007181525,
US2007108155, US2006060555, US2005284837, US2005263480, US2005263479,
US2005098529, US2005000931, US2004173556, US2004161558, US2004155006,
US2004149676, US2004149675, US2004124169, US2004108294, US2004055992,
US2004035765, US2004016758, US2004007553, US2004003562, US2003192853,
US2003150833, US2003116522, US2003102280, US2003000907, KR101413817,
JP2010514637, JP2008503400, EP1316507, EP1316507, CN103097254,
AU2002301924,

Abstract:

Source: US6276543B A composite closure for a container has an outer band with a partial toroidal hook that overhangs a crown around the periphery of an insert cover disk. As the closure is tightened on the container, the hook bears downwardly on the crown of the disk and urges the disk against the container rim. The hook has several vents formed on its underside to enable air communication. A lower, inner edge of the hook is spaced apart from the disk to provide communication with the vents from the environment. An annular recess is formed on the underside of the hook, and is in communication with the vents and with a gap formed between an outboard wall of the crown and an inboard sidewall of the hook. A retaining bead is formed on a skirt below the hook to retain the disk. The bead is spaced apart from the disk when the closure is assembly to a container to enable communication from the environment through the vents to the threads.

63) Family number: 10236201 (US4752014A)

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Title:	Tamper-evident child-resistant closure and container with same			
Priority:	US19870133652 19871216			
Family:	Publication number	Publication date	Application number	Application date
	<u>US4752014 A</u>	19880621	US19870133652	19871216
Probable Assignee:	POLY SEAL CORP			
Assignee(s)^{:(std):}	POLY SEAL CORP			
Assignee(s):	BANK OF AMERICA NA ; FLEET NATIONAL BANK ; POLY SEAL 8303 PULASKI HIGHWAY BALTIMORE MARYLAND			
Inventor(s)^{:(std):}	HOUSE RANDALL F ; JUK STEVEN B			
International class (IPC 8-9):	<u>B65D50/04</u> (Advanced/Invention); <u>B65D50/00</u> (Core/Invention)			
International class (IPC 1-7):	<u>B65D55/02</u>			
CPC:	<u>B65D50/046</u>			
European class:	<u>B65D50/04F2</u>			
US class:	<u>215/216</u>			
Classification Explorer				
Cited documents:	US4687112 A, US4413742 A,			
Forward Citations:	WO9723388, WO9719000, WO9716358, WO9701494, USD653281, USD597410, USD582274, USD582273, USD540678, USD533452, USD532691, USD532298, USD530610, USD527633, USD515422, USD513587, USD513452, USD509426, USD481948, USD476563, USD421909, US9650184, US9422091, US9016489, US8631966, US8490804, US8469212, US8371463, US8245867, US8240491, US8191728, US8123057, US8087539, US8074821, US8052016, US8038026, US8020723, US7946443, US7942279, US7798348, US7731048, US7687004, US7641064, US7628283, US7594588, US7594587, US7111746, US6357615, US6296130, US6161711, US6053343, US6036036, US5988412, US5979681, US5927527, US5927526, US5865330, US5722546, US5706963, US5671853, US5603421, US5460281, US5449077, US5437387, US5310074, US4986430, US2016280429, US2012000879, US2010264145, US2010051572, US2010025355, US2009277912, US2009071927, US2009039086, US2008302794, US2008284064, US2008283527, US2008277368, US2008277367, US2008169287, US2008169263, US2008078763, US2008078760, US2007278174, US2007228042, US2007164027, US2007144996, US2007095845, US2006231453, US2006103135, US2005145627, US2005133475, US2005092751, US2004195241, GB2311062, GB2311062, FR2699145, EP0780318, EP0751078, EP0737626, EP0603090, EP0345394,			

Abstract:

Source: US4752014A A container and safety closure therefor includes a hollow container having an externally threaded tubular neck defining a tubular opening into the container. An outer surface area of the container extending outwardly from and adjacent to the neck or portion of the neck or stepped portion thereof or an attached ring has a plurality of recesses extending inwardly. An internal threaded closure adapted to screw on to and off the threaded neck is provided with a web formed integral with a lower edge of the closure and extends outwardly from one side thereof adjacent to the neck. A tab extends upwardly from the web. A pawl formed integrally with either an under surface of the web or in an inwardly facing vertical surface on the web or an outwardly facing surface of the tab is provided to engage the recesses in the container or neck thereof or in the ring when the closure is threadably moved downwardly on the neck. The upstanding tab extends upwardly from distal end of the web. At least one tamper-evident indicating, frangible web connects the upstanding tab to the closure, this web or webs being fracturable by application of a radially, inwardly directed force to the tab which breaks the frangible web or webs and allows disengagement of the pawl from the recesses so that the closure may be removed from the container.

64) Family number: 11000987 (US5642825A)

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Title: CONTAINER CLOSURE HAVING PERIPHERAL TAMPER–INDICATOR

Priority: CA19972206933 19970602 US19950517065 19950821 US19960752641 19961119
US19950545959 19951020

Family:	Publication number	Publication date	Application number	Application date
	CA2206933 AA	19980519	CA19972206933	19970602
	CA2206933 C	20050419	CA19972206933	19970602
	DE69714827 D1	20020926	DE19976014827	19970603
	DE69714827 T2	20021205	DE19976014827T	19970603
	EP0842862 A2	19980520	EP19970108832	19970603
	EP0842862 A3	19981104	EP19970108832	19970603
	EP0842862 B1	20020821	EP19970108832	19970603
	US5642825 A	19970701	US19950517065	19950821
	US5775528 A	19980707	US19960752641	19961119
	US5829613 A	19981103	US19950545959	19951020

Probable Assignee: ULTRASEAL TECHNOLOGIES CORP

Assignee(s):^(std): SUPERSEAL CORP ; ULTRASEAL TECHNOLOGIES CORP

Assignee(s): US CAP ; ULTRASEAL TECHNOLOGIES CORP WORCESTER ; WOHLGEMUTH EMANUEL E ; SUPERSEAL CORPORATIN ; SUPERSEAL CORPORATIN CONDOMINO LUCIANO SUITE ; SUPERSEAL CORPORATIO ; SUPERSEAL CORPORATIO COMDOMINO LUCIANO SUITE ; HOGAN CHARLES

Inventor(s):^(std): HOGAN CHARLES ; WOHLGEMUTH EMANUEL E ; WOHLGEMUTH EMANUEL ERICK

Agent(s): MCFADDEN FINCHAM; OSLER HOSKIN AND HARCOURT LLP

Designated states: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

International class
(IPC 8–9): [B65D41/34](#) [B65D41/47](#) [B65D55/02](#) [B65D55/06](#) (Advanced/Invention);
[B65D41/32](#) [B65D41/34](#) (Core/Invention)

International class
(IPC 1–7): [B65D41/34](#) [B65D41/47](#) [B65D55/06](#)

CPC: [B65D41/3409](#) [B65D41/47](#) [B65D55/022](#) [B65D41/3447](#) [Y10S215/901](#)

European class: [B65D41/34A1](#) [B65D41/34D1](#) [B65D41/47](#) [B65D55/02D](#)

US class: [215/256](#) [215/330](#) [215/901](#)

[Classification Explorer](#)

Cited documents: US5642825 A, US5560504 A, US5553727 A, US5480045 A, US5456376 A, US5450972 A, US5431291 A, US5307946 A, US5307945 A, US5285912 A, US5213224 A, US5207340 A, US5100011 A, US5009323 A, US4922684 A, US4801032 A, US4798303 A, US4798301 A, US4759465 A, US4625876 A, US4320843 A, US4103803 A, US4066181 A, US3980195 A, US3360149 A, GB681404 A, GB2114553 A1, FR2517635 A1, FR1016084 A, CA1026269 A1,

Forward Citations: WO09136957, WO0126993, USD755251, USD732391, US9707308, US9572904, US9561298, US9181001, US8844770, US8808637, US8668097, US8529501, US8499950, US8273303, US8252247, US8231025, US7882977, US7875000, US7866496, US7837052, US7753234, US7303088, US7198170, US7134567, US7134567, US7051491, US6886708, US6637611, US6631820, US6585714, US6523710, US6458094, US6439412, US6435382, US6405885, US6373786, US6279600, US6176255, US6102064, US6003701, US5975321, US5967352, US5775528, US2016023813, US2012031871, US2012018401, US2011155758, US2011017740, US2010213159, US2010172794, US2010084364, US2010064456, US2009200258, US2009155080, US2009078668, US2009032534, US2008296309, US2008223813, US2007181578, US2007173756, US2007141575, US2007034590, US2006249474, US2006073293, US2005269282, US2005145629, US2004149756, US2004055991, US2003205549, US2003189048, ITMI20130719, GB2399559,

Abstract:

Source: US5642825A In combination, a container having an opening and a cap adapted for closing the opening and having a tamper-indicating ring frangibly connected thereto for denying removal of the cap while the ring is connected thereto, wherein the ring comprises a plurality of pull-tabs to facilitate disconnection from the cap, the pull-tabs being symmetrically disposed about the ring such that one or more is convenient to right-handed users and one or more of the remaining is convenient to left-handed users, regardless of the cap's rotational position relative to the user.

65) Family number: 58344276 (WO16075471A1)

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Title: CONTAINER CLOSURE ASSEMBLY WITH VENT**Priority:** GB20140020189 20141113

Family:	Publication number	Publication date	Application number	Application date
	GB201420189 A0	20141231	GB20140020189	20141113
	<u>GB2532256 A1</u>	20160518	GB20140020189	20141113
	<u>WO16075471 A1</u>	20160519	WO2015GB53436	20151112

Probable Assignee: BEESON AND SONS LTD**Assignee(s):**^(std): BEESON AND SONS LTD**Inventor(s):**^(std): KING ROGER MILNER ; ROGER MILNER KING**Agent(s):** JACKSON RICHARD ERIC ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D1/02 B65D41/04 B65D41/34 B65D51/16 (Advanced/Invention)
 (IPC 8-9):

CPC: B65D41/0471 B65D41/3428 B65D51/1661 B65D51/1688 B65D1/023 B65D1/0246 B65D1/0253

[Classification Explorer](#)

Cited documents: WO11070326 A1, WO0115988 A1, US6006930 A, GB2476089 A1, GB2409200 A1, GB2330133 A1,

Abstract:

A container closure assembly comprising; a container neck (12) having an opening; a closure (14) for the neck, the closure having a base portion (16) and a skirt portion (18); a screw thread on the closure, the screw thread comprising a plurality of circumferentially overlapping thread segments (26), each thread segment having upper (28) and lower (30) thread surfaces; and lugs (20) on the neck to engage the screw thread on the closure; and means (46,48) for forming a seal between the neck and closure when the closure is screwed down on the neck; the closure further comprising a block (44) to restrict rotation of the closure in an unscrewing direction beyond a venting position when the closure is under an axial pressure; wherein the neck and closure are constructed and arranged to provide a vent for venting gas from the container neck at least when the closure is in the venting position; and wherein the vent includes a recess (34) in the neck located adjacent to one or more of the lugs on the neck.

66) Family number: 20605057 (WO9804474A2)

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Title: LIQUID CONTAINER CLOSURE ASSEMBLY
Priority: GB19960015966 19960730 GB19970006883 19970404 WO1997GB02018 19970728
Family:

Publication number	Publication date	Application number	Application date
<u>AU199737008 A1</u>	19980220	AU19970037008	19970728
<u>BRPI9710788 A</u>	19990817	BR1997PI10788	19970728
<u>CN1226217 A</u>	19990818	CN19971096858	19970728
<u>EP0918700 A2</u>	19990602	EP19970933763	19970728
<u>GB2323839 A1</u>	19981007	GB19980007015	19980402
<u>GB2323839 B2</u>	20010808	GB19980007015	19980402
GB9615966 A0	19960911	GB19960015966	19960730
GB9706883 A0	19970521	GB19970006883	19970404
GB9807015 A0	19980603	GB19980007015	19980402
<u>RU99104146 A</u>	20010120	RU19990104146	19970728
<u>WO9804474 A2</u>	19980205	WO1997GB02018	19970728
<u>WO9804474 A3</u>	19980319	WO1997GB02018	19970728

Probable Assignee: MONTGOMERY DANIEL AND SON LTD

Assignee(s):^(std): FAULKNER ALAN ; MONTGOMERY DANIEL AND SON LTD ; SLOANE CRAIG MARTIN ; THOMSON DAVID WILLIAM

Assignee(s): DANIEL MONTGOMERY AND SON LTD

Inventor(s):^(std): FAUKNER ALAN ; FAULKNER ALAN ; SLOANE CRAIG MARTIN ; THOMSON DAVID WILLIAM ; WILLIAM DAVID THOMSON ; DAVID WILLIAM THOMSON ; DAVID THOMSON WILLIAM ; CRAIG MARTIN SLOANE ; ALAN FAULKNER ; ALAN FAUKNER

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CZ DE DK EE ES FI FR GA GB GE GH GN GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

International class
 (IPC 8-9): B65D41/34 B65D45/32 B65D49/04 (Advanced/Invention);
B65D41/34 B65D45/00 B65D49/00 (Core/Invention)

International class
 (IPC 1-7): B65D41/34 B65D45/32 B65D49/04 B65D55/02

CPC: B65D41/3409 B65D45/32 B65D49/04 B65D2101/0015 B65D2101/0023 B65D2101/0084

European class: B65D41/34A1 B65D45/32 B65D49/04 L65D101/00A2 L65D101/00A3 L65D101/00A6

[Classification Explorer](#)

Cited documents: WO9601216 A2, US4930647 A, US4805791 A, US4497415 A, US4372456 A, US4180175 A, GB2158424 A1, GB1588794 A, GB1402054 A, EP0711711 A1, DE3025903 A1,

Forward Citations: WO14091455, WO14082863, WO0218224, US8544663, US8113367, US7219820, FR2798647, EP1313649, CN105600129, CN102498044,

Abstract:

There is disclosed an improved closure assembly for application to a mouth of a container for liquid, for example, a neck of a bottle. It is an objection of the improvement to provide a closure assembly which cannot be removed without an extreme level of effort, or breakage being caused to the bottle. A closure assembly adapted to be applied to a mouth and neck portion of a container for liquid, comprises tubular means (2, 2') adapted to lie substantially concentrically with respect to said mouth and provided with projection means (6, 6') projecting inwardly of the tubular means (2, 2'), said projection means (6, 6') being moveable radially of the tubular means (2, 2') in a stiffly resilient manner, the closure assembly being further provided with a supporting sleeve means (10, 10') adapted to surround at least the projection means (6, 6') of said tubular means (2, 2'). A screw-cap with tamper-evident means is provided on top of the assembly.

67) Family number: 23434599 (US4534480A)

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Title: Tamper evident closure
Priority: US19840616108 19840601

Family:	Publication number	Publication date	Application number	Application date
	AU198543262 A1	19851205	AU19850043262	19850531
	EP0163470 A2	19851204	EP19850303527	19850520
	EP0163470 A3	19870923	EP19850303527	19850520
	US4534480 A	19850813	US19840616108	19840601

Probable Assignee: KERR GROUP INC

Assignee(s):^(std): SUN COAST PLASTICS INC

Assignee(s): SUN COAST CLOSURES INC A CORP OF FLORIDA ; SUN COAST CLOSURES INC A FLORIDA CORPORATION ; SUN COAST IND INC ; TUBED PRODUCTS LLC (F K A KERR ACQUISITION SUB II ; TUBED PRODUCTS LLC F K A KERR ACQUISITION SUB II L ; BANK OF AMERICA TEXAS NA ; CIT GROUP BUSINESS CREDIT INC ; KERR GROUP INC ; NATIONS BANK NA ; NATIONS BANK OF TEXAS NA ; PLASTICS FUNDING CORP ; SAFFRON ACQUISITION CORP ; SETCO LLC ; SETCO LLC (F K A KERR ACQUISITION SUB I LLC) ; SETCO LLC F K A KERR ACQUISITION SUB I LLC ; SPBC INC ; SPBC INC 12750 MERIT DRIVE STE 1300 DALLAS TEXAS 7 ; SUN COAST CLOSURES INC ; SUN COAST PLASTIC INC ; SUN COAST PLASTICS OF FLORIDA INC ; SUN COAST IND ; WELLS FARGO BANK NATIONAL ASSOCIATION ; TUBED PRODUCTS LLC

Inventor(s):^(std): DUTT HERBERT V ; DUTT HERBERT VINCENT ; PIRKAU ARNO F ; SANTOSTASI PAUL A ; SANTOSTASI PAUL ANTHONY

Inventor(s): ARNO F PIRKAU ; HERBERT VINCENT DUTT ; PAUL ANTHONY SANTOSTASI

Agent(s): CALLINANS

Designated states: AT BE CH DE FR GB IT LI LU NL SE

International class
 (IPC 8-9): [B65D41/34](#) (Advanced/Invention) ;
[B65D41/34](#) (Core/Invention)

International class
 (IPC 1-7): [B65D41/34](#) [B65D53/02](#) [B65D55/06](#)

CPC: [B65D41/3409](#)

European class: [B65D41/34A1](#)

US class: [215/252](#)

[Classification Explorer](#)

Cited documents: US4337870 A, US4225050 A, US3980195 A, US3901403 A, US3874540 A, US3871545 A, US3812994 A, US3650428 A, US3504818 A, US3463341 A, US3415403 A, US3407976 A, US3310191 A, US2140732 A, DE2755548 A1,

Forward Citations: WO9923002, WO07068038, WO0155000, USRE37243, US9181001, US8123056, US7581652, US7527160, US7228979, US7198170, US6637611, US6557714, US6439412, US6073809, US5910646, US5862953, US5593055, US5560504, US5553727, US5480045, US5307946, US5292019, US5285912, US5209795, US5115932, US5111947, US5040692, US4930647, US4909404, US4871077, US4813563, US4784281, US4592476, US2011174761, US2009152229, US2008041810, US2007034591, US2005269282, US2005145629, US2005103741, US2004069738, US2004055991, GB2269163, FR2606375, EP0670271, AU667529,

Abstract:

Source: US4534480A A tamper evident closure preferably for use on a screw threaded neck of a container is disclosed. The closure includes a tamper evident band which is quite thin and has a diameter which approximates that of the cap's sidewall. The tamper evident band is joined to the cap's sidewall by a plurality of bridge strips that are circumferentially aligned with ratchet teeth on the tamper evident band. During application of the cap to the container neck, the band deforms as the ratchet teeth cam over cooperatively shaped ratchet lugs on the bottle neck. However, during cap removal, the ratchet lugs stop the ratchet teeth and the tamper evident band from

moving so that the band is separated from the cap thereby providing a clear indication of tampering with the closure.

68) Family number: 61646005 (WO17093218A1)

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Title: A TAMPER-EVIDENT CLOSURE

Priority: GB20150021303 20151202 GB20160003600 20160302 GB20160004499 20160316

Family:

Publication number	Publication date	Application number	Application date
GB201521303 A0	20160113	GB20150021303	20151202
<u>WO17093218 A1</u>	20170608	WO2016EP79075	20161129

Probable Assignee: OBRIST CLOSURES SWITZERLAND

Assignee(s):^(std): OBRIST CLOSURES SWITZERLAND

Assignee(s): OBRIST CLOSURES SWITZERLAND GMBH

Inventor(s):^(std): WEIR ALLISON

Agent(s): BRYERS LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT HW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): B65D41/34 B65D49/02 B65D55/02 (Advanced/Invention)

CPC: B65D41/34 B65D49/02 B65D55/026 B65D2101/0069 B65D2101/0084

[Classification Explorer](#)

Cited documents: WO14170284 A1, WO06117505 A1, WO05049443 A1, US4723673 A, US2014183195 AA,

Abstract:

A tamper-evident closure (101) comprises a first portion (105, 106) and a second portion (102, 104) comprising a window (103) through which a view of the first portion (105, 106) is visible. The second portion (102, 104) is rotated relative to the first portion (105, 106) upon first opening of the tamper-evident closure (101), from a first position in which the first and second portions (105, 106; 102, 104) are in a first relative relation and a first view of the first portion (105, 106) is visible through the window (103), to a second position in which the first and second portions (105, 106; 102, 104) are in a second relative relation and a second, different view of the first portion (105, 106) is visible through the window (103). A locking mechanism irreversibly locks the first and second portions (105, 106; 102, 104) in the second relative relation.

69) Family number: 18918419 (US4673095A)

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Title: CLOSURE DEVICE FOR CONTAINERS

Priority: CA19850494282 19851030 EP19850307745 19851025 GB19850026420 19851025
 GB19850002181 19850129 GB19840028547 19841112 GB19850001843 19850124

Family:

Publication number	Publication date	Application number	Application date
<u>AT76030 E</u>	19920515	AT19850307745T	19851025
<u>AU198549268 A1</u>	19860522	AU19850049268	19851031
<u>AU585903 B2</u>	19890629	AU19850049268	19851031
<u>CA1291722 A1</u>	19911105	CA19850494282	19851030
<u>DE3586038 D1</u>	19920617	DE19853586038	19851025
<u>EP0182519 A2</u>	19860528	EP19850307745	19851025
<u>EP0182519 A3</u>	19880302	EP19850307745	19851025
<u>EP0182519 B1</u>	19920513	EP19850307745	19851025
<u>ES296675 U</u>	19871216	ES19850296675U	19851011
<u>ES296675 Y</u>	19880601	ES19850296675U	19851011
<u>ES296675 Y1</u>	19880630	ES19850296675U	19851011
<u>GB2167050 A1</u>	19860521	GB19850026420	19851025
<u>GB2167050 B2</u>	19890802	GB19850026420	19851025
GB8428547 A0	19841219	GB19840028547	19841112
GB8501843 A0	19850227	GB19850001843	19850124
GB8502181 A0	19850227	GB19850002181	19850129
GB8526420 A0	19851127	GB19850026420	19851025
<u>IE56699 B</u>	19911106	IE19850002802	19851111
<u>IE852802 L</u>	19860512	IE19850002802	19851111
<u>JP61164953 A2</u>	19860725	JP19850254652	19851112
<u>US4673095 A</u>	19870616	US19850796338	19851112
<u>ZA8508447 A</u>	19870325	ZA19850008447	19851104

Probable Assignee: METAL CLOSURES GROUP PLC

Assignee(s):^(std): KING PRECISION ENG SPENCE ; KING PRECISION ENG SPENCER ; METAL CLOSURES GROUP PLC ; PURESEVIC P J ; PURESEVIC PETER J ; SPENCER KING PRECISION ENG ; SPENCER KING PRECIS ENG LTD ; SULLIVAN DENIS O ; SPECTRA KING PRECISION ENG ; SPENCER KING PRECISION ENGINEERS LIMITED ; SPENCER KING PREC ENG LTD ; SPENCER KING PRECISION ENGINEERS LTD ; SUPENSAA KING PURISHIYON ENG ; SPENCER KING PREC ENGINEERS LT ; SULLIVAN D O ; SPENCER KING PRECISION ENGINEE ; SPECTRA KING PRECISION ENGINEE ; TAYLOR J D ; SUPENSAA KING PURISHIYON ENGINEERS LTD ; TAYLOR JULIAN D

Assignee(s): TAYLOR JULIAN DAVIDSON ; SPECTRA KING PRECISION ENGINEERS LIMITED ; PURESEVIC PETER JAMES ; SPECTRA KING PRECISION ENGINEERS LTD ; METAL CLOSURES GROUP PLC PO BOX ; O SULLIVAN D ; O SULLIVAN DENIS ; METAL CLOSURES GROUP PLC WEST BROMWICH WEST MIDLAN ; METAL CLOSURES GROUP PLC P O BOX 32 BROMFORD LANE ; METAL CLOSURES GROUP PLC WEST BROMWICH WEST MIDLANDS GB ; METAL CLOSURES GROUP PLC PO BOX 32 BROMFORD LANE WEST BROMWICH WEST MIDLANDS B70 7HY

Inventor(s):^(std): PURESEVIC PETER J ; PURESEVIC PETER JAMES ; TAYLOR JULIAN D ; TAYLOR JULIAN DAVIDSON ; PIITAA JIEIMUZU PIYUAASEBITSUKU ; PETER JAMES PURESEVIC ; O SULLIVAN DENIS ; JULIAN DAVIDSON TAYLOR ; JIYURIAN DEBITSUDOSON TEIRAA ; DENIS OOSARIBAN ; DENIS O SULLIVAN ; PIITAA JIEIMUZU PIYUAASEBITSUK

Inventor(s): TAYLOR JULIAN DAVIDSON MID GLAMORGAN WALES GB ; O SULLIVAN DENIS SOUTH GLAMORGAN WALES GB

Agent(s): GRIFFITH HACK; BERESKIN AND PARR

Designated states: AT BE CH DE FR GB IT LI LU NL SE

International class
(IPC 8-9): B65D41/04 B65D50/04 B65D55/02 (Advanced/Invention);
B65D41/04 B65D55/02 (Advanced/Non-invention);
B65D41/04 B65D50/00 B65D55/02 (Core/Invention);
B65D41/04 B65D55/02 (Core/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): A61K31/495 B65D41/04 B65D51/18 B65D55/02 B65D85/56 C07D403/06

CPC: B65D50/041

European class: B65D50/04B

US class: 215/220

[Classification Explorer](#)

Cited documents: WO8204029 A1, US4555036 A, US4394916 A, US4011960 A, GB2100238 A1, CH517626 A, AU477954,

Forward Citations: WO9912824, WO9302940, WO9222468, WO9222468, WO9001451, US9586738, US9580213, US9045265, US8186526, US8109396, US7815061, US7796472, US6382444, US6206216, US6158604, US6029834, US5836465, US5785194, US5762215, US5743419, US5676268, US5638969, US5611443, US5590799, US5316161, US5147052, US5005718, US4997096, US4957210, US2013026126, US2011006030, US2010288765, US2009078670, US2009014404, US2007199912, US2005145086, US2004099627, US2004069737, US2004045923, TR28622, JP6067751, JP2015509064, GB2449975, GB2449975, GB2298194, GB2210360, EP0528561, EP0519627, EP0393340, AU662349,

Abstract:

Source: US4673095A A closure device for screw-threaded cylindrical container openings comprises inner and outer closure members having a first drive arrangement therebetween for turning the device clockwise to mount same to close the opening. A second drive arrangement comprises a hexagonal projection and a hexagonal orifice on the members which engage on application of axial pressure to the device to permit, on applying an anti-clockwise torque, unscrewing of the device from the opening. The orifice may be initially closed by a cover secured to the boundary by the orifice by frangible connectors which are fractured by the projection on initial axial pressure being applied. This provides a tamper evident feature. In other embodiments, a cover has a manually graspable tab for tearing it from the opening before axial pressure is applied.

70) Family number: 22636976 (US6382444B)

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Title: Tamper-evident plastic closure system with snap-on band
Priority: US19990124835P 19990317 US20000527205 20000316

Family:	Publication number	Publication date	Application number	Application date
	<u>US6382444 BA</u>	20020507	US20000527205	20000316

Probable Assignee: SENTINEL PACKAGING SYSTEMS INC

Assignee(s):^(std): SENTINEL PACKAGING SYSTEMS INC

Inventor(s):^(std): NYMAN HENRY

International class
^{(IPC 8-9):} B65D41/04 B65D41/34 (Advanced/Invention);
B65D41/04 B65D41/34 (Core/Invention)

International class
^{(IPC 1-7):} B65D55/02

CPC: B65D41/0471 B65D41/3438

European class: B65D41/04E B65D41/34C3

US class: 215/218 215/252 215/301 215/334 215/44

[Classification Explorer](#)

Cited documents: US6085920 A, US6006932 A, US5813553 A, US5740932 A, US5611443 A, US5582308 A, US5465858 A, US5445466 A, US5433331 A, US5280842 A, US5161706 A, US5103991 A, US5076453 A, US5020681 A, US4832218 A, US4801028 A, US4775064 A, US4770308 A, US4724972 A, US4679696 A, US4673095 A, US4669620 A, US4646926 A, US4629082 A, US4598833 A, US4562933 A, US4562931 A, US4330067 A, US4289248 A, US4165813 A, US3972436 A, US3968894 A, US3901403 A, US3853236 A, US3850328 A, US3809365 A, US3795338 A, US3795337 A, US3677431 A,

Forward Citations: WO17053419, WO14128322, US9399534, US8991634, US8865458, US8794461, US8544666, US8517194, US8394626, US7703621, US7624701, US7560272, US7549547, US7517495, US7451885, US7320410, US7300633, US7299939, US7270959, US7198170, US7156264, US6942114, US6938787, US6786179, US2012298670, US2010233394, US2010178148, US2008173611, US2007267384, US2007175852, US2007151521, US2007151520, US2007045315, US2006169666, US2005199574, US2005145629, US2004231609, US2004069738, US2004060891, US2004026288, US2004011757, US2002166836, TWI516420, ES2421212, CN105008234,

Abstract:

Source: US6382444B A tamper evident closure for containers having finish a with thread means and a radially outwardly circumferentially extending bead below the threads comprising, a cap portion of cup-like form having internal threads for cooperatively engaging the threads on a container to apply and remove the cap portion, a retainer ring depending from the lower edge of the skirt portion of the cap and connected thereto by a series of circumferentially spaced bridge connections, and a tamper evident band having means for rotatably mount on the retaining ring and rotatable thereto and including a series of spring fingers for engaging under the retainer bead on the container when the closure is fully seated.

71) Family number: 29081705 (US2003173379A)

© PatBase

Title: COVER FOR DISPENSING CLOSURE WITH PRESSURE ACTUATED VALVE**Priority:** US20020098819 20020315 US20050169133 20050628

Family:	Publication number	Publication date	Application number	Application date
	MXPA03002321 A1	20041029	MX2003PA02321	20030317
	US2003173379 AA	20030918	US20020098819	20020315
	US2005269373 AA	20051208	US20050169133	20050628
	US6910607 BB	20050628	US20020098819	20020315

Probable Assignee: CROWN PACKAGING TECHNOLOGY INC**Assignee(s):^(std):** CROWN CORK AND SEAL TECH CORP ; GAISER RICKY G ; HIERZER VALENTIN ; SIMPSON ROBERT**Assignee(s):** CROWN PACKAGING TECHNOLOGY INC ; OBRIST CLOSURES SWITZERLAND GMBH ; CROWN CORK AND SEAL TECHNOLOGIES ; CROWN CORK AND SEAL TECHNOLOGIES CORP ; CROWN HOLDINGS INC ; CROWN OBRIST GMBH ; CITICORP NORTH AMERICA INC ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS**Inventor(s):^(std):** GAISER RICKY G ; HIERZER VALENTIN ; SIMPSON ROBERT**Inventor(s):** GAISER RICKY**Agent(s):** WOODCOCK WASHBURN LLP**International class**
(IPC 8-9): [B65D47/20](#) (Advanced/Invention);
[B65D47/04](#) (Core/Invention)**International class**
(IPC 1-7): [B65D5/72](#) [B65D51/00](#) [B67B5/00](#) [B67D5/06](#)**CPC:** [B65D47/2031](#)**European class:** [B65D47/20E2](#)**US class:** [222/212](#) [222/490](#) [222/494](#) [222/556](#) [222/562](#)[Classification Explorer](#)**Cited documents:** US6910607 BB, US6662977 BB, US6179166 BA, US6179166 B1, US6112951 A, US6089418 A, US6089411 A, US6039224 A, US5971232 A, US5954237 A, US5927566 A, US5927549 A, US5897033 A, US5743443 A, US5642824 A, US5632420 A, US5531363 A, US5456374 A, US5409144 A, US5390805 A, US5377877 A, US5271531 A, US5213236 A, US5115950 A, US5025942 A, US4749108 A, US4728006 A, US3856170 A, US2713953 A, US2684789 A, US1989714 A, JP8282703 A2, EP0555623 A1,**Forward Citations:** WO08118302, USD801827, USD738732, USD728378, USD720622, US9580214, US8794489, US8397957, US8397956, US7861393, US7837403, US7681750, US7398900, US7255250, US7178361, US2016023818, US2014224356, US2012199118, US2011163134, US2010108724, US2008237271, US2007251079, US2007181523, US2006169723, US2006133886, US2006075773, US2006037975, US2005279781, US2005269373,**Abstract:**

Source: US2003173379A A cover for a valved dispensing closure prevents the valve from opening while the cover is disposed on closure. The cover's central projection prevents flaps formed in the valve from opening, and the cover's outer projection prevents the flexible valve head from moving or inverting. The cover may also have projections that project inwardly from its skirt. The cover projections interact with mating projections formed on an exterior of the closure, and a lower end of the skirt may be disposed into an annular groove in the closure, to enhance a seal between the closure and the cover.

0) US5333151A – HIGH SPEED FREQUENCY–SHIFT KEYING DECODER

72) Family number: 20289455 (US5333151A)

© PatBase

Title: High speed frequency–shift keying decoder

Priority: CA19932107041 19930927 CA19932107055 19930927 WO1993GB02202 19931025
FR19930001410 19930209 FR19930007012 19930610 US19920980071 19921123
WO1994FR00144 19940209 WO1994FR00145 19940209

Family:

Publication number	Publication date	Application number	Application date
<u>AT175165 E</u>	19990115	AT19940906255T	19940209
<u>AT192107 E</u>	20000515	AT19940906254T	19940209
<u>AU199460029 A1</u>	19940829	AU19940060029	19940209
<u>AU199460030 A1</u>	19940829	AU19940060030	19940209
<u>AU676009 B2</u>	19970227	AU19940060030	19940209
<u>AU696551 B2</u>	19980910	AU19940060029	19940209
<u>BRPI9406119 A</u>	19951212	BR1994PI06119	19940209
<u>BRPI9406401 A</u>	19960130	BR1994PI06401	19940209
<u>CA2107041 AA</u>	19940810	CA19932107041	19930927
<u>CA2107055 AA</u>	19940810	CA19932107055	19930927
<u>CA2151923 AA</u>	19950615	CA19942151923	19940209
<u>CN1040311 C</u>	19981021	CN19941091136	19940209
<u>CN1117722 A</u>	19960228	CN19941091134	19940209
<u>CN1117723 A</u>	19960228	CN19941091136	19940209
<u>CZ9502040 A3</u>	19960814	CZ19950002040	19940209
<u>CZ9502041 A3</u>	19951213	CZ19950002041	19940209
<u>DE69323091 D1</u>	19990225	DE19936023091	19931025
<u>DE69323091 T2</u>	19990715	DE19936023091T	19931025
<u>DE69415655 D1</u>	19990211	DE19946015655	19940209
<u>DE69415655 T2</u>	19990617	DE19946015655T	19940209
<u>DE69424149 D1</u>	20000531	DE19946024149	19940209
<u>DE69424149 T2</u>	20001116	DE19946024149T	19940209
<u>EP0670093 A1</u>	19950906	EP19930923619	19931025
<u>EP0670093 B1</u>	19990113	EP19930923619	19931025
<u>EP0682624 A1</u>	19951122	EP19940906254	19940209
<u>EP0682624 B1</u>	20000426	EP19940906254	19940209
<u>EP0682625 A1</u>	19951122	EP19940906255	19940209
<u>EP0682625 B1</u>	19981230	EP19940906255	19940209
<u>ES2127378 T3</u>	19990416	ES19940906255T	19940209
<u>ES2146252 T3</u>	20000801	ES19940906254T	19940209
<u>FI952690 A</u>	19950807	FI19950002690	19950602
<u>FI952690 A0</u>	19950602	FI19950002690	19950602
<u>FI952691 A</u>	19950808	FI19950002691	19950602
<u>FI952691 A0</u>	19950602	FI19950002691	19950602
<u>FR2701248 A1</u>	19940812	FR19930001410	19930209
<u>FR2701248 B1</u>	19950428	FR19930001410	19930209
<u>FR2706426 A1</u>	19941223	FR19930007012	19930610
<u>FR2706426 B1</u>	19950922	FR19930007012	19930610
<u>JP8504307 T2</u>	19960507	JP19940512866T	19931025
<u>JP8509188 T2</u>	19961001	JP19940517731T	19940209
<u>JP8509189 T2</u>	19961001	JP19940517732T	19940209

<u>KR19960700181 A</u>	19960119	KR19950702935	19950718	
<u>KR19960700182 A</u>	19960119	KR19950702936	19950718	
<u>KR19967000181 A</u>	19960119	KR19957002935	19940209	
<u>KR19967000182 A</u>	19960119	KR19957002936	19940209	
<u>MX9306225 A1</u>	19940831	MX19930006225	19931006	
<u>MX9306232 A1</u>	19940831	MX19930006232	19931006	
<u>NO952382 A</u>	19950808	NO19950002382	19950616	
<u>NO952382 A0</u>	19950616	NO19950002382	19950616	
<u>NO952383 A</u>	19950809	NO19950002383	19950616	
<u>NO952383 A0</u>	19950616	NO19950002383	19950616	
<u>NZ261329 A</u>	19960528	NZ19940261329	19940209	
<u>PL173080 B1</u>	19980130	PL19940309922	19940209	
<u>PL174688 B1</u>	19980831	PL19940309921	19940209	
<u>PL309921 A1</u>	19951113	PL19940309921	19940209	
<u>PL309922 A1</u>	19951113	PL19940309922	19940209	
<u>RU2094343 C1</u>	19971027	RU19950120002	19940209	
<u>RU2126351 C1</u>	19990220	RU19950120081	19940209	
<u>RU95120002 A</u>	19970810	RU19950120002	19950808	
<u>RU95120081 A</u>	19970910	RU19950120081	19950909	
<u>SK98895 A3</u>	19960508	SK19950000988	19940209	
<u>SK98995 A3</u>	19960508	SK19950000989	19940209	
<u>US5333151 A</u>	19940726	US19920980071	19921123	
<u>US5402901 A</u>	19950404	US19930128384	19930929	
<u>WO9413084 A1</u>	19940609	WO1993GB02202	19931025	
<u>WO9418084 A1</u>	19940818	WO1994FR00144	19940209	
<u>WO9418085 A1</u>	19940818	WO1994FR00145	19940209	

Probable Assignee: LE MOULAGE AUTOMATIQUE

Assignee(s):^(std): CARVALHEIRO JOSE ; FORD MOTOR CO ; FRANCHET ALAIN ; GUERRAZZI VINCENT ; LE MOULAGE AUTOMATIQUE SA ; LE MOULAGE AUTOMATIQUE S A CHA ; LE MULYAZH OTOMATIK ; LE MULJAZH OTOMATIK ; MOULAGE AUTOMATIQUE SA ; LEMOULAGE AUTOMATIQUE ; PELLERANO PIERRE ; MOULAGE AUTOMATIQUE LE ; TETRA PAK CLOSURES DEV LEVALLO ; NORD EST DEV ; TETRA PAK CLOSURES DEV

Assignee(s): MOULAGE AUTOMATIQUE ; VISTEON GLOBAL TECHNOLOGIES INC ; NORD EST DEVELOPPEMENT ; TETRA PAK CLOSURES DEVELOPPEMENT ; NORD EST DEVELOPPEMENT PARIS FR ; TETRA PAK CLOSURES DEVELOPPEMENT LEVALLOIS PERRET ; LE MOULAGE AUTOMATIQUE SOC ANONYME ; LE MOULAGE AUTOMATIQUE SOCIETE ANONYME ; LE MOULAGE AUTOMATIQUE S A CHATEAU THIERRY FR ; LE MOULAGE AUTOMATIQUE S A CHATEAU THIERRY ; LE MOULAGE AUTOMATIQUE AVENUE DE L EUROPE Z I ; LE MOULAGE AUTOMATIQUE ; FORD MOTOR CO DEARBORN MICH US ; FORD MOTOR COMPANY

Inventor(s):^(std): ZHOZE KARVALEIRO ; ZHOZE KARVAL EIRO ; VINCENT GUERRAZZI ; VINCENT GUERRAZZI ; VICENT GUERRAZZI ; VENSAN GERRAZZI ; PLOWDREY ROBERT DONALD ; PLOWDREY ROBERT D ; PIERRE PELLERANO ; PELLERANO PIERRE BATISTE ; PELLERANO PIERRE B ; PELLERANO PIERRE ; P ER BATIST PELLERANO ; KENNEDY JOHN FRANCIS ; KENNEDY JOHN F ; JOSE CARVALHEIRO ; GUERRAZZI VINCENT ; PER BATIST PELLERANO ; GUERRAZZI VINCENT ; GUERRAZZI VICENT ; GUARRAZZI VINCENT ; FRANCHET ALAIN GERARD ; FRANCHET ALAIN ; CARVALHEIRO JOSE ; ALLEN FRANSHE ; ALAIN FRANCHET ; PLOWDREY ROBERT ; KENNEDY JOHN

Inventor(s): KENNEDY JOHN FRANCIS GARDEN CITY MI 48135 US ; PLOWDREY ROBERT DONALD LIVONIA MI 48152 US ; ALLEN FRANSHE[FR] ; CARVALHEIRO JOSE F 75012 PARIS FR ; FRANCHET ALAIN F 02400 BRASLES FR ; PELLERANO PIERRE F 75010 PARIS FR ; ZHOZE KARVAL'EIRO[FR] ; ZHOZE KARVAL'EIRO ; GUERRAZZI VINCENT F 01500 AMBERIEU EN BUGEY FR ; P'ER BATIST PELLERANO[FR] ; P'ER BATIST PELLERANO ; VENSAN GERRAZZI[FR]

Agent(s): HALFORDS IP; SIM AND MCBURNEY

Designated states: AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK ES FI FR GA GB GE GN GR HU IE IT JP KP KR KZ LI LK LU LV MC MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SK SN TD TG UA US UZ VN

International class
(IPC 8-9): B29C45/00 B29C45/44 B65D39/08 B65D41/32 B65D41/34 B65D55/02 H04L27/156 (Advanced/Invention);
B29C45/44 B29L31/56 B65D41/34 (Advanced/Non-invention);
B29C45/44 B65D41/34 B65D55/02 H04L27/156 (Core/Invention)

International class
(IPC 1-7): B29C45/00 B29C45/44 B29L31/56 B65D1/00 B65D39/08 B65D41/32 B65D41/34 B65D50/00 B65D55/02 B65D55/06 B65D55/08 H03D3/02 H03H7/19 H04L27/14 H04L27/156

CPC: H04L27/1563 B29C45/44 B29C45/4407 B29L2031/565 B65D41/3447 B65D41/3452

European class: B29C45/44 B29C45/44B B65D41/34D1 B65D41/34D1A H04L27/156A L29L31/56B

US class: 215/252 329/303 329/337 375/334 375/88 455/337

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Cited documents: US5273173 A, US5155446 A, US4907709 A, US4890754 A, US4828127 A, US4756438 A, US4744480 A, US4741447 A, US4715506 A, US4571738 A, US4550843 A, US4549667 A, US4529096 A, US4527705 A, US4472816 A, US4461391 A, US4335354 A, US4193034 A, US3739288 A, US3601710 A, US3569845 A, US3470478 A, US3017464 A, JP56156012 A2, JP56156012, GB2255553 A1, GB2032737 A1, GB1134894 A, FR2549806 A1, EP0458250 A2, EP0355235 A1, EP0306259 A2, EP0133348 A1, EP0096351 A1, DE9208944 U, DE9208944 U, DE2516679 B1, DE2516679 A1, CH669556, CA1279608, AU667964 B2, AU6002994 A1, AU2059295 A1,

Forward Citations: WO9958418, WO9905039, WO9727037, WO9700209, WO13088809, WO08039600, WO08039600, WO04014742, WO04014742, WO0015517, USD634200, USD634199, USD633386, US9511905, US8794458, US8672158, US8469213, US8365932, US8360257, US8231020, US7591398, US7451885, US7228979, US6938787, US6793082, US6543634, US6328175, US6213321, US6041953, US5992661, US5779076, US5680945, US5648037, US5573128, US5483193, US2011315650, US2008073348, US2006169666, US2004069738, US2004011757, KR20140104490, KR101629124, JP6005247, JP2014122062, JP2013126881, JP2011212880, JP2003063545, GB2295143, GB2295143, FR2783240, FR2744052, FR2721282, EP2842886, EP2792610, EP2179942, EP1757055, EP0998414, EP0987187, EP0879180, EP0876248, EP0799772, EP0729894, EP0688724, DE19613364, CN103261045, CN103261045, CN102773972, CN102773972, CN102022402, AU699513,

Abstract:

Source: US5333151A A frequency-shift keying (FSK) signal detector splits an FSK signal into two paths. In one path, a phase-altering circuit having a variable frequency characteristic between the two encoding frequencies of the FSK signal provides either a phase lead or a phase lag depending upon the instantaneous frequency of the FSK signal. The phase-altered signal is sampled in response to the signal in the second path to decode a digital signal.

73) Family number: 20452679 (US5860542A)

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Title: Sealing device and container**Priority:** JP19950297161 19951115 WO1996JP03334 19961114

Family:	Publication number	Publication date	Application number	Application date
	AT263073 E	20040415	AT19960938461T	19961114
	AU199714324 A1	19970605	AU19970014324	19961114
	AU722794 B2	20000810	AU19970014324	19961114
	BRPI9607711 A	19980113	BR1996PI07711	19961114
	CN1105669 C	20030416	CN19961091456	19961114
	CN1168122 A	19971217	CN19961091456	19961114
	DE69632026 D1	20040506	DE19966032026	19961114
	DE69632026 T2	20041028	DE19966032026T	19961114
	EP0801005 A1	19971015	EP19960938461	19961114
	EP0801005 A4	20000726	EP19960938461	19961114
	EP0801005 B1	20040331	EP19960938461	19961114
	ES2217326 T3	20041101	ES19960938461T	19961114
	HK1002859 A1	20040917	HK19980102011	19980311
	JP3187433 B2	20010711	JP19970514162	19961114
	KR100222112 B1	19991001	KR19970702494	19970416
	KR19970707022 A	19971201	KR19970702494	19970416
	KR19977007022 A	19971201	KR19977002494	19961114
	MX9703162 A1	19970731	MX19970003162	19961114
	TW329415 B	19980411	TW19970101806	19970215
	US5860542 A	19990119	US19970836417	19970514
	WO9718139 A1	19970522	WO1996JP03334	19961114

Probable Assignee: ALCOA CLOSURE SYSTEMS JAPAN LTD**Assignee(s):^(std):** ALCOA CLOSURE SYSTEMS JAPAN ; OKOYA BOTTLE CAP SYSTEM JAPAN ; SHIBAJAKI SHAIKAKSO CO LTD ; SHIBAZAKI SEISAKUSHO LTD ; TAKAMATSU KOUICHI ; SHIBAZAKI SEISAKUASHO LTD**Assignee(s):** SHIBASAKI SEISAKUSHO CO LTD ; SHIBAZAKI SEISAKUSHO KK ; OKOYA BOTTLE CAP SYSTEM JAPAN CO LTD ; ALCOA CLOSURE SYSTEMS JAPAN LIMITED ; ALCOA CLOSURE SYSTEMS JAPAN LTD**Inventor(s):^(std):** KOUICHI TAKAMATSU ; TAKAMATHU KOICHI ; TAKAMATSU KOUICHI**Agent(s):** FB RICE; FB RICE PTY LTD**Designated states:** AT AU BE BR CH CN DE DK ES FI FR GB GR IE IT JP KR LI LU MC MX NL PT SE SG US

International class
 (IPC 8-9): [B65D41/32](#) [B65D41/34](#) (Advanced/Invention);
[B65D41/32](#) (Advanced/Non-invention);
[B65D41/32](#) [B65D41/34](#) (Core/Invention)

International class
 (IPC 1-7): [B65D39/00](#) [B65D41/32](#) [B65D41/34](#) [B65D49/02](#) [B65D55/16](#)

CPC: [B65D41/3428](#)**European class:** [B65D41/34C1](#)**US class:** [215/252](#) [215/44](#)[Classification Explorer](#)**Cited documents:**

WO9622233 A1, US5667088 A, US5660288 A, US5564582 A, US5533633 A, US5205426 A, US5167335 A, US5137163 A, US5050753 A, US4756438 A, US4666053 A, JP7291317 A2, JP62251352 A2, JP62159349 U1, JP62159349 U, JP62011745 U1, JP62011745 U, JP61217358 A2, JP61164144 U1, JP61164144 U, JP61164144 A2, JP61099539 U1, JP61099539 U, JP6024458 A2, JP60161054 U1, JP60161054 U, JP48024451 Y2, JP48024451 Y1, JP46024152 Y2, JP3056990 A2, JP2296666 A2, EP0231905 A2, EP0049876 A1, DE2856433 A1,

Forward Citations: WO08033260, WO08033260, WO06083654, WO06066356, WO06045196, WO06013404, USD587118, USD441650, US9818249, US9811671, US8886946, US8807360, US8596477, US7789254, US7637384, US7451898, US7451885, US7445130, US6702133, US6672468, US6557714, US6491175, US6308848, US6253939, US6119883, US6116443, US6085921, US2012055945, US2011036839, US2011024423, US2008061062, US2007187352, US2006169666, US2006091100, US2005284837, US2005072751, US2005000931, US2004168999, US2004155006, US2004045925, JP4059955, JP4004594, JP2002160750, JP11035053, JP11020847, GB2436502, GB2436502, FR2897043, ES2255879, EP2467309, EP1796980, EP1008530, CN104552739, CN103063473, AU757519,

Abstract:

Source: US5860542A PCT No. PCT/JP96/03334 Sec. 371 Date May 14, 1997 Sec. 102(e) Date May 14, 1997 PCT Filed Nov. 14, 1996 PCT Pub. No. WO97/18139 PCT Pub. Date May 22, 1997A sealing device comprises a container and a synthetic resin cap attached to the mouth portion thereof. The synthetic resin cap has a cap main body composed of a top plate portion and a tube portion extending downward from the periphery thereof, the tube portion being separated by means of a tearable weakening line into an upper main portion and a lower tamper-evidence ring portion, a threaded portion being formed on the inner wall surface of the main portion, and erectable engaging projections being provided on the inner wall surface of the tamper-evidence ring portion. The container has an external thread formed on the outer circumference of the upper end of the mouth portion thereof, an annular expanded portion formed underneath the external thread, and at least one depressing portion formed on the expanded portion which engages the engaging projections on the cap and pushes down the engaging projections when the synthetic resin cap attached to the container mouth portion is twisted in the cap-opening direction.

0) GB2322123A – CONTAINER NECK AND CLOSURE

74) Family number: 13479876 (GB2322123A)

© PatBase

Title: CONTAINER NECK AND CLOSURE

Priority: GB19970002928 19970213

Family:	Publication number	Publication date	Application number	Application date	
	<u>GB2322123 A1</u>	19980819	GB19970019138	19970909	
	<u>GB2322123 B2</u>	20010110	GB19970019138	19970909	
	<u>GB2322362 A1</u>	19980826	GB19970002928	19970213	
	<u>GB2322362 B2</u>	20010110	GB19970002928	19970213	
	GB9702928 A0	19970402	GB19970002928	19970213	
	GB9719138 A0	19971112	GB19970019138	19970909	

Probable Assignee: PORTOLA PACKAGING LTD

Assignee(s):^(std): PORTOLA PACKAGING LTD

Assignee(s): PORTOLA PACKAGING LIMITED

Inventor(s):^(std): HEIGHINGTON GLENN ; MAVIN GERRY

Inventor(s): GERRY MAVIN ; GLENN HEIGHINGTON

International class
(IPC 8-9): [B65D1/02 B65D41/04](#) (Advanced/Invention);
[B65D1/02 B65D41/04](#) (Core/Invention)

International class
(IPC 1-7): [B65D1/02 B65D41/04](#)

CPC: [B65D1/023 B65D41/045](#)

European class: [B65D1/02D1 B65D41/04D2](#)

[Classification Explorer](#)

Cited documents: US4856668 A, US4294370 A, US3747792 A, GB2123392 A1, GB2117361 A1, GB2041892 A1, GB1602746 A, GB1448262 A,

Forward Citations: GB2375760, GB2375760, EP2183168,

Abstract:

Source: GB2322123A A container has a neck which defines a neck opening 54 and comprises an upper neck stretch portion below the opening having a first engagement means 70 and a lower neck stretch portion beneath the upper neck stretch portion. A closure comprises a cap 80 having a top 82, a downwardly extending upper skirt portion 86 depending from the top 82 and a lower skirt portion depending from the upper skirt portion. The upper skirt portion has an inner surface including a second engagement means 96 engageable with the first engagement means 70 to releasably secure the closure to the container neck. The lower skirt portion has an inner surface which is substantially smooth. The closure is adapted such that when the closure is applied to the container neck the lower skirt portion overlies the lower neck stretch portion.

75) Family number: 2959031 (US4927036A)

© PatBase

Title: Container with tamper indicator using piped light
Priority: US19870009720 19870202 US19890312433 19890217 WO1988US00260 19880128
Family:

Publication number	Publication date	Application number	Application date
AU198813450 A1	19880824	AU19880013450	19880128
AU606140 B2	19910131	AU19880013450	19880128
DE3863503 D1	19910808	DE19883863503	19880128
EP0301074 A1	19890201	EP19880901994	19880128
EP0301074 B1	19910703	EP19880901994	19880128
JP1502019 T2	19890713	JP19880501895T	19880128
US4927036 A	19900522	US19890312433	19890217
WO8805756 A1	19880811	WO1988US00260	19880128

Probable Assignee: DIEHL POJEDINEC EDWARD P
Assignee(s):^(std): DIEHL EDWARD P ; DIEHL POJEDINEC EDWARD P ; EDWARD P DIEHL
Assignee(s): DIEHL EDWARD P LINCOLN PARK N J US
Inventor(s):^(std): DIEHL EDWARD P ; DIEHL POJEDINEC EDWARD P
Inventor(s): EDWARD P DIEHL ; DIEHL EDWARD P LINCOLN PARK N J US
Agent(s): CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD
Designated states: AT AU BB BE BG BR CH DE DK FI FR GB HU IT JP KP KR LK LU MC MG MW NL NO RO SD SE SU
International class [B65D55/02](#) (Advanced/Invention);
 (IPC 8-9): [B65D55/02](#) (Core/Invention)
International class [B65D55/02](#)
 (IPC 1-7):
CPC: [B65D55/026](#)
European class: [B65D55/02G](#)
US class: [215/203 215/230 215/250 220/265 385/13](#)

[Classification Explorer](#)

Cited documents: US4682844 A, US4662710 A, US4657339 A, US4609114 A, US4489841 A, US4447123 A, US4432601 A, US4407562 A, US4161348 A, US4130341 A, US4106849 A, US4104981 A, US4095872 A, US4071726 A, US3819928 A, US3780248 A,

Forward Citations: US7579061, US7249878, US6394022, US2005258634, GB2199020,

Abstract:

Source: US4927036A A tamper evident device is disclosed herein comprising in its most basic form a light guide with finished ends; one of which serves to collect light, the other to emit said light to serve as a light emitting indicator. The invention is attached to closures and containers so that upon opening, the light path is interrupted causing the indicator to go dark, thus signalling a tampered condition.

76) Family number: 13331456 (US5692628A)

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Title: Press–on screw–off self–tapping closure/container package
Priority: DE19971005315 19970213 GB19970003732 19970222 US19960583780 19960111
Family:

Publication number	Publication date	Application number	Application date
<u>DE19705315 A1</u>	19980820	DE19971005315	19970213
<u>GB2323593 A1</u>	19980930	GB19970003732	19970222
<u>GB2323593 B2</u>	20010509	GB19970003732	19970222
GB9703732 A0	19970409	GB19970003732	19970222
<u>US5692628 A</u>	19971202	US19960583780	19960111

Probable Assignee: BERRY PLASTICS CORP

Assignee(s):^(std): REXAM CLOSURE INC ; REXAM CLOSURES INC

Assignee(s): REXAM CLOSURES INC EVANSVILLE IND US ; REXAM CLOSURES LLC ; BERRY PLASTICS CORP

Inventor(s):^(std): WHITEHEAD JAMES F ; WHITEHEAD JAMES E ; NILSTOFT CLAS ; MONTGOMERY GARY V

Inventor(s): NILSTOFT CLAS EVANSVILLE IND ; CLAS NILSTOFT ; GARY V MONTGOMERY ; JAMES E WHITEHEAD ; MONTGOMERY GARY V EVANSVILLE IND US ; NILSTOFT CLAS EVANSVILLE IND US ; WHITEHEAD JAMES E EVANSVILLE IND US

International class
^{(IPC 8–9):} B65D1/02 B65D41/17 B65D41/47 (Advanced/Invention) ;
B65D1/02 B65D41/02 B65D41/32 (Core/Invention)

International class
^{(IPC 1–7):} B65D1/02 B65D1/03 B65D1/12 B65D41/04 B65D41/17 B65D41/34 B65D8/02

CPC: B65D1/0246 B65D41/17 B65D41/47

European class: B65D1/02D1B B65D41/17 B65D41/47

US class: 215/318 215/320 215/43 215/44 220/289

[Classification Explorer](#)

Cited documents: US5259522 A, US5040692 A, US4863030 A, US4744478 A, US4721219 A, US4717034 A, US4709825 A, US4379512 A, US4340149 A, US4308965 A, US4307816 A, US4251002 A, US4231480 A, US4190171 A, US4000825 A, US3690503 A, US3690497 A, US3685677 A, US3677431 A, US3606062 A, US3494496 A, US3448881 A, US3371813 A, US3270904 A, US3223269 A, US2117407 A, US2039757 A, GB635262 A, GB1004473 A, EP0251259 A1, DE4217539 A1,

Forward Citations: WO10028172, USD481312, USD472143, US9611079, US8839976, US8777041, US8596477, US8474644, US8231025, US7882977, US7854106, US7828166, US6786348, US6705495, US6648188, US6595395, US6520361, US6223957, US2013153576, US2013126530, US2011155758, US2010058574, US2009057261, US2007181578, US2004118881, FR2962983, EP2409928,

Abstract:

Source: US5692628A A closure–container package is illustrated in which the closure is pressed–on to the container neck and threaded off the container neck. Either the container neck or the closure has a helical thread which engages axially extending ribs on the other of the container neck or closure to form indentations in the ribs which act as threads, teeth or a track for unthreading. A continuous or rotary seal is used between the container neck and the closure which does not require a sealing force from the threaded connection.

Title: Tamper Evident Ring**Priority:** AU20050225025 20051018

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2005225025 AA</u>	20070503	AU20050225025	20051018

Probable Assignee: SPOTLESS SERVICES NZ LTD**Assignee(s):^(std):** SPOTLESS SERVICES NZ LTD**Assignee(s):** SPOTLESS SERVICES LTD**Inventor(s):^(std):** RUNDLE GRAEME EDWARD**Inventor(s):** GRAEME EDWARD RUNDLE**Agent(s):** A J PARK; AJ PARK

International class B65D41/34 B65D55/08 (Advanced/Invention);
 (IPC 8-9): B65D41/34 B65D55/02 (Core/Invention)

[Classification Explorer](#)**Abstract:**

Source: AU2005225025A The invention is for a moulded tamper evident closure suitable for a container of a kind having a lip below a male threaded mouth. The closure has a cap having a 00 downwards depending internally threaded skirt to engage a complementary threaded mouth on the suitable container. Depending from the closure is a tamper evident ring V) C frangibly detachable from the cap via a frangible zone or frangible zones, the tamper evident ring having, at least one engaging feature adapted to co-act as a ratchet with a complementary feature or features of said suitable container whereby tightening for sealing, but not untightening for removal, will be achievable without damage of the frangible zone(s), and at least one retaining feature adapted to co-act by abutment with a said lip and said suitable container to retain the tamper evidencing on said container, upon untightening and/or removal of said cap 495197_I.DOC k P-ACADI 2:5b c c 3 II 2005225025 91 18 Oct 2005

78) Family number: 31712727 (US2005039416A)

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Title: COLOR-CODED SHRINK WRAPPED CLOSURE SYSTEM**Priority:** US20030644491 20030820 US20050122688 20050505

Family:	Publication number	Publication date	Application number	Application date
	<u>US2005039416 AA</u>	20050224	US20030644491	20030820
	<u>US2005205513 AA</u>	20050922	US20050122688	20050505

Probable Assignee: BLACKHAWK MOLDING CO INC**Assignee(s):^(std):** HIDDING DOUGLAS J**Assignee(s):** BLACKHAWK MOLDING CO INC**Inventor(s):^(std):** HIDDING DOUGLAS J**Inventor(s):** HIDDING DOUGLAS**Agent(s):** DAVID I ROCHE BAKER AND MCKENZIE; DAVID I ROCHE BAKER AND MCKENZIE LLP

International class B65D1/02 B65D41/62 (Advanced/Invention);
 (IPC 8-9): B65D1/02 B65D41/00 (Core/Invention)

International class B65B7/28 B65D51/00
 (IPC 1-7):

CPC: B65D1/023 B65D41/62 B65D2203/00**European class:** B65D1/02D1 B65D41/62 L65D203/00**US class:** 215/246 53/281 53/281S 53/397 53/397S 53/471 53/471S 53/585 53/585S[Classification Explorer](#)

Cited documents: US6745505 BB, US6070750 A, US6003701 A, US5904266 A, US5904259 A, US5669427 A, US5641084 A, US5605230 A, US5524782 A, US5392939 A, US5295519 A, US5217307 A, US5197258 A, US5094357 A, US4919285 A, US4776476 A, US4427138 A, US4225050 A, US3720343 A, US3314564 A, US3142580 A, US3095103 A, US2265015 A, US2121041 A, US2003230577 AA,

Forward Citations: WO11068785, USD790340, USD786087, USD776535, USD766727, USD717666, US9586729, US9475600, US9227772, US9085396, US9033151, US8870004, US8752705, US8381925, US8028446, US8025314, US7963425, US7922074, US2016023812, US2014299486, US2013313218, US2011132781, US2009230076, US2009057390, US2007241075, US2004216341, EP2279125, AU2010326201,

Abstract:

Source: US2005039416A A packaging system for improved management of cap inventory when different beverages, such as different types of milk (skim, 1 percent, 2 percent and whole) or water (spring, distilled, fortified, mineral etc.) are bottled in the same bottling lines at various facilities. The system includes maintaining a supply of standard caps, which may be free of colorants or pigments, and a supplies of reels of different colored (or differently printed) shrink sleeve material. The different types of beverage are bottled in containers that have a single standard cap and standard uniform bottles, and the different contents of said bottles are differentiated from one another by the application of colored (or distinctively printed) shrink sleeves or bands. The cap and/or the bottle neck are adapted to be engaged by the shrink band in a way that protects the bottle from being tampered with, and when threaded caps are used, helps prevent the inadvertent loosening of the caps during in shipment.

79) Family number: 32245283 (US2005199527A)

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Title: CHILD RESISTANT DISPENSING CLOSURE PACKAGE**Priority:** US20040799787 20040312

Family:	Publication number	Publication date	Application number	Application date
	<u>US2005199527 AA</u>	20050915	US20040799787	20040312
	<u>US7114619 BB</u>	20061003	US20040799787	20040312

Probable Assignee: PARADIGM PACKAGING INC**Assignee(s):^(std):** PARADIGM PACKAGING INC**Assignee(s):** US BANK NATIONAL ASSOCIATION ; ZATS ALEKSEY ; ELLIS DOUGLAS ; NYMAN HENRY H**Inventor(s):^(std):** ELLIS DOUGLAS ; NYMAN HENRY H ; ZATS ALEKSEY**Inventor(s):** NYMAN HENRY**Agent(s):** CALFEE HALTER AND GRISWOLD LLP**International class** B65D43/12 B65D83/04 (Advanced/Invention);
(IPC 8-9): B65D83/04 (Core/Invention)**International class** B65D83/04
(IPC 1-7):**CPC:** B65D50/046**European class:** B65D50/04F2**US class:** 206/1.5 206/1.500 206/528 206/540 220/345.1[Classification Explorer](#)**Cited documents:** US6439442 BA, US5971154 A, US5462189 A, US5445283 A, US5400914 A, US5284262 A, US5188253 A, US5050752 A, US4972657 A, US4860899 A, US4832221 A, US4819829 A, US4535903 A, US4469241 A, US4462501 A, US4458819 A, US4358022 A, US4170724 A, US4146146 A, US4127221 A, US3949899 A, US3924768 A, US3923180 A, US3893593 A, US3860135 A, US3843008 A, US3759420 A, US3625386 A, US3501041 A, US3313441 A, US2115494 A,**Forward Citations:** WO11117769, WO07082363, USD731309, USD690199, USD684458, US9656795, US9365333, US9295312, US8931657, US8851315, US8784377, US8657136, US8458994, US8359816, US8353869, US8281930, US8251242, US8083089, US8028851, US7980417, US7934615, US7909198, US7806270, US7648024, US7617935, US7584843, US7581642, US2014299499, US2014251851, US2013320017, US2011289884, US2011226772, US2010276461, US2009206082, US2009178948, US2009108014, US2009045096, US2008202955, US2008054008, US2008035643, US2008017658, US2007278125, US2007235368, US2006071412, GC4083, EP2767485, EP2078685, EP2028130, EP2011743, CN102811920, CN102811920, AU2011231179, AU2011231179,**Abstract:**

Source: US2005199527A A medicine container includes a child-resistant closure with a tamper-evident feature. The closure includes a plug adapted to be fixed to the container adjacent the open end. The plug has an access opening for enabling removal of material from the container through the open end of the container. A slide is supported on the plug for sliding movement in a first direction relative to the plug between a closed position in which the slide covers the access opening and an open position in which the access opening is uncovered. A child-resistant feature is interposed between the plug and the slide. The closure also includes a tamper-evident feature that permanently indicates breaking of the original seal of the container. The container may have a rectangular configuration including at least one surface large enough for a mailing address label; and a sealable window mailer envelope for receiving the medicine container.

0) US4784281A – TAMPER-EVIDENT CLOSURES

80) Family number: 3374443 (US4784281A)

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Title: Tamper-evident closures
Priority: US19840680157 19841210 US19860923011 19861023 US19880248400 19880923
Family:

Publication number	Publication date	Application number	Application date
US4784281 A	19881115	US19860923011	19861023
US4909404 A	19900320	US19880248400	19880923

Probable Assignee: ROZENBERG OLEG

Assignee(s):^(std): ROZENBERG OLEG

Inventor(s):^(std): ROZENBERG OLEG

International class [B29C45/26 B29C45/44 B65D41/34 B65D41/48](#) (Advanced/Invention)
(IPC 8-9):

International class [B65D41/34 B65D41/46](#)
(IPC 1-7):

CPC: [B29C45/2618 B29C45/4407 B29L2031/565 B65D41/3409 B65D41/3447 B65D41/48 B65D2101/0038 B65D2101/0053](#)

European class: [B29C45/26F B29C45/44B B65D41/34A1 B65D41/34D1 B65D41/48 L29L31/56B L65D101/00A3C L65D101/00A3E](#)

US class: [215/200 215/220 215/223 215/224 215/252 215/256](#)

[Classification Explorer](#)

Cited documents: US4555039 A, US4541536 A, US4534480 A, US4526282 A, US4503985 A, US4494664 A, US4474301 A, US4299328 A, US3650428 A, US3329295 A, GB809398 A,

Forward Citations: WO9846492, WO9323304, WO16080898, WO14193211, WO12033451, WO09068778, WO09068778, WO08129348, WO06004665, WO05090183, USRE38399, USD747201, US8695821, US8678810, US8631966, US8517194, US8499950, US8490805, US7611025, US6381928, US6360908, US6338414, US6102223, US5938054, US5813553, US5257724, US5207783, US2014231376, US2012318768, US2010258520, US2010181323, US2009032996, US2005199574, US2005173367, US2005116382, JP5995465, JP2013180821, FR2957587, FR2923172, FR2639031, EP1735219, EP1018420, EP0975525, EP0343534, EP0343534, AU710761,

Abstract:

Source: US4784281A Frangible areas of different configuration are formed between cap and skirt portions of different embodiments of molded plastic closures. Such frangible areas formed from within the closure by throughcuts, undercuts, and grooves are facilitated by also forming the skirt to extend from and diverge out from the cap to facilitate ejection of the closure from its mold; and by forming one or more surfaces on the skirt to also facilitate ejection of the closure from its mold.

81) Family number: 61600946 (WO17081045A1)

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Title: IMPROVEMENTS IN OR RELATING TO A CLOSURE FOR A CONTAINER NECK
Priority: GB20150019787 20151110 GB20150021045 20151130 GB20160010289 20160614
Family:

Publication number	Publication date	Application number	Application date
GB201519787 A0	20151223	GB20150019787	20151110
<u>WO17081045 A1</u>	20170518	WO2016EP77060	20161109

Probable Assignee: OBRIST CLOSURES SWITZERLAND
Assignee(s):^(std): OBRIST CLOSURES SWITZERLAND
Assignee(s): OBRIST CLOSURES SWITZERLAND GMBH
Inventor(s):^(std): MCPHERSON ALEXANDER DONALD MEIKLEM ; RICHARDSON DAVID CONWAY
Agent(s): BRYERS LLP
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D41/62 B65D49/04 B65D55/02 (Advanced/Invention)
 (IPC 8-9):

CPC: B65D49/04 B65D41/62 B65D55/022 B65D55/026 B65D2101/0084

[Classification Explorer](#)

Cited documents: WO13113435 A1, WO09010722 A1, WO09010717 A1, WO06117505 A1, WO05049443 A1, WO02096771 A1, US573823 A, US4540100 A, US2005189355 AA, US2004035817 AA, FR2759351 A1,

Abstract:

A closure (101) for a container neck comprises a first portion (102) comprising a body (104) for fixing to the container neck and a second portion (103) comprising a cap (105) releasably engageable with the body (104). The closure (101) comprises a seal support portion (107) formed from a first plastics material and a seal (106) formed from a second plastics material that is more compliant than the first plastics material, the seal (106) formed integrally with the seal support portion (107). A closure (101) with a bi-injection moulded seal. A method of forming the closure (101) comprising the step of bi-injection moulding the seal support portion (107) and the seal (106). A container comprising a container neck provided with the closure (101).

0) IN01104DN2006A – CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

82) Family number: 41747944 (IN01104DN2006A)

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Title: CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

Family:	Publication number	Publication date	Application number	Application date
	<u>IN01104DN2006 A</u>	20070817	IN2006DN01104	20060302

Probable Assignee: ABACUS

Assignee(s): ABACUS

Inventor(s): HIGGINS CHRISTOPHER LYNDON

International class B65D41/34
(IPC 1-7).

Abstract:

Source: IN01104DN2006A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102), a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamperevident band (NO) frangibly connected to said skirt; the neck (10) of the container including a plurality of discretely spaced projections (18) extending outwardly from said neck and adapted to engage with tabs (122) on said tamper-evident band to facilitate breaking of the band (MO) from the skirt of the closure.

Title: TAMPER EVIDENT CLOSURE**Priority:** EP20130799225 20131114 GB20120021610 20121130 WO2013EP73820 20131114**Family:**

Publication number	Publication date	Application number	Application date
CN104903206 A	20150909	CN201380069905	20131114
CN104903206 B	20160928	CN201380069905	20131114
EP2925626 A1	20151007	EP20130799225	20131114
EP2925626 B1	20170712	EP20130799225	20131114
ES2638563 T3	20171023	ES20130799225T	20131114
JP2016501788 T2	20160121	JP20150544408T	20131114
JP6205430 B2	20170927	JP20150544408T	20131114
MX2015006777 A1	20150806	MX20150006777	20131114
PH2015501218 A	20160201	PH20150501218	20150529
PH2015501218 B	20160201	PH20150501218	20150529
RU2015120266 A	20170110	RU20150120266	20131114
TH157659 A	20161116	TH20151002998	20131114
TR201714501 T4	20171121	TR20170014501T	20131114
US2015298876 AA	20151022	US20130648671	20131114
WO14082863 A1	20140605	WO2013EP73820	20131114
WO14082863 A9	20140724	WO2013EP73820	20131114

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** MCPHERSON ALEXANDER DONALD MEIKLEM ; MEIKLEM MCPHERSON ALEXANDER DONALD**Inventor(s):** ALEXANDER DONALD MEIKLEM MCPHERSON**Agent(s):** BRYERS LLP; ISERN JORGE; OZAWA SEIJI; HIROTA MASANORI; TOLGA CAYLAK; LICHOTA CATHERINE ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B65D41/34](#) [B65D55/02](#) (Advanced/Invention);
[B65D55/02](#) (Core/Invention)**CPC:** [B65D49/04](#) [B65D55/02](#) [B65D41/3457](#) [B65D41/3442](#) [B65D41/3423](#) [B65D41/348](#)**US class:** [215/200](#) [220/780](#)[Classification Explorer](#)**Cited documents:** WO9804474 A2, WO9804472 A1, US5799810 A, US3517847 A, US3517847, US2011259844 AA, US2011006029 AA, US2009289027 AA, US2009289027, US2006273115 AA, US2003178442 AA, JP9238998 A2, JP9238998, JP52142059 U, JP52142059 U, JP50085548 U, JP50085548 U, JP2008505811 T2, JP2008505811, GB2450939 A1, GB2158424 A1, CN101573274 A, AU464605 B2,**Forward Citations:** US9694948,

Abstract:

Source: US2015298876A A closure (10) is provided. The closure (10) comprises a body portion (20) having engagement means (45) for engagement with a container(15),and a shell for engagement with the body portion (20), wherein the shell comprises securing means (80) arranged in use to secure the engagement means (45) onto the container(15). The container (15) may be a bottle. The body portion (20) may be a pourer fitment. The engagement means (45) may comprise at least one clip. The securing means (80) may comprise a bead.

0) US2006278599A – BEVERAGE BOTTLING PLANT WITH A BEVERAGE BOTTLE ...

84) Family number: 33802634 (US2006278599A)

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Title: BEVERAGE BOTTLING PLANT WITH A BEVERAGE BOTTLE CLOSING MACHINE FOR APPLYING A SCREW-TOP BOTTLE CLOSURE TO A BEVERAGE BOTTLE

Priority: DE200510022952 20050519

Family:	Publication number	Publication date	Application number	Application date
	<u>DE102005022952 B3</u>	20070329	DE200510022952	20050519
	<u>EP1724201 A2</u>	20061122	EP20060009382	20060506
	<u>EP1724201 A3</u>	20061213	EP20060009382	20060506
	<u>US2006278599 AA</u>	20061214	US20060436895	20060518
	<u>US7975863 BB</u>	20110712	US20060436895	20060518

Probable Assignee: KHS GMBH

Assignee(s):^(std): KHS AG ; KHS MASCH AND ANLAGENBAU AG ; TILL VOLKER

Assignee(s): KHS MASCH U ANLAGENBAU AG ; KHS MASCHINEN UND ANLAGENBAU AG ; KHS GMBH ; KHS MASCH

Inventor(s):^(std): TILL VOLKER

Agent(s): NILS H LJUNGMAN ESQUIRE NILS H LJUNGMAN AND ASSOCIATES; NILS H LJUNGMAN AND ASSOCIATES

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR YU

International class
(IPC 8-9): B65D39/00 B65D41/00 B65D41/34 B65D43/00 B65D45/16 B65D47/00 B65D49/12
B65D51/00 B65D55/02 B65D83/00 (Advanced/Invention);
B65D41/34 B65D49/00 B65D51/00 B65D55/02 (Core/Invention)

CPC: B65D41/3409

European class: B65D41/34A1

US class: 215/252 215/253 215/258 215/288 215/388

[Classification Explorer](#)

Cited documents: US6336566 BA, US5318192 A, US5285912 A, US5115932 A, US5040692 A, US4771904 A, US4760941 A, US4567991 A, US3874540 A, US2002148803 AA, FR2862620 A1, EP0941938 A2, EP0413466 A1, DE9410956 U, DE8001216 U, DE8001216, DE69916520 T2, DE3038453 A1, DE2223845 A1,

Forward Citations: US2011100947,

Abstract:

Source: US2006278599A Beverage bottling plant with a beverage bottle closing machine for applying a screw-top bottle closure to a beverage bottle, which screw-top bottle closure is designed to essentially prevent or minimize the tampering thereof. The abstract of the disclosure is submitted herewith as required by 37 C.F.R. §1.72(b). As stated in 37 C.F.R. §1.72(b): A brief abstract of the technical disclosure in the specification must commence on a separate sheet, preferably following the claims, under the heading "Abstract of the Disclosure." The purpose of the abstract is to enable the Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure. The abstract shall not be used for interpreting the scope of the claims. Therefore, any statements made relating to the abstract are not intended to limit the claims in any manner and should not be interpreted as limiting the claims in any manner.

Title: CLOSURE**Priority:** GB20090005749 20090402 WO2010GB00388 20100303

Family:	Publication number	Publication date	Application number	Application date
	<u>DE202010017831 U1</u>	20121206	DE201020017831U	20100303
	<u>EP2414252 A1</u>	20120208	EP20100710384	20100303
	<u>EP2414252 B1</u>	20170614	EP20100710384	20100303
	GB200905749 A0	20090520	GB20090005749	20090402
	GB201116952 A0	20111116	GB20110016952	20100303
	<u>GB2480593 A1</u>	20111123	GB20110016952	20100303
	<u>GB2480593 B2</u>	20120509	GB20110016952	20100303
	<u>GB2480593 C</u>	20120509	GB20110016952	20100303
	<u>GB2480593 C</u>	20100714	GB20110016952	20100303
	<u>MX2011010441 A1</u>	20111028	MX20110010441	20100303
	<u>US2012067922 AA</u>	20120322	US20110251581	20111003
	<u>WO10112801 A1</u>	20101007	WO2010GB00388	20100303

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):^(std):** BENOIT GONIN CLAUDE ; GREENWOOD MATTHEW DAVID ; OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** BENOIT GONIN CLAUDE**Inventor(s):** CLAUDE BENOIT GONIN**Agent(s):** GREENWOOD MATTHEW DAVID; GREENWOOD MATTHEW

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D35/38 B65D47/00 B65D47/06 B65D47/08 B65D47/20 B65D55/02
^{(IPC 8-9):} B67D7/06 (Advanced/Invention)

CPC: B65D47/2031 B65D47/0857 B65D55/024 B65D2101/0023**European class:** B65D47/08D B65D47/20E2 B65D55/02F L65D101/00A3**US class:** 222/153.06 222/153.060P 222/494 222/494S 222/546 222/546S 222/556 222/556S[Classification Explorer](#)

Cited documents: US6786363 BA, US6672487 BA, US5938087 A, US4941592 A, US2008011704 AA, US2007029352 AA, US2003189065 AA, JP2003160162 A2, FR2891531 A1, EP1892194 A1,

Forward Citations: WO17045889, WO16026794, WO15128071, WO15121177, USD737679, USD736634, USD727730, US9815599, US9802738, US9382045, US2017129659, US2016145013, US2016001936, US2015108167, JP6177704, JP2014234240, EP2889232, CN106240984, CN106029513,

Abstract:

Source: US2012067922A A closure comprises a base and a lid. The base comprises a spout portion. The lid comprises a cover portion and a ring portion securable around the spout portion. The cover portion of the lid is hingedly connected to the ring portion and is moveable between a closed position and an open position, in which the spout portion is substantially unobstructed by the cover portion. The ring portion and the spout portion comprise locking means, operable to prevent separation of the ring portion from the spout portion.

86) Family number: 43984465 (US2009277861A)

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Title: CLOSURE WITH TAMPER EVIDENT STRIP**Priority:** US20080117418 20080508

Family:	Publication number	Publication date	Application number	Application date
	<u>US2009277861 AA</u>	20091112	US20080117418	20080508

Probable Assignee: LONG JR CHARLES J**Assignee(s):^(std):** LONG JR CHARLES J**Inventor(s):^(std):** LONG JR CHARLES J**Agent(s):** ECKERT SEAMANS CHERIN AND MELLOTT

International class B65D17/40 B65D41/00 (Advanced/Invention);
 (IPC 8-9): B65D17/28 B65D41/00 (Core/Invention)

CPC: B65D41/3404 B65D2101/0053**European class:** B65D41/34A L65D101/00A3E**US class:** 215/252 220/276[Classification Explorer](#)

Cited documents: US7604139 BA, US6793082 BA, US6772913 BB, US6736280 BA, US6523710 BA, US6405886 BA, US6325225 BA, US6224802 BA, US6216905 BA, US6177041 BA, US6053344 A, US6050436 A, US6016931 A, US5909827 A, US5893474 A, US5853095 A, US5749484 A, US5727705 A, US5711443 A, US569854 A, US5678714 A, US5603422 A, US5593055 A, US5564582 A, US5547092 A, US5540349 A, US5465876 A, US5465858 A, US5370270 A, US5328044 A, US5273083 A, US5257705 A, US5248050 A, US5232125 A, US5222530 A, US5207783 A, US5190178 A, US5036991 A, US4997097 A, US4967920 A, US4966294 A, US4936475 A, US4934546 A, US4844268 A, US4815617 A, US4801030 A, US4721210 A, US4691834 A, US4676389 A, US4660735 A, US4593830 A, US457771 A, US4572387 A, US4565293 A, US4562931 A, US4534479 A, US4522308 A, US4470513 A, US4410101 A, US4385708 A, US4305517 A, US4202455 A, US4166552 A, US4032029 A, US4026459 A, US3812991 A, US2125788 A, US2008135512 AA, US2007272647 AA, US2006201905 AA, US2004251228 AA, US2004232149 AA, US2004074861 AA, US2004060893 AA, US1908245 A, US1524010 A,

Forward Citations: US9334097, US2007272647,**Abstract:**

Source: US2009277861A The present invention relates generally to a closure for a container, such as a bottle or the like, and more particularly, to a resealable, tamper evident closure for a container. The closure consists of a top section connected to a lower skirt portion. The closure is structured such that it would be evident if one were to attempt to remove the closure or tamper with the closure and that the contents of the container should not be consumed due to the risk of possible contamination.

87) Family number: 56265536 (WO14060524A1)

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Title: TAMPER EVIDENT CONTAINER ASSEMBLY
Priority: IN2012CH04355 20121018 WO2013EP71740 20131017
Family:

Publication number	Publication date	Application number	Application date
CN104736447 A	20150624	CN201380054280	20131017
ID201701000 A	20170217	ID2015P0001686	20131017
IN02061CN2015 A	20160701	IN2015CN02061	20150409
IN04355CH2012 A	20140425	IN2012CH04355	20121018
TH163244 A	20170608	TH20151002103	20131017
WO14060524 A1	20140424	WO2013EP71740	20131017

Probable Assignee: BASF SE
Assignee(s):^(std): BASF SE
Inventor(s):^(std): PANDIT NISHMA ; VISHWANATHAN GANESH
Inventor(s): GANESH VISHWANATHAN ; NISHMA PANDIT
Agent(s): LUDIYANTO SH; RIPPEL HANS CHRISTOPH
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
International class [B65D41/00](#) [B65D41/34](#) (Advanced/Invention);
 (IPC 8-9): [B65D41/34](#) (Core/Invention)
CPC: [B65D41/3419](#) [B65D41/0485](#) [B65D2101/0007](#) [B65D2101/0076](#)

[Classification Explorer](#)

Cited documents: WO07148993 A2, US2008164235 AA, JP11070967 A2, DE3610864 C1,

Abstract:

The invention is related to a container closure assembly comprising: – a container comprising at its open end a first neck portion having a screw thread for receiving a cap and below the first neck portion a second neck portion wherein the diameter of the second neck portion is larger than the diameter of the first neck portion and wherein a plurality of tabs or protrusions are arranged on the outer surface of the second neck portion, the tabs or protrusions extending outwards to engage tabs of a tamper evident seal ring; – a cap comprising a threaded part to engage the thread of the container, a plurality of tabs or protrusions arranged on an inner curved surface of the cap to engage a seal ring of a tamper evident seal and a groove extending from one side of the curved surface over the top surface area to the opposite side of the curved surface to receive a seal strap; and – a tamper evident seal comprising a seal ring comprising a plurality of tabs arranged on the inner surface of the seal ring to engage the tabs or protrusions of the second neck portion of the container, at least one tab to engage to tabs or protrusions of the cap, wherein the at least one tab is connected to the seal ring by breakable bridges, and a seal strap constructed such that in an assembled state the seal strap extends from one point of the seal ring over the cap to a point on the seal ring opposite to the first point, wherein the seal strap is received by the cap in a form fit connection.

0) WO9733801A1 – TAMPER RESISTANT CONTAINER AND CLOSURE ASSEMBLY...

88) Family number: 8846608 (WO9733801A1)

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Title: TAMPER RESISTANT CONTAINER AND CLOSURE ASSEMBLY
Priority: GB19960005398 19960314 WO1997GB00613 19970305

Family:	Publication number	Publication date	Application number	Application date
	AU199721002 A1	19971001	AU19970021002	19970305
	GB2311060 A1	19970917	GB19960005398	19960314
	GB9605398 A0	19960515	GB19960005398	19960314
	WO9733801 A1	19970918	WO1997GB00613	19970305

Probable Assignee: BEESON AND SONS LTD

Assignee(s):^(std): BEESON AND SONS LTD ; KING ROGER MILNER ; KING WITNEY MILNER

Assignee(s): BEESON AND SONS LIMITED

Inventor(s):^(std): KING ROGER MILNER ; KING WITNEY MILNER

Inventor(s): WITNEY MILNER KING ; ROGER MILNER KING

Designated states: AL AM AT AU AZ BA BB BE BF BG BR BY CA CH CN CU CZ DE DK EE ES FI FR GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN YU

International class
^{(IPC 8-9):} [B65D41/34](#) (Advanced/Invention);
[B65D41/34](#) (Core/Invention)

International class
^{(IPC 1-7):} [B65D41/34](#)

CPC: [B65D41/3409](#) [B65D41/3428](#)

European class: [B65D41/34A1](#) [B65D41/34C1](#)

[Classification Explorer](#)

Cited documents: WO9411267 A2, US4989740 A, US4813561 A, US4592476 A, EP0413466 A1, DE2747295 A1,

Forward Citations: WO02076839, WO02076839, US6557714,

Abstract:

The invention provides container closure assemblies comprising a container neck (1, 20) and a closure (2, 21) secured on the container neck by screw threads. A tamper-evident ring (3, 22) is severably attached to the closure and has inwardly projecting retaining tabs (15) for retaining it on the container neck after the closure has been removed for the first time. The invention is characterized by the provision of side wall elements (7, 8) on the container neck defining windows (10, 26) for receiving individual retaining tabs (15) of the tamper-evident ring to block rotation of the tamper-evident ring on the container neck and obstruct tampering with the flexible tabs (15).

89) Family number: 42826986 (US2009020530A)

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Title: PLASTIC PLUG WITH OVERCAP**Priority:** US20070879252 20070717

Family:	Publication number	Publication date	Application number	Application date
	BRPI0803517 A2	20090407	BR2008PI03517	20080709
	CA2636958 AA	20090117	CA20082636958	20080707
	EP2017185 A2	20090121	EP20080252261	20080702
	EP2017185 A3	20090415	EP20080252261	20080702
	US2009020530 AA	20090122	US20070879252	20070717

Probable Assignee: RIEKE CORP**Assignee(s):**^(std): BAUGHMAN GARY M ; RIEKE CORP**Assignee(s):** TRIMAS CORP**Inventor(s):**^(std): BAUGHMAN GARY M**Inventor(s):** GARY M BAUGHMAN**Agent(s):** WILLIAMS MICHAEL IAN ET AL; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK TR

International class (IPC 8-9): [B23P11/00](#) [B25B13/44](#) [B25B13/48](#) [B25B23/145](#) [B65D17/50](#) [B65D39/08](#) [B65D41/04](#) [B65D50/00](#) [B65D51/18](#) [B67B3/20](#) (Advanced/Invention);
[B23P11/00](#) [B25B13/00](#) [B25B23/14](#) [B65D17/00](#) [B65D39/00](#) [B65D41/04](#) [B65D50/00](#) [B65D51/18](#) [B67B3/00](#) (Core/Invention)

CPC: [Y10T29/49826](#) [B65D39/082](#) [B65D51/18](#) [B67B3/2073](#) [B67B7/182](#)**European class:** [B65D39/08A](#) [B65D51/18](#) [B67B3/20L](#) [B67B7/18B](#)**US class:** [220/233](#) [220/288](#) [29/428](#) [81/54](#)[Classification Explorer](#)

Cited documents: WO04096656 A1, USD315309 S1, US6968968 BB, US6726048 BB, US6360908 BA, US6247605 BA, US5996833 A, US5971189 A, US5971183 A, US5829611 A, US5823377 A, US5735419 A, US5680953 A, US5215220 A, US4948006 A, US4779766 A, US4416661 A, US4310102 A, US4306357 A, US4271972 A, US4211333 A, US4002259 A, US3987929 A, US3891118 A, US3838785 A, US3817420 A, US3811174 A, US3744654 A, US3684125 A, US3566332 A, US3556332 A, US3187860 A, US3122261 A, US2007158296 AA, US2005258129 AA, US2005133508 AA, US2003071007 AA, GB1245081 A, FR2439721 A1, DE29821764 U1, DE20105917 U1, DE1478847 A1,

Forward Citations: US9670044, US8066139, US8061543, US2014311090, US2012187127, US2012187121, EP2088089, CN106346400, CN104108671,

Abstract:

Source: US2009020530A A closure for a container opening according to one embodiment of the present invention comprises a plug including concave recesses and being constructed and arranged to be received within the container opening and an overcap including inwardly projecting convex forms constructed and arranged for interfit into the recesses of the plug, the overcap being attached to the plug so as to create an assembly, wherein the overcap to plug interfit helps to prevent rotation of the overcap relative to the plug.

90) Family number: 12157007 (US5450973A)

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Title: Tamper-evident closure apparatus**Priority:** US19940310427 19940922

Family:	Publication number	Publication date	Application number	Application date
	<u>US5450973 A</u>	19950919	US19940310427	19940922

Probable Assignee: DM CONSULTING SERVICES**Assignee(s):^(std):** EAGLE ENGRAVING AND MOLD CORP**Assignee(s):** DM CONSULTING SERVICES**Inventor(s):^(std):** ELLIS JOHN D ; MATTIA DANIEL

International class B65D41/04 B65D41/34 B65D51/16 (Advanced/Invention);
 (IPC 8-9): B65D41/04 B65D41/34 B65D51/16 (Core/Invention)

International class B65D41/34
 (IPC 1-7):

CPC: B65D41/0421 B65D41/3428 B65D51/1661**European class:** B65D41/04B1A B65D41/34C1 B65D51/16D3**US class:** 215/252 215/344 215/354[Classification Explorer](#)

Cited documents: US5356019 A, US5346082 A, US5167335 A, US5131069 A, US5096079 A, US5007545 A, US4997097 A, US4978017 A, US4813561 A, US4801031 A, US4801030 A, US4784280 A, US4732289 A, US4550844 A, US4511053 A, US4090631 A,

Forward Citations: WO0034133, WO0034133, USD723919, US9598200, US7918360, US7775386, US7651004, US7625354, US7513377, US7344039, US7222741, US7059485, US6931821, US6739466, US6729488, US6673298, US6581792, US6491175, US6488165, US6371317, US6355201, US6328175, US6126025, US6116442, US5785196, US5749484, US5738231, US5685443, US5630522, US5609262, US2015158621, US2009223967, US2008173611, US2006255003, US2006102174, US2006043051, US2006021959, US2005189312, US2004232100, US2004188375, US2004144786, EP2666730, EP1273524, EP1212243, CN106255649, AU754428, AT410202,

Abstract:

Source: US5450973A A tamper indicating closure comprising a one-piece molded plastic closure which threads onto the finish of a container such that when the closure is removed from the container, a tamper indicating band becomes separated from a lower end of a cap member of the closure. The tamper indicating band is joined to the closure along a weakened frangible line. The band includes a flexible Y-shaped annular flap segmented into tabs and attached to the lower end of the annular tamper band. When the closure is applied to the container, the annular band folds radially inward and up toward the cap member. The interior surface of the band and the first leg of the annular band include corresponding ratchet teeth which are designed to accommodate a varying degree of finish tolerances and which engage upon removal of the cap from the container. A second leg of the annular flap extends outwardly beneath a peripheral bead on the finish of the container when the closure is fully attached. Upon removal of the closure from the container, the second leg abuts underneath the peripheral bead to create resistance. The ratchet teeth on the band and flap are caused to engage with one another while the first leg wedges between the outside edge of the peripheral bead and the skin of the cap member. Further removal of the closure causes the tamper indicating band to sever from the cap member along the weakened line.

91) Family number: 54110480 (WO14170287A3)

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Title: TAMPER-EVIDENT CLOSURE FOR CONTAINER**Priority:** GB20130007008 20130418**Family:**

Publication number	Publication date	Application number	Application date
GB201307008 A0	20130529	GB20130007008	20130418
<u>WO14170287 A2</u>	20141023	WO2014EP57552	20140414
<u>WO14170287 A3</u>	20150219	WO2014EP57552	20140414

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** MCPHERSON ALEXANDER DONALD MEIKLEM**Agent(s):** BRYERS LLP ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D41/62 B65D49/04 B65D55/08 (Advanced/Invention)
(IPC 8-9):

CPC: B65D41/62 B65D49/04 B65D55/0818 B65D2101/0007 B65D2101/003[Classification Explorer](#)**Cited documents:** WO09010722 A1, GB158342 A, GB1376403 A, FR2578783 A1, BE701123 A,**Abstract:**

A tamper-evident closure for a container (2), comprising a shell (1) including a break line (7) and a tearable strip (8) extending across the break line (7), such that upon first opening the strip (8) is torn apart. A closure (10) comprising a first portion (25, 30, 37) including inner (25) and outer (30) parts, and a second portion (20, 36); the first (25, 30, 37) and second (20, 36) portions initially joined by a break line (40) and the outer part (30) movable relative to the inner part (25) from a first position in which at least part of the first (25, 30, 37) and second (20, 36) portions are adjacent each other to a second position in which there is a gap (G) therebetween, and locking means for irreversibly locking the closure (10) in the second position upon first opening so that the gap (G) cannot be closed.

92) Family number: 13185566 (US5507416A)

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Title: Tamper evident push pull resealable cap

Priority: US19940314674 19940929 US19950536623 19950928 US19960616367 19960315

Family:

Publication number	Publication date	Application number	Application date
US5507416 A	19960416	US19940314674	19940929
US5657906 A	19970819	US19950536623	19950928
US5662247 A	19970902	US19960616367	19960315

Probable Assignee: WEST PENN PLASTICS

Assignee(s):^(std): WEST PENN PLASTICS

Assignee(s): WEST PENN PLASTICS RD

Inventor(s):^(std): MARINO MICHAEL ; RAPCHAK THOMAS P

International class [B65D41/34 B65D41/48 B65D43/10 B65D47/24 B65D51/18](#) (Advanced/Invention)
(IPC 8-9):

International class [B67D5/33](#)
(IPC 1-7):

CPC: [B65D41/3409 B65D41/48 B65D47/243 B65D2101/0023 B65D2101/003 B65D2251/0015 B65D2251/0087 B65D51/18](#)

European class: [B65D41/34A1 B65D41/48 B65D47/24A2 B65D51/18 L65D101/00A3 L65D101/00A3B L65D251/00Y2D L65D251/00Y6J](#)

US class: [222/153.07 222/153.1 222/153.14 222/525](#)

[Classification Explorer](#)

Cited documents: US5507416 A, US5328063 A, US5104008 A, US4948003 A, US4805807 A, US4801032 A, US4779764 A, US4760941 A, US4749103 A, US4746035 A, US4589561 A, US4561553 A, US4500016 A, US4253588 A,

Forward Citations: USD747201, USD517864, USD503309, USD489259, USD470054, USD451397, USD448667, USD438114, USD435793, USD424442, USD423358, US9815598, US9527635, US8573445, US7661560, US7228979, US7107783, US7077294, US6793082, US6769575, US6758359, US6752295, US6698605, US6655553, US6568566, US6415966, US6357628, US6338425, US6321924, US6305579, US6135329, US6085947, US6073810, US6070766, US6050452, US6039218, US6024256, US6024255, US5975369, US5890633, US5839611, US5829611, US5813575, US5662247, US5657906, US2016214770, US2014054330, US2008185405, US2007215627, US2006020342, US2005263480, US2005263479, US2005147329, US2005127102, US2005011911, US2004173556, US2004007553, US2003230546, US2003000907, GB2370835, GB2320924, FR2768131, FR2748457, EP2810897, EP1086041, EP1025014, EP0909718, AT410781,

Abstract:

Source: US5507416A An improvement for a tamper evident resealable cap for use on a bottle, the cap having an upstanding spout that is registerable with an opening in the center of the cap and a sealing plug of a smaller diameter positioned thereabove on multiple upstanding legs extending from the spout. The improvement is directed towards a detachable annular ring secured to the cap by a plurality of frangible elements thereabout, the ring is arranged for restrictive registration with a locking shoulder that extends from the top of the cap body. The cap body has a tamper evident band secured to the cap by a plurality of circumferentially spaced frangible elements with a plurality of annularly spaced radially inwardly extending annular projections and is registerable with a neck portion of the bottle to prevent rotation in one direction without removal of the tamper evident ring.

93) Family number: 47071738 (US2007095781A)

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Title: CLOSURE HAVING BAND WITH INTERNAL THREAD FORMED BY IMPRESSION
Priority: US20010270757P 20010222 US20020079769 20020221 US20060557712 20061108
Family:

Publication number	Publication date	Application number	Application date
<u>US2007095781 AA</u>	20070503	US20060557712	20061108
<u>US7134565 BA</u>	20061114	US20020079769	20020221
<u>US8071004 BB</u>	20111206	US20060557712	20061108

Probable Assignee: CROWN CORK AND SEAL TECH CORP

Assignee(s):^(std): MARTIN JAMES L ; GERMAN GALEN G ; HOTTLE LARRY ; CROWN CORK AND SEAL TECH CORP ; WAN MIN M ; SHENKAR EMANUEL ; WAN MIN MILES

Assignee(s): CROWN CORK AND SEAL TECHNOLOGIES ; CITICORP NORTH AMERICA INC ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS ; CROWN CORK AND SEAL TECHNOLOGIES CORP ; DEUTSCHE BANK AG ; DEUTSCHE BANK NEW YORK BRANCH AGENT AG AS ; CROWN PACKAGING TECHNOLOGY INC ; DEUTSCHE BANK NEW YORK BRANCH COLLATERAL AGENT AG AS

Inventor(s):^(std): GERMAN GALEN ; GERMAN GALEN G ; HOTTLE LARRY ; MARTIN JAMES L ; SHENKAR EMANUEL ; WAN MIN M ; WAN MIN MILES

Inventor(s): WAN MIN ; MARTIN JAMES

Agent(s): WOODCOCK WASHBURN LLP

International class
 (IPC 8-9): B29B7/00 B29B7/22 B29C70/80 B65D45/00 B65D45/30 B65D49/12 B65D51/00 H05B6/00 (Advanced/Invention);
A21C3/00 (Advanced/Non-invention);
B65D45/00 B65D49/00 B65D51/00 H05B6/00 (Core/Invention)

CPC: B65D41/0492

European class: B65D41/04G

US class: 215/252 215/252S 215/258 215/258S 215/276 215/317 264/255 264/268 264/328.7 264/328.8 264/478 264/478S 425/130

[Classification Explorer](#)

Cited documents: WO9852833 A1, WO9627532 A1, WO0187726 A1, US6142325 A, US6056136 A, US5685443 A, US5443853 A, US5346082 A, US5190177 A, US5165978 A, US4793499 A, US4721219 A, US4717034 A, US4709825 A, US4694970 A, US4493427 A, US3270904 A, US2597830 A, GB1004473 A, DE2233305 A1,

Forward Citations: USD677585, USD677584, USD672663, USD663622, USD663210, USD661204, USD661203, USD658078, USD656042, USD653563, USD653562, USD653126, USD653125, USD653124, USD653123, USD652742, USD652741, USD652740, USD651527, USD651526, USD649887, USD641261, USD638311, USD632190, USD632189, USD632188, USD632187, USD631759, USD626015, USD624438, USD621724, USD620377, USD615877, USD614970, USD614969, USD614049, USD612732, USD607727, USD607330, USD607329, USD606406, USD606405, USD606404, USD606403, USD606402, USD599678, USD599677, USD596958, USD596957, USD596956, USD596955, USD596505, USD596504, USD596503, USD596502, USD596501, USD596500, USD588021, USD588020, USD588019, USD588018, USD588017, USD588016, US9688451, US9315306, US9242782, US9216840, US8845602, US8191736, US8141741, US2013026127, US2011204546, US2009283549, US2009090721, US2008141454,

Abstract:

Source: US2007095781A The present invention relates to closures for mating with containers having a threaded finish. The closures comprise a flange and a skirt downwardly depending therefrom. The skirt includes a deformable element formed of a different material than that of the flange and skirt and disposed on an interior surface. The deformable element inner diameter is smaller than the outer diameter of the container, and accordingly deforms upon mating the closure with the container. The container threads impress threads into the deformable element to form threads on the closure. The deformable element is formed of a suitable material. The closures of the present invention provide for the use of high-speed press-on capping equipment.

94) Family number: 1967569 (US4522307A)

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Title: Child-resistant tamper-evident closure
Priority: CA19840465726 19841018 GB19840026060 19841016 US19830543334 19831019
Family:

Publication number	Publication date	Application number	Application date
<u>AU198433704 A1</u>	19850426	AU19840033704	19840928
<u>BE900847 A</u>	19850215	BE19840213853	19841018
<u>BE900847 A1</u>	19850215	BE19840213853	19841018
<u>CA1265096 A1</u>	19900130	CA19840465726	19841018
<u>DE3437066 A1</u>	19850502	DE19843437066	19841009
<u>FR2553737 A1</u>	19850426	FR19840015974	19841018
<u>GB2148259 A1</u>	19850530	GB19840026060	19841016
<u>GB8426060 A0</u>	19841121	GB19840026060	19841016
<u>IT1178157 A</u>	19870909	IT19840049036	19841018
<u>IT8449036 A0</u>	19841018	IT19840049036	19841018
<u>JP60148470 A2</u>	19850805	JP19840218757	19841019
<u>LU85599 A</u>	19850604	LU19840085599	19841017
<u>NL8402989 A</u>	19850517	NL19840002989	19841001
<u>US4522307 A</u>	19850611	US19830543334	19831019

Probable Assignee: ANCHOR HOCKING CORP

Assignee(s):^(std): ANCHOR HOCKING CORP ; MOTODA ELECTRONICS CO LTD

Assignee(s): STEINER GERALD E ; ANCHOR HOCKING CORP LANCASTER OHIO US ; ANCHOR HOCKING PACKAGING CO ; ANCHOR HOCKING TE LANCASTER OHIO VER ST V AM CORP

Inventor(s):^(std): STEINER G E ; STEINER GERALD E ; STEINER GERALD B ; JIERARUDO II SUTEINAA

Inventor(s): G E STEINER ; GE STEINER ; GERALD E STEINER ; STEINER GERALD B LANCASTER OHIO US

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; SMART AND BIGGAR

International class
 (IPC 8-9): B65D41/04 B65D41/34 B65D50/04 B65D50/06 B65D51/18 B65D55/02 B65G60/00 (Advanced/Invention);
B65D41/34 (Advanced/Non-invention);
B65D41/34 B65D50/00 B65D55/02 B65G60/00 (Core/Invention)

International class
 (IPC 1-7): B65D41/04 B65D41/32 B65D41/34 B65D41/62 B65D51/18 B65D51/20 B65D55/02 B65D55/06 B65D55/08 B65D55/12

CPC: B65D50/041 B65D50/043 B65D50/06 B65D55/024 B65D2101/0023 B65D2101/0038

European class: B65D50/04B B65D50/04D B65D50/06 B65D55/02F B65G60/00 L65D101/00A3 L65D101/00A3C

US class: 215/219 215/256

[Classification Explorer](#)

Cited documents: US4454955 A, US3974929 A, US3946889 A, US3837518 A, GB2137599 A1, GB2066792 A1, DE3041230 A1, CH484789 A,

Forward Citations: WO9101924, US8444610, US7857154, US7628283, US7434703, US7198170, US6848590, US5918752, US5477972, US5163557, US4573598, US2010145287, US2008169263, US2008093363, US2006070973, US2005218106, US2005055986, US2003121877, EP1302406, CN104495006,

Abstract:

Source: US4522307A A child resistant closure cap is described which is easily applied to a threaded container and which thereafter may not be removed without the initial removal of a tamper indicating band so that the

closure is also tamper-evident.

95) Family number: 55705995 (WO14016391A1)

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Title: TAMPER EVIDENT CLOSURE**Priority:** EP20130741764 20130725 IT2012MI01324 20120727 WO2013EP65761 20130725

Family:	Publication number	Publication date	Application number	Application date
	CN104507821 A	20150408	CN201380040016	20130725
	CN104507821 B	20170329	CN201380040016	20130725
	EA201500177 A1	20150529	EA20150000177	20130725
	EP2877411 A1	20150603	EP20130741764	20130725
	EP2877411 B1	20170426	EP20130741764	20130725
	ES2635237 T3	20171003	ES20130741764T	20130725
	IN00822DN2015 A	20150612	IN2015DN00822	20150202
	ITMI20121324 A1	20140128	IT2012MI01324	20120727
	MX2015001200 A1	20150410	MX20150001200	20130725
	WO14016391 A1	20140130	WO2013EP65761	20130725

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):^(std):** GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A**Inventor(s):^(std):** GIOVANNINI MARCO ; JOHNSON STUART ; MITTINO MAURIZIO ; STUART JOHNSON**Inventor(s):** MARCO GIOVANNINI ; MAURIZIO MITTINO**Agent(s):** BONVICINI DAVIDE; CARPINTERO MARIO; BONVICINI DAVIDE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D41/62](#) [B65D55/02](#) (Advanced/Invention)
(IPC 8-9):**CPC:** [B65D2101/0069](#) [B65D41/62](#) [B65D55/026](#)[Classification Explorer](#)**Cited documents:** WO11157978 A1, WO08110917 A1, WO06117505 A1, GB2385321 A1, EP2178771 A1, EP1694576 A1, EP1313649 A1, CN201600446 U, CN1083010 A, CN102076573 A, CA2504728 C,**Forward Citations:** WO15113851,**Abstract:**

The present invention relates to a tamper evident closure (1) comprising a pourer (20) with a lower part (30) and an upper part (40) movable relative to the lower part (30) from a first position to a second position, a cap (50), attachment means (80) for attaching the cap (50) with the upper part (40). In the first position the cap (50) and the lower part (30) are adjacent and the outer surface (52) of the cap (50) is able to be grasped for opening the container (10). Upon first opening, rotation of the cap (50) causes the upper part (40) and the cap (50) to move relative to the lower part (30) from the first position to the second position. In the second position, there is a gap between the cap (50) and the lower part (30) and the upper part (40) and the lower part (30) are adapted to become mutually irreversibly locked so that the attachment means (80) can be released to remove the cap (50) from the upper part (40).

96) Family number: 12136567 (US6039196A)

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Title: Tamper indicating child-resistant closure**Priority:** US19980107601 19980630

Family:	Publication number	Publication date	Application number	Application date
	<u>US6039196 A</u>	20000321	US19980107601	19980630

Probable Assignee: PHOENIX CLOSURES INC**Assignee(s):^(std):** PHOENIX CLOSURES INC**Inventor(s):^(std):** EKKERT LEN ; MILLER ALBERT R ; ZEMLO BRIDGETT

International class B65D50/04 (Advanced/Invention);
^{(IPC 8-9):} B65D50/00 (Core/Invention)

International class B65D41/34 B65D55/02
^{(IPC 1-7):}

CPC: B65D50/04 B65D2101/0023**European class:** B65D50/04 L65D101/00A3**US class:** 215/216 215/221 215/250[Classification Explorer](#)**Cited documents:** US5727703 A, US5706963 A, US5638969 A, US5460281 A, US5165559 A, US4752013 A, US4511051 A, US4449639 A, US4345690 A, US3980195 A, DE2533230 A1,

Forward Citations: WO04043847, WO04043847, US9796265, US9062869, US9016489, US8839976, US8763830, US8292101, US8286819, US8231025, US7882977, US7861873, US7857154, US7762419, US7628283, US7527160, US7513384, US6983859, US6931821, US6866164, US6612450, US6561370, US6439409, US6296130, US6279766, US2014268825, US2013126530, US2012091134, US2012000879, US2011155758, US2011088505, US2009184122, US2008169263, US2008093363, US2007181578, US2007108210, US2007090111, US2007045320, US2007039964, US2005103741, US2003085227, CN102275678, CN102275675, CN102275675,

Abstract:

Source: US6039196A A child resistant closure is used with an associated container. The closures includes a closure cap having a circular top wall portion and a depending annular skirt portion. The skirt portion has an edge region spaced from the top wall portion. The cap includes at least one pivotal release tab extending from the skirt portion and connected thereto by a connector. The connector extends between the tab and the skirt portion at about the edge region. The tab further includes a ratchet extending therefrom to engage the container. The closure is removed from the container by urging the release tab inwardly of the closure to disengage the ratchet from the container. The closure can include a tear away tamper-evident band overlying the release tab to provide visibly discernible evidence that the closure has been removed from the container.

97) Family number: 27160485 (US2004206720A)

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Title: SCREW CAP COMPRISING A TAMPER-EVIDENT BAND**Priority:** CH20010001104 20010618 WO2002CH00277 20020524

Family:	Publication number	Publication date	Application number	Application date
	AT304486 E	20050915	AT20020780752T	20020524
	DE50204271 D1	20051020	DE20025004271	20020524
	DK1397296 T3	20051219	DK20020780752T	20020524
	EP1397296 A1	20040317	EP20020780752	20020524
	EP1397296 B1	20050914	EP20020780752	20020524
	EP1397296 B8	20051123	EP20020780752	20020524
	ES2247388 T3	20060301	ES20020780752T	20020524
	US2004206720 AA	20041021	US20030481169	20031218
	US7077278 BB	20060718	US20030481169	20031218
	WO02102678 A1	20021227	WO2002CH00277	20020524

Probable Assignee: BERICAP HOLDING GMBH**Assignee(s):**^(std) BERICAP HOLDING GMBH ; DUBACH WERNER FRITZ ; TERXO AG ; TERXO AG WETZIKON KEMPTEN**Inventor(s):**^(std) DUBACH WERNER FRITZ ; DUBACH FRITZ**Agent(s):** PAULEY PETERSEN AND ERICKSON

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class
^{(IPC 8-9):} [B65D39/00](#) [B65D41/34](#) [B65D55/02](#) ^{(Advanced/Invention):}
[B65D39/00](#) [B65D41/34](#) [B65D55/02](#) ^(Core/Invention)

International class
^{(IPC 1-7):} [B65D41/34](#)

CPC: [B65D41/3409](#) [B65D55/024](#)**European class:** [B65D41/34A1](#) [B65D55/02F](#)**US class:** [215/252](#) [215/257](#)[Classification Explorer](#)**Cited documents:** US6116443 A, US4936475 A, US4458820 A, US3463341 A, GB2159123 A1, EP0625950 B1, EP0593396 A1, EP0460557 B1, EP0149496 B1, DE3111692 A1, DE3100629 A1,

Forward Citations: WO15065481, WO12136417, WO10097476, USD802421, USD747201, USD638707, USD634200, USD634199, USD633386, US9428308, US8672158, US8231020, US7413097, ITFI20120158, EP3066018, DE102011006845, DE102009010681, CN105705425,

Abstract:

Source: US2004206720A At least one cutting element on a closure having a spout and a screw cap, which can be screwed thereon and which has a tamper-evident band. The tamper-evident band is joined to a lower edge of an outer wall of the screw cap via specified rupture location bridges. The at least one cutting element outwardly projects through an intermediate space. When the screw cap is unscrewed for the first time, the at least one cutting element cuts through the specified rupture location bridges. A distance between the tamper-evident band upper edge and the lower edge of the screw cap is provided with a measure whereby enabling the distance to be surmounted only occurs once all specified rupture location bridges are cut through.

98) Family number: 60268698 (WO17001533A1)

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Title: TAMPER-EVIDENT OVERCAP**Priority:** GB20150011421 20150630

Family:	Publication number	Publication date	Application number	Application date
	GB201511421 A0	20150812	GB20150011421	20150630
	<u>WO17001533 A1</u>	20170105	WO2016EP65228	20160629

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** MCPHERSON ALEXANDER DONALD MEIKLEM ; RICHARDSON DAVID CONWAY**Agent(s):** BRYERS LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D51/18 B65D55/02 (Advanced/Invention)
(IPC 8-9):

CPC: B65D55/024 B65D51/18 B65D55/026 B65D2101/0053[Classification Explorer](#)**Cited documents:** WO15113851 A1, US5740932 A,**Abstract:**

A tamper-evident overcap (100) for a closure (101) comprises a cap superior part (100A) fixable to an exterior surface of the closure (100), and a co-axial annular inferior part (100B) which is releasably connected to the cap superior part (100A) and comprises at least one inwardly directed projection (6) facing an interior of the overcap and at least one zone of weakness (5). At least one projection (6) of the annular inferior part (100B) is capable of interacting with at least one projection (3C) located on the exterior surface of the closure (101). The torque of the engagement of the projections (6, 3C) of the tamper-evident overcap (101) and the closure (101) causes the annular inferior part (100B) to break at the zone of weakness (5) if an attempt is made to open the closure (101) without the annular inferior part (100B) having been removed from the tamper-evident overcap (100).

Title: TAMPER-EVIDENT PACKAGE**Priority:** US20040837766 20040503

Family:	Publication number	Publication date	Application number	Application date
	<u>US2005252878 AA</u>	20051117	US20040837766	20040503

Probable Assignee: ALCOA CLOSURE SYSTEMS INT**Assignee(s):^(std):** ALCOA CLOSURE SYSTEMS INT INC**Assignee(s):** ALCOA CLOSURE SYSTEMS INTERNATIONAL ; ALCOA CLOSURE SYSTEMS INT**Inventor(s):^(std):** BABCOCK DAVID**Agent(s):** WOOD PHILLIPS KATZ CLARK AND MORTIMER

International class B65D41/34 (Advanced/Invention);
 (IPC 8-9): B65D41/34 (Core/Invention)

International class B65D41/34
 (IPC 1-7):

CPC: B65D41/3404 B65D41/3428**European class:** B65D41/34A B65D41/34C1**US class:** 215/252[Classification Explorer](#)**Cited documents:** US6557714 BB, US6112923 A, US6044992 A, US6003701 A, US5975321 A, US5915579 A, US5307946 A, US5285912 A, US5205426 A, US4609115 A, US4497765 A, US4423820 A, US4418828 A, US4345691 A,**Forward Citations:** WO13099655, WO12104607, WO08027044, WO07085927, USD798720, USD793235, USD791586, USD783400, USD769719, USD769715, USD766716, USD766080, USD761103, US9731869, US9718587, US9181001, US8763830, US8544666, US8528759, US8424705, US8353413, US8123056, US8091724, US7581652, US7578404, US7413097, US2015129534, US2015027976, US2013313287, US2012091134, US2012067892, US2012031871, US2011100947, US2010140210, US2009320590, US2009152229, US2009084751, US2008164235, US2008017642, US2007034591, US2007034590, US2006175281, TWI572534, JP5294050, JP5286867, JP2013133143, JP2009226831, JP2009226830, JP2009057089, EP2179939, CN104053610, CN103339034, CN103339034,**Abstract:**

Source: US2005252878A An improved tamper-evident package includes a plastic closure having a top wall portion, a depending annular skirt portion, and a tamper band at least partially detachably connected to the skirt portion. The package includes a container having a neck portion configured for tamper-indicating cooperation with the projections on the tamper band. The container includes a plurality of circumferentially spaced ratchet-like locking teeth, each of which presents a locking surface for interfering engagement with the respective one of the projections on the closure tamper band. Notably, disposition of the flexible projections of the pilfer band in pre-determined relationship to an internal thread formation of the closure permits the flexible projections to be positioned so that each of the locking teeth on the container is engaged by a respective one of the flexible projections attendant to very little relative rotation of the closure relative to the container during removal.

100) Family number: 43592118 (WO09095297A1)

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Title: TAMPER EVIDENT CLOSURE CAP AND COMBINATION COMPRISING THE SAID CLOSURE AND A CONTAINER**Priority:** EP20080101223 20080201

Family:	Publication number	Publication date	Application number	Application date
	<u>AR070337 AA</u>	20100331	AR2009P100316	20090130
	<u>EP2088090 A1</u>	20090812	EP20080101223	20080201
	<u>WO09095297 A1</u>	20090806	WO2009EP50277	20090112

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** DREYER LINO ; OBRIST CLOSURES SWITZERLAND ; ODET PHILIPPE GERARD ; WIDMER SEBASTEN CEDRIC**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** DREYER LINO ; ODET PHILIPPE GERARD ; ODET PHILLIPPE GERARD ; WIDMER SEBASTEN CEDRIC ; WIDMER SEBASTIEN CEDRIC**Agent(s):** MUELLER CHRISTOPH EMANUEL; MUELLER CHRISTOPH**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [B65D41/34](#) (Advanced/Invention);
(IPC 8-9): [B65D41/34](#) (Core/Invention)**International class** [B65D41/00](#)
(IPC 1-7):**CPC:** [B65D41/3428](#)**European class:** [B65D41/34C1](#)[Classification Explorer](#)**Cited documents:** WO9733800 A1, WO9117090 A1, WO03004369 A1, US5400913 A, US5040692 A, US4978016 A, DE19708909 A1,**Forward Citations:** CN103158933, CN103158933,**Abstract:**

This invention relates generally to the field of tamper evident closure caps (1; 101) comprising a top panel (2) and a cylindrical skirt (3) depending from the periphery of the top panel (2) and to combinations of a closure cap (1; 101) and a container (20). According to the invention the closure cap (1; 101) comprises a tamper indicating band (4), frangibly connected to the open end (5) of the skirt (3), wherein the tamper evident band (4) at its lower edge (6) comprises at least one hingedly connected retaining element (7), which extends with its distal edge (8) radially inwardly and towards the top panel (2) when the cap (1; 101) is in the screwed on position. The retaining element (7) has at least one recess (9), forming a window or a hollow. The recess (9) is located in a distance (10) from the hinged connection (11) between the lower edge (6) of the tamper indicating band (4) and the retaining element (7) and is located in a distance (12) from the distal edge (8) of the annular retaining ring (7).

101) Family number: 42100749 (WO08095863A1)

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Title: TAMPER EVIDENT CLOSURE AND CONTAINER FOR RECEIVING TAMPER EVIDENT CLOSURE AND COMBINATION THEREOF**Priority:** WO2007EP51207 20070208

Publication number	Publication date	Application number	Application date
<u>WO08095863 A1</u>	20080814	WO2008EP51222	20080131

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** DREYER LINO ; OBRIST CLOSURES SWITZERLAND ; ROUCHON JUILEN ; WIDMER SEBASTEN CEDRIC**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** DREYER LINO ; ROUCHON JUILEN ; WIDMER SEBASTEN CEDRIC**Agent(s):** MUELLER CHRISTOPH ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** B65D41/34 (Advanced/Invention);
(IPC 8-9); B65D41/34 (Core/Invention)**CPC:** B65D1/0246 B65D41/3433 B65D41/3452**European class:** B65D1/02D1B B65D41/34C1A B65D41/34D1A[Classification Explorer](#)**Cited documents:** JP7101457 A2, GB2277320 A1, GB2227239 A1, GB2114553 A1, GB1592689 A, EP1698564 A1, EP0413466 A1,**Forward Citations:** WO13072474, WO12150569, US9278785, US8141793, EP2447179, EP2447179,**Abstract:**

A container assembly comprising a container finish and a tamper evident closure in sealing contact. The tamper evident closure (10) having a lower tamper evident band (18) frangibly connected to an upper body portion (16) and inwardly protruding projections (22) positioned on the tamper evident band (18). The projections are configured to engage with corresponding retaining projections (30) on the outer surface of the container finish (28). Such engagement occurs when an axially rotational force is applied to the closure in an opening direction, resulting in the tamper evident band (18) rupturing from the upper body portion (16) before the sealing contact is broken.

102) Family number: 3551842 (US5111947A)

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Title: Tamper proof cap and container

Priority: US19900621765 19901204 US19920867143 19920410 WO1991US09036 19911203

Family:

Publication number	Publication date	Application number	Application date
AT151370 E	19970415	AT19910903294T	19911203
AU199191544 A1	19920708	AU19910091544	19911203
AU649929 B2	19940602	AU19910091544	19911203
CA2097514 AA	19930601	CA19912097514	19911203
DE69125620 D1	19970515	DE19916025620	19911203
EP0559833 A1	19930915	EP19920903294	19911203
EP0559833 A4	19931229	EP19920903294	19911203
EP0559833 B1	19970409	EP19920903294	19911203
US5111947 A	19920512	US19900621765	19901204
US5292019 A	19940308	US19920867143	19920410
WO9210407 A1	19920625	WO1991US09036	19911203

Probable Assignee: RING RICHARD

Assignee(s):^(std): PATTERSON MICHAEL C ; RING LORRAINE E ; RING LORRAINE ; PATTERSON MICHAEL ; RING L ; PATTERSON M ; RING RICHARD R ; RING RICHARD ; RING R ; CLOSURE TECH CORP ; CLOSURE TECH INC ; CLOSURE TECHNOLOGIES INC

Assignee(s): CLOSURE TECHNOLOGIES INC A CORP OF WA 40 PERCENT ; RING LORRAINE E 20 PERCENT ; RING RICHARD R 20 PERCENT ; RING LORRAINE SANTA ROSA CALIF ; RING RICHARD LONGVIEW WASH ; RING LORRAINE SANTA ROSA CALIF US ; RING RICHARD LONGVIEW WASH US ; PATTERSON MICHAEL LONGVIEW WASH ; CLOSURE TECHNOLOGY CORP ; PATTERSON MICHAEL LONGVIEW WASH US ; CLOSURE TECHNOLOGY CORP LONGVIEW WASH US

Inventor(s):^(std): PATTERSON MICHAEL C ; PATTERSON MICHAEL

Inventor(s): MICHAEL C PATTERSON

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; OYEN WIGGS GREEN AND MUTALA LLP

Designated states: AT AU BE BR CA CH CS DE DK ES FI FR GB GR IT JP KR LI LU MC NL NO PL SE

International class
(IPC 8-9): [B65D41/34](#) [B65D55/08](#) (Advanced/Invention)

International class
(IPC 1-7): [B65D41/32](#) [B65D41/34](#) [B65D55/08](#)

CPC: [B65D41/3404](#)

European class: [B65D41/34A](#)

US class: [215/252](#) [215/254](#) [215/256](#) [215/258](#)

[Classification Explorer](#)

Cited documents: US831271 A, US5115932 A, US4984701 A, US4848613 A, US4828127 A, US4813561 A, US4771904 A, US4646926 A, US4597500 A, US4575388 A, US4573598 A, US4572388 A, US4567991 A, US4550845 A, US4540101 A, US4534480 A, US4530438 A, US4480761 A, US4418828 A, US4402415 A, US4337870 A, US4131212 A, US4076140 A, US4062466 A, US3980195 A, US3955696 A, US3902621 A, US3901404 A, US3893583 A, US3850329 A, US3812994 A, US3415403 A, US3310191 A, US3106808 A, US2423582 A, US2134178 A, US2104236 A, TW108041 B, JP1085250 A2, GB977312 A, GB2031856 A1, EP0272431 B1, EP0189346 A2, DE2442341 A1, AU7685591 A1, AU7509991 A1,

Forward Citations: WO9532900, WO14041442, US8865458, US8394626, US8276748, US7915388, US7891510, US7568585, US7560272, US7527160, US7517495, US7490719,

US7300633, US7270959, US6988642, US6116451, US5938054, US5893474,
US5540342, US5467880, US5445284, US5181632, US2016023813, US2014231376,
US2011056866, US2008264894, US2008223485, US2007284265, US2006102583,
US2005103741, US2004079765, FR2710325, EP0644125, AU679205,

Abstract:

Source: US5111947A A tamper proof cap for use on container having a threaded neck. The cap includes a top portion, an annular skirt portion depending from the top portion and a separable strip depending from the bottom of the skirt portion. The boundary between the skirt portion and separable strips is defined by a line weakness. The skirt portion has internal threads that complement threads on an upper portion of the container neck. A portion of the separable strip has internal teeth that engage notches on a lower portion of the container neck. At the end of the strip is a tab which is grasped and pulled to sever the strip from the skirt along the line of weakness, thereby allowing the skirt portion to be unthreaded. The teeth of the strip and the container notches are constructed to allow the teeth to slide past the notches upon rotation of the cap in clockwise threading direction while causing the teeth to engage the notches to prevent rotation of the cap in a counterclockwise unthreading direction.

103) Family number: 52122661 (US2014083879A)

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Title: CUTTING AND DISPENSING CLOSURES**Priority:** US20110472404P 20110406 US20110482747P 20110505 WO2012US31966 20120403
US20120009811 20120403

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2832472 AA</u>	20131004	CA20122832472	20120403
	<u>CN103562089 A</u>	20140205	CN201280027359	20120403
	<u>CN103562089 B</u>	20160224	CN201280027359	20120403
	<u>EP2694392 A1</u>	20140212	EP20120716844	20120403
	<u>MX2013011595 A1</u>	20140430	MX20130011595	20120403
	<u>SG194116 A1</u>	20131129	SG20130074752	20120403
	<u>US2014083879 AA</u>	20140327	US20120009811	20120403
	<u>WO12138637 A1</u>	20121011	WO2012US31966	20120403

Probable Assignee: ABBOTT LABORATORIES**Assignee(s):^(std):** ABBOTT LAB ; ULSTAD DAVID C**Assignee(s):** ABBOTT LABORATORIES**Inventor(s):^(std):** ULSTAD DAVID C**Inventor(s):** DAVID C ULSTAD**Agent(s):** MBM INTELLECTUAL PROPERTY LAW LLP; BOULT WADE TENNANT; JOVANOVIĆ MILAN ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** A61J9/00 B65D51/22 B65D51/28 (Advanced/Invention)
(IPC 8-9):**CPC:** B65D51/22 A61J9/008 B65D51/225 B65D51/2835 B65D2251/0015 B65D2251/0062 B65D2251/0093**European class:** B65D51/22A1F B65D51/28B1B1 L65D251/00Y2D L65D251/00Y4M L65D251/00Y6M**US class:** 206/222 215/11.1 220/258.4[Classification Explorer](#)**Cited documents:** WO9525042 A1, WO11030173 A1, US6230884 BA, US2004251276 AA, US20040251276, US2001004054 AA, US20010004054, EP0293290 A1, CN2374493 Y, CN1297411 A, CN1092595 C,**Forward Citations:** US2014367283, GB2503946, FR3050183, EP3235752, CN104108525,**Abstract:**

Source: US2014083879A A closure (100) for a container (110) includes a stationary member (200) having an inner surface (210) and an outer surface (220), the inner surface is configured to be secured to an outer circumference (150) of a neck (130) of the container at a first inner portion (215) having a first set of threads (218) and includes a second inner portion (225) having a second set of screw threads (230), the outer surface includes a third set of screw threads (320). A substantially cylindrical cap member (270) includes a top (280) and a sidewall (290) that extends downward from an outer circumference of the top, the sidewall includes sidewall threads for rotational engagement with the third set of screw threads of the stationary member. A cutting member (330) includes outer threads (340) located on an outer circumference of the cutting member and an engagement member (360) located on an inner circumference of the cutting member. The cylindrical cap is configured to move the cutting member in an opposite longitudinal direction to the cylindrical cap upon opening rotation of the cylindrical cap.

104) Family number: 10236199 (US4752013A)

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Title: Tamper-evident child-resistant cap and bottle with axial locking means**Priority:** US19870125869 19871127

Family:	Publication number	Publication date	Application number	Application date
	<u>US4752013 A</u>	19880621	US19870125869	19871127

Probable Assignee: MILLER JACK V**Assignee(s):^(std):** MILLER JACK V ; MILLER RUTH E**Inventor(s):^(std):** MILLER JACK V ; MILLER RUTH E

International class
 (IPC 8-9): B65D41/34 (Advanced/Invention);
B65D41/34 (Core/Invention)

International class
 (IPC 1-7): B65D55/02

CPC: B65D41/3409 B65D2101/0053**European class:** B65D41/34A1 L65D101/00A3E**US class:** 215/216 215/253[Classification Explorer](#)**Cited documents:** US4630743 A, US4540098 A, US3954200 A,

Forward Citations: WO9846491, WO9716358, WO09056647, WO06124467, USD421909, US9650184, US9422091, US8631966, US8561860, US8371463, US8240491, US8087539, US8074821, US8038026, US8020723, US7942279, US7922017, US7918360, US7731048, US7611027, US7111746, US6655553, US6612450, US6357615, US6296130, US6161711, US6039196, US5988413, US5979681, US5927526, US5865330, US5687863, US5671853, US5603421, US5460281, US5449077, US5310074, US5230433, US5111954, US4986430, US4821898, US2016280429, US2011147415, US2010147899, US2010051572, US2010025355, US2009223967, US2009071927, US2008208150, US2008169287, US2008116202, US2007228042, US2007007230, US2006255004, US2006231453, US2005092751, US2003217987, GB2311062, GB2311062, EP2055645, EP1009673, CN105314223, AU727858, AU720185,

Abstract:

Source: US4752013A A tamper-evident child-resistant screw cap for a bottle has an internally threaded closure portion and a depending cylindrical skirt portion having a pair of diametrically spaced arc segments, frangibly attached to the skirt and flexurally attached to the open end of the closure portion. The arc segments have downward-facing ratchet dogs engaged with upward-facing ratchet teeth on the bottle neck. Each arc segment has an upstanding rigid lever which may be inwardly depressed to disengage the ratchet dogs from the ratchet teeth of the bottle neck, permitting first removal of the cap only after breaking the frangible attachments and depressing the levers while unscrewing the cap; thereafter permitting removal only by depressing the levers while unscrewing the cap, or by breaking off the levers and arc segments at their flexural attachments, thereby converting the cap to a non child-resistant configuration.

105) Family number: 44003706 (US2009283492A)

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Title: VISUAL TAMPER-EVIDENT CONICAL SCREW CAP AND NECK FINISH
Priority: US20080045079P 20080415 US20080093898P 20080903 US20110075612 20110330
Family:

Publication number	Publication date	Application number	Application date
US2009283492 AA	20091119	US20080122835	20080519
US2011174761 AA	20110721	US20110075612	20110330
WO09151868 A2	20091217	WO2009US44096	20090515
WO09151868 A3	20100520	WO2009US44096	20090515

Probable Assignee: OMEGA CAP SOLUTIONS LLC**Assignee(s):**^(std): CRISCI ROBERT E ; MOLINARO LUCA ; OMEGA CAP SOLUTIONS LLC**Inventor(s):**^(std): CRISCI ROBERT E ; MOLINARO LUCA**Agent(s):** COHEN AND GRIGSBY PC; WETTACH THOMAS C ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class ^(IPC 8-9): [B65D41/00](#) [B65D41/34](#) [G06F17/27](#) [G06F17/28](#) [G10L15/06](#) [G10L15/18](#) [G10L15/22](#) (Advanced/Invention);
[B65D41/00](#) [B65D41/34](#) [G06F17/27](#) [G06F17/28](#) [G10L15/00](#) (Core/Invention)

CPC: [G06F17/2818](#) [G10L15/063](#) [G10L15/1815](#) [G10L15/183](#) [G10L15/22](#)**European class:** [B65D41/34A1](#) [G06F17/28D2](#) [G10L15/18S](#) [S10L15/063](#) [S10L15/183](#) [S10L15/22](#)**US class:** [215/256](#)[Classification Explorer](#)

Cited documents: WO09129315 A1, US6523710 BA, US6003701 A, US5597082 A, US5553727 A, US5480045 A, US5465876 A, US5456376 A, US5415306 A, US5346082 A, US5307946 A, US5307945 A, US5303838 A, US5285912 A, US5267661 A, US5249695 A, US5213224 A, US5190178 A, US5105960 A, US5103991 A, US5009323 A, US4938370 A, US4785952 A, US4625875 A, US4561553 A, US4534480 A, US4497765 A, US4062466 A, US3980195 A, US2005173370 AA,

Forward Citations: USD790340, USD786087, USD776535, USD766727, USD755251, USD711739, US9731871, US9718588, US9694946, US9181001, US9096356, US2014263339, US2014156256, US2009200258, CN105022726,

Abstract:

Source: US2009283492A A tamper-evident cap is disclosed including a closure member and an annular wall depending outward therefrom to a bottom rim. Annular wall has a flange or sealing member extending inwardly adjacent to the closure member and a plurality of threads spaced apart and helically positioned to cooperate with respective threads of a container neck finish having substantially the same outward shape. A band is circumferentially positioned around the bottom rim including a pull tab and teeth. The pull tab extends from a part of the band and is preferably positioned within the circumference of the band. The teeth are mounted on a boss each tooth having an inner face angled acutely relative to the rim and being designed fit with the neck finish. A cap in combination with a neck finish having a vertical wall for sealing engagement with the cap annular flange is also disclosed.

0) US2015344196A – CLOSURE WITH TAMPER EVIDENT SECONDARY PIECE

106) Family number: 60977146 (US2015344196A)

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Title: CLOSURE WITH TAMPER EVIDENT SECONDARY PIECE
Priority: US20140006782P 20140602 US20150728262 20150602

Family:	Publication number	Publication date	Application number	Application date
	<u>US2015344196 AA</u>	20151203	US20150728262	20150602

Probable Assignee: WEATHERCHEM CORP

Assignee(s):^(std): WEATHERCHEM CORP

Assignee(s): MADISON CAPITAL FUNDING LLC

Inventor(s):^(std): DAGGETT BARRY ; GROUBERT BRIAN DAVID

International class B65D43/02 (Advanced/Invention)
(IPC 8-9) :

CPC: B65D2101/0084 Y10T29/49828 Y10T29/49964 B65D47/0838 B65D55/024

US class: 220/265 220/288 220/315 29/428 29/525.11

[Classification Explorer](#)

Cited documents: US5133470 A, US2012205377 AA, US2007272651 AA, US2005279727 AA, US2005184070 AA,

Abstract:

Source: US2015344196A Embodiments in accordance with the present invention relate to a dispensing closure that comprises a tamper evident secondary lock. Provided is a dispensing closure that encompasses a lid portion and a body portion configured to operatively engage a container. The tamper evident secondary lock is configured to be coupled with the body portion of the dispensing closure and to prevent access to the container and its contents until a tamper evident portion of the secondary lock has been removed. In this manner an end-user can readily determine if the container has been opened prior to the end-user's first use and thus be alerted to possible tampering with the contents of the container. Also provided are embodiments directed to a container assembly and a method for forming the closure.

Title: TAMPER EVIDENT CLOSURE**Priority:** AU1994PM05055 19940415 AU19950016469 19950413

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199516469 A1</u>	19951026	AU19950016469	19950413
	<u>AU505594 A0</u>	19940505	AU1994PM05055	19940415
	<u>AU690212 B2</u>	19980423	AU19950016469	19950413
	<u>WO9528334 A1</u>	19951026	WO1995AU00212	19950413

Probable Assignee: GV ENG PTY LTD**Assignee(s):^(std):** GV ENG PTY LTD ; GV ENGINEERING PTY LTD ; VERTER MICHAEL**Assignee(s):** G V ENGINEERING PTY LTD**Inventor(s):^(std):** VERTER MICHAEL**Inventor(s):** MICHAEL VERTER**Agent(s):** SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD**Designated states:** AT BE CA CH CN DE DK ES FR GB GR IE IT JP KR LU MC NL NZ PT SE SG US

International class
^{(IPC 8-9):} B65D41/34 B65D55/06 (Advanced/Invention);
B65D41/34 B65D55/02 (Core/Invention)

International class
^{(IPC 1-7):} B65D101/00 B65D41/34 B65D55/06 B65D55/08

CPC: B65D41/3404 B65D2101/0023**European class:** B65D41/34A L65D101/00A3[Classification Explorer](#)**Cited documents:** US4967920 A, US4062466 A, US3850329 A, US3182840 A, GB2290098 A1, GB2240098 A1, EP0352962 A1, DE2115720 A1, DE2106152 A1, AU4636189 A1, AU4108189 A1,**Forward Citations:** WO09146567, WO05009860, WO0130663, EP2105386, EP1847469, EP1281627, CN106542191, CN103204303, CN103204303,**Abstract:**

A thermoplastic closure (1) having an annular internally threaded skirt (2) portion; one or more portions of the skirt beneath the internally threaded portion being configured as a flap (7) capable of folding radially outwardly with respect to the skirt about a vertical hinge (12); container engaging means (4) extending towards the container from a position on the flap adjacent its leading edge (with reference to the unscrewing operation) and being adapted to interact with a trigger (9) on or near the neck of the container; the configuration of the container engaging means and trigger means facilitating ratchet-like interaction between the two components whereby they override each other during the running up of the closure onto the container but during unscrewing of the closure from the container the two components interfere with each other so as to impede unscrewing of the closure; one or more frangible joints (13) joining the leading edge of the flap to the closure skirt such frangible joints being adapted to fracture after the container engaging means and trigger means have engaged each other during the unscrewing operation; the flap being adapted to fold radially outwardly about its vertical hinge after said fracture.

108) Family number: 29426237 (WO03086891A1)

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Title: SNAP–ACTION HINGED CLOSURE FOR A REFILLABLE CONTAINER

Priority: CH20020000632 20020414 CH20020000632 20020416 WO2003CH00209 20030401

Family:

Publication number	Publication date	Application number	Application date
AU2003212177 AA	20031027	AU20030212177	20030401
EP1494933 A1	20050112	EP20030707989	20030401
WO03086891 A1	20031023	WO2003CH00209	20030401

Probable Assignee: CREATECHNIC AG

Assignee(s):^(std): CREATECHNIC AG ; KUNZ ARMIN

Inventor(s):^(std): KUNZ ARMIN

Inventor(s): ARMIN KUNZ

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8–9): [B65D41/34 B65D47/08](#) (Advanced/Invention);
[B65D41/34 B65D47/08](#) (Core/Invention)

International class
(IPC 1–7): [B65D41/34 B65D47/8](#)

CPC: [B65D41/3414 B65D47/0814 B65D2101/0038](#)

European class: [B65D41/34A1A B65D47/08B1A L65D101/00A3C](#)

[Classification Explorer](#)

Cited documents: US6253937 BA, US5273173 A, FR2804090 A1, EP0621199 B1, EP0386348 A1, DE10025265 A1,

Forward Citations: US8733566, EP1799574, CN103612822,

Abstract:

A snap–action hinged closure (1) consisting of a lower part (2), which is joined to a cap (4) via a snap–action hinge (3), is provided with a first tamper–evident band (5), which ensures the integrity of the product before the initial opening by means of an appropriately secured joining between the cap (4) and the lower part (2). A second temper–evident band (6) holds the entire closure (1) on the container neck in a manner that prevents it from being unscrewed. An embodiment of this type enables a significantly better closing and fitting whereby preventing malfunctionings inherent thereto from occurring. The situation is additionally improved by virtue of the fact that an enlarged annular gap (63) is provided between the tamper–evident band (6) and the lower part (2) and is protected by corresponding supporting elements (63, 65) so that, during fitting, the predetermined breaking connecting elements (62) do not tear and they have an increased flexibility, whereas the denticulation (61) of the tamper–evident band (6) slides over a corresponding toothed ring on the container in a ratchet–like manner.

0) GB2141697A – TAMPER EVIDENT CLOSURES

109) Family number: 15341710 (GB2141697A)

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Title: TAMPER EVIDENT CLOSURES

Priority: GB19830016734 19830620

Family:	Publication number	Publication date	Application number	Application date
	GB2141697 A1	19850103	GB19830016734	19830620
	GB2141697 B2	19861008	GB19830016734	19830620
	GB8316734 A0	19830720	GB19830016734	19830620

Probable Assignee: ROBINSON WHITE PLASTICS LIMITE

Assignee(s):^(std): ROBINSON WHITE PLASTICS LIMITE ; ROBINSON WHITE PLASTICS LTD

Assignee(s): ROBINSON WHITE PLASTICS LIMITED

Inventor(s):^(std): DAVIS RONALD

Inventor(s): RONALD DAVIS

International class
(IPC 8-9): [B65D50/04 B65D55/02](#) (Advanced/Invention),
[B65D50/00 B65D55/02](#) (Core/Invention)

International class
(IPC 1-7): [B65D55/02](#)

CPC: [B65D50/041 B65D55/024](#)

European class: [B65D50/04B B65D55/02F](#)

[Classification Explorer](#)

Cited documents: US4371088, US3946889, GB2066792, GB1515409, GB1408797,

Forward Citations: WO03066467, US7401707, US5803283, US5762215, GB2210360, EP0387323, EP0214711, DE102005013435,

Abstract:

Source: GB2141697A A tamper evident child resistant closure comprises an inner cap (3) surrounded by an outer cap (2). The caps are biased into the illustrated position by leaf springs (8) integral with the inner cap, and in this position ratchet teeth on the inner cap skirt engage a saw-tooth profile track (12) on the outer cap (2) to permit tightening of but prevent removal of the closure. To remove the closure, the outer cap (2) is depressed to engage dogs on the outer cap in slots on the inner cap. On the first occasion that the outer cap is depressed a frangible disc (15) is broken away to provide tamper evidence.

110) Family number: 33984340 (US2011151069A)

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Title: INFANT OR BABY FEEDING SYSTEMS

Priority: GB20060019202 20060929 GB20060022147 20061107 GB20070001502 20070126
 GB20070009368 20070516 GB20070010238 20070530 GB20070010818 20070606
 WO2007GB50601 20071001

Family:	Publication number	Publication date	Application number	Application date	
	<u>AU2007301709 AA</u>	20080403	AU20070301709	20071001	
	<u>AU2007301709 AH</u>	20090604	AU20070301709	20071001	
	<u>CN101641072 A</u>	20100203	CN200780041405	20071001	
	<u>EP2101714 A2</u>	20090923	EP20070824813	20071001	
	GB200619202 A0	20061108	GB20060019202	20060929	
	GB200622147 A0	20061220	GB20060022147	20061107	
	GB200701502 A0	20070307	GB20070001502	20070126	
	GB200709368 A0	20070627	GB20070009368	20070516	
	GB200710238 A0	20070711	GB20070010238	20070530	
	GB200710818 A0	20070718	GB20070010818	20070606	
	<u>US2011151069 AA</u>	20110623	US20070311450	20071001	
	<u>WO08038054 A2</u>	20080403	WO2007GB50601	20071001	
	<u>WO08038054 A3</u>	20080703	WO2007GB50601	20071001	
	<u>ZA200902770 A</u>	20100728	ZA20090002770	20090421	

Probable Assignee: HARDING EDWARD**Assignee(s):**^(std): EDWARD HARDING ; HARDING EDWARD ; HARDING EDWARD JAMES ; PACKAGING INNOVATION LTD ; PACKAGING INNOVATION LTD GB**Assignee(s):** PACKAGING INNOVATION LIMITED**Inventor(s):**^(std): HARDING EDWARD JAMES ; JAMES HARDING EDWARD**Inventor(s):** EDWARD JAMES HARDING**Agent(s):** PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; FITCHETT STUART PAUL; SAUNDERS AND DOLLEYMORE**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT HW HN HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class ^(IPC 8-9): A61J11/04 A61J9/00 B65D25/40 B65D30/08 B65D35/02 B65D41/00 B65D41/32 B65D85/00 B65D85/72 H05B3/02 (Advanced/Invention);
A61J9/00 (Core/Invention);
A61J (Subclass/Invention)

CPC: A61J9/005 A61J9/008 A61J11/0085 A61J11/045 A61M1/062 A61J9/001 A61J11/008 A61J11/0095 A61J11/04 A61J2200/42 B65D51/226 B65D77/065 B65D77/067 B65D85/72**European class:** A61J11/00Z2 A61J11/00Z2A A61J11/00Z6 A61J11/04 A61J11/04A A61J9/00A A61J9/00C A61J9/00E B65D51/22A3 B65D77/06B2 B65D77/06B2A B65D85/72 K61J200/42 K61M1/06A**US class:** 206/459.1 206/459.100S 215/11.1 215/11.100S 219/386 219/386S 220/200 220/200S 220/265 220/265S 220/359.4 220/359.400S 222/566 222/566S 222/92 222/92S 383/109 383/109S 426/117 426/117P[Classification Explorer](#)**Cited documents:** WO06077580 A2, FR2653749 A1,

Forward Citations: WO14059223, WO14017992, WO13057016, US9713576, US9675525, US9555926, US9480625, US9301902, US9295350, US9248077, US9161887, US9144336, US8833598, US8490577, US8336495, US2017172852, US2016015603, US2015375901, US2015090622, US2015024085, US2014361010, US2014261206, US2014246122, US2014189981, US2014107608, US2014076907, US2013064479, US2012085724, GB2487422, GB2469659, EP3073983, EP2906177, EP2583659, EP2575920, CN105476862, CN104797230, CN104257506, CN103987359, CN103987359, CN103974685, CN103960156, CN102838077,

Abstract:

Source: US2011151069A An infant feeding system comprising a sterile sealed laminated bag having a predetermined quantity of liquid infant food sealed therein, a compressed integral sterile teat sealed with the bag closure and or spout and a protective cap for the teat, the system being arranged such that the cap can be removed to enable the infant to feed from the sterile teat and food.

111) Family number: 48529678 (US2013233444A)

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Title: DISPENSING SYSTEM**Priority:** EP20110807961 20111121 GB20110000615 20110114 GB20110008657 20110523
WO2011GB01633 20111121**Family:**

Publication number	Publication date	Application number	Application date
<u>DE602011014909 D1</u>	20150430	DE201160014909T	20111121
<u>EP2663511 A1</u>	20131120	EP20110807961	20111121
<u>EP2663511 B1</u>	20150318	EP20110807961	20111121
GB201100615 A0	20110302	GB20110000615	20110114
GB201108657 A0	20110706	GB20110008657	20110523
<u>GB2482211 A1</u>	20120125	GB20110000615	20110114
<u>GB2482211 B2</u>	20121219	GB20110000615	20110114
<u>MX2013008136 A1</u>	20131120	MX20130008136	20111121
<u>US2013233444 AA</u>	20130912	US20110824968	20111121
<u>WO12095617 A1</u>	20120719	WO2011GB01633	20111121

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):**^(std) GREENWOOD MATTHEW DAVID ; GUGLIELMINI BERNARD ; OBRIST CLOSURES SWITZERLAND ; ROGNARD JEAN YVES**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):**^(std) ROGNARD JEAN YVES ; GUGLIELMINI BERNARD**Inventor(s):** BERNARD GUGLIELMINI ; JEAN YVES ROGNARD**Agent(s):** GREENWOOD MATTHEW DAVID; GREENWOOD MATTHEW ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** B65D51/28 B65D81/32 (Advanced/Invention)
(IPC 8-9):**CPC:** B65D51/2835 B65D51/2814 B65D51/2828 B65D51/285 B65D81/32 B65D51/2821 B65D2101/0076**European class:** B65D51/28B1A B65D51/28B1B1 L65D101/00A5**US class:** 141/329[Classification Explorer](#)**Cited documents:** WO9962776 A1, WO9838104 A1, WO09100544 A1, WO09073998 A1, WO07085106 A1, WO06123946 A1, US7748550 BB, US7635012 BB, US7614496 BB, US7337921 BB, US7178683 BB, US6305576 BA, US6165523 A, US3548562 A, US3347410 A, US2631521 A, US2009260999 AA, US2009242561 AA, US2008142473 AA, US2003017236 AA, GB1256247 A, EP2240382 B1, EP2239205 A1, EP2238043 B1, EP1819603 B1, EP1611024 A2, DE2157492 A1,**Forward Citations:** WO16124683, CN104736449, CH710693,**Abstract:**

Source: US2013233444A A dispensing system for a container, the system comprising a cap and a storage cartridge for containing a consumable or other item, the cartridge being attached or attachable to the cap, the cartridge comprising a breachable closure member and breaching means for breaching the closure member, in which the breaching means are contained in the cartridge and are activated upon rotation of the cap whereby to dispense the product into a container.

112) Family number: 19201679 (US4494664A)

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Title: Tamper evident closure
Priority: IT19820020041 19820309
Family:

Publication number	Publication date	Application number	Application date
AU198311983 A1	19830915	AU19830011983	19830302
AU563595 B2	19870716	AU19830011983	19830302
DE3307992 A1	19830922	DE19833307992	19830307
ES279823 U	19841216	ES19830279823U	19830308
ES279823 Y	19850701	ES19830279823U	19830308
ES279823 Y1	19850710	ES19830279823U	19830308
FR2523083 A1	19830916	FR19830003869	19830309
FR2523083 B1	19870821	FR19830003869	19830309
GB2116155 A1	19830921	GB19830005579	19830301
GB2116155 B2	19860312	GB19830005579	19830301
GB8305579 A0	19830330	GB19830005579	19830301
IT1150264 A	19861210	IT19820020041	19820309
IT8220041 A0	19820309	IT19820020041	19820309
US4494664 A	19850122	US19830470535	19830228

Probable Assignee: GUALA SPA

Assignee(s):^(std): GUALA A S P A ; GUALA ANGELO SPA ; GUALA SPA ANGELO

Assignee(s): GUALA SPA ; GUALA A SPA ; ANGELO GUALA S P A ; ANGELO GUALA SPA

Inventor(s):^(std): PIERGIACOMO GUALA ; GUALA PIERGIACOMO

Agent(s): PHILLIPS ORMONDE FITZPATRICK

International class [B65D41/04 B65D41/34](#) (Advanced/Invention) ;
^{(IPC 8-9):} [B65D41/04 B65D41/34](#) (Core/Invention)

International class [B65D41/34 B65D41/38 B65D55/08 B65D55/12 B67B](#)
^{(IPC 1-7):}

CPC: [B65D41/0414 B65D41/3409](#)

European class: [B65D41/04B1 B65D41/34A1](#)

US class: [215/252 215/258](#)

[Classification Explorer](#)

Cited documents: US4372456 A, US4343408 A, US4322009 A, US4225050 A, US3957169 A, US3904062 A, US3335889 A, US3314564 A, US3232470 A, US2162754 A, GB974564 A, GB2076381 A1, FR2477507 A1, FR2348116 A1, FR1536459 A, FR1473772 A, DE2638385 A1, DE2309499 A1, DE1532388 B2,

Forward Citations: WO9414674, WO9323305, WO08092716, WO08092716, WO08072981, WO08072981, WO05009855, US7712619, US6637611, US6439412, US5779076, US5593055, US5477972, US5360126, US5027964, US4936474, US4909404, US4784281, US4560076, US4550845, US2016023813, US2013001185, US2005269282, US2005045578, US2004055991, JP5995465, JP2013180821, GB2149765, FR2957587, FR2600629, EP2504249, EP0650901, EP0540786, EP0521633, EP0261037, CN104108527, CN103482209,

Abstract:

Source: US4494664A A tamper evident closure for bottles and containers includes a cap and a tamper-indicating lower ring or belt, those two parts are linked together by a weak breakable circumferential area, which will break at opening of the container leaving behind the lower ring. This closure is the result of a simplified manufacturing process that forms the breakable circumferential area by forming misaligned cuts about the circumference of the closure between the upper cap and lower ring. Upon opening, the lower ring moves down on the neck of the

container. Upon reclosing, the space between the cap and ring makes the prior opening of the bottle very evident.

113) Family number: 30322072 (WO05058722A2)

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Title: CONTAINER CLOSURE**Priority:** GB20030029469 20031219

Family:	Publication number	Publication date	Application number	Application date
	GB200329469 A0	20040128	GB20030029469	20031219
	<u>WO05058722 A2</u>	20050630	WO2004GB05355	20041220
	<u>WO05058722 A3</u>	20051117	WO2004GB05355	20041220

Probable Assignee: ALCOA CLOSURE SYSTEMS INT INC**Assignee(s):^(std):** ALCOA CLOSURE SYSTEMS INT INC ; THOMPSON NIGEL**Assignee(s):** ALCOA CLOSURE SYSTEMS INTERNATIONAL EUROPE ; ALCOA CLOSURE SYSTEMS INT ; ALCOA CLOSURE SYSTEMS INT EUROPE**Inventor(s):^(std):** THOMPSON NIGEL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D47/08 (Advanced/Invention);
B65D47/08 (Core/Invention)

International class
(IPC 1-7): B65D47/08

CPC: B65D47/088 B65D2101/0023**European class:** B65D47/08D4C L65D101/00A3[Classification Explorer](#)**Cited documents:** WO02098756 A2, DE8421061 U, DE10342407 A1,**Forward Citations:** EP1892194,**Abstract:**

The present invention relates to a container closure comprising a main body element (3) for attachment to a container, said main body element having a spout member (4). The closure further comprises a tapered cap element (2) for covering the spout member. The cap element is hingeably connected to a shoulder portion of the main body element by way of a hinge member (10) and moveable between open and closed positions, the cap element covering the spout member in the closed position. The main body element includes a recess (11) on an outer surface, at or adjacent the hinge member, the cap element having a protrusion (12), which is received in the recess when the cap element is moved to a fully open position.

114) Family number: 3165631 (US5203838A)

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Title: ASSEMBLY COMPRISING AN OPENING CAPSULE AND A RECEPTACLE WITH A TAMPERPROOF COVER**Priority:** CA19912049105 19910813 EP19910420292 19910808 FR19900010605 19900814**Family:**

Publication number	Publication date	Application number	Application date
<u>AT99255 E</u>	19940115	AT19910420292T	19910808
<u>CA2049105 AA</u>	19920215	CA19912049105	19910813
<u>CA2049105 C</u>	19960917	CA19912049105	19910813
<u>DE69100886 D1</u>	19940210	DE19916000886	19910808
<u>DE69100886 T2</u>	19940428	DE19916000886T	19910808
<u>DK0471629 T3</u>	19940124	DK19910420292T	19910808
<u>EP0471629 A1</u>	19920219	EP19910420292	19910808
<u>EP0471629 B1</u>	19931229	EP19910420292	19910808
<u>ES2047999 T3</u>	19940301	ES19910420292T	19910808
<u>FI913830 A</u>	19920215	FI19910003830	19910813
<u>FI913830 A0</u>	19910813	FI19910003830	19910813
<u>FR2665886 A1</u>	19920221	FR19900010605	19900814
<u>FR2665886 B1</u>	19921016	FR19900010605	19900814
<u>IE69573 B</u>	19961002	IE19910002862	19910813
<u>IE912862 A1</u>	19920226	IE19910002862	19910813
<u>IS3744 A7</u>	19920215	IS19910003744	19910814
<u>JP2080436 C3</u>	19960809	JP19910204428	19910814
<u>JP5016961 A2</u>	19930126	JP19910204428	19910814
<u>JP7102864 B4</u>	19951108	JP19910204428	19910814
<u>NO913153 A</u>	19920217	NO19910003153	19910813
<u>NO913153 A0</u>	19910813	NO19910003153	19910813
<u>PT98671 A</u>	19940131	PT19910098671	19910813
<u>PT98671 B</u>	19990129	PT19910098671	19910813
<u>US5203838 A</u>	19930420	US19910745235	19910814

Probable Assignee: CEBAL**Assignee(s):^(std):** CEBAL ; CEBAL CLICHY**Assignee(s):** CEBAL CLICHY FR ; CEBAL S A ; CEBAL SA ; SCHNEIDER BERNARD**Inventor(s):^(std):** BERNARD SCHNEIDER ; SCHNEIDER BERNARD ; BERUNAARU SHIYUNEDEERU**Inventor(s):** SCHNEIDER BERNARD F 51800 SAINTE MENEHOULD FR**Agent(s):** ROBIC; KAWAGUCHI YOSHIO**Designated states:** AT BE CH DE DK ES FR GB GR IT LI LU NL SE**International class**
(IPC 8-9): B65D51/20 B65D51/22 B65D55/02 (Advanced/Invention);
B65D51/18 B65D55/02 (Core/Invention)**International class**
(IPC 1-7): B65D1/22 B65D41/02 B65D41/42 B65D51/20 B65D51/22 B65D55/02**CPC:** Y10S215/901 B65D51/222 B65D2251/0025 B65D2251/0071**European class:** B65D51/22 B65D51/22A1 L65D251/00Y2J L65D251/00Y6A**US class:** 215/235 215/250 215/253 215/318 215/32 215/48 215/901[Classification Explorer](#)

Cited documents: US5007546 A, US4998988 A, US4940167 A, US4884705 A, US4666063 A, US4402415 A, GB2017661 A1, EP0214095 B1, EP0192011 A1, EP0137458 A2,

Forward Citations: USRE39340, US8522994, US7540389, US6484909, US6408904, US6164450, US6123122, US6095354, US6089419, US6032812, US6006960, US5992659, US5971232, US5829456, US5690242, US5687865, US5662231, US5547091, US5513763, US5467788, US2012285964, US2008281280, US2007007227, US2006124575, US2004011697, JP5801596, JP2012224375, GB2300628, EP0585997,

Abstract:

Source: US5203838A The assembly of a closure (3) and a receptacle (1) having a neck (2) of plastic material surmounted by a tamperproof cover (98). The closure (3) comprises an opening capsule (3) provided with a base (4), and the base (4) and the neck (2) are configured for snap-on engagement after the commencement of insertion in full cross-section of a fitting device (25) onto the cover (8), and, lower down, a screwing device, these devices (15 and 25) allowing the cover (8) to be ruptured and to be fitted into the neck (2).

0) US4727998A – TAMPER EVIDENT CLOSURE

115) Family number: 10167976 (US4727998A)

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Title: Tamper evident closure

Priority:

US19860879478 19860627US19870018285 19870224

Family:

Publication number	Publication date	Application number	Application date
US4727998 A	19880301	US19870018285	19870224

Probable Assignee:

SIMON B KENNETH

Assignee(s):^(std):

SIMON B KENNETH

Assignee(s):

TOTAL PAC INC ; ALL PAK INC ; PITTSBURGH NATIONAL BANK ; PNC BANK
NATIONAL ASSOCIATION ; PNC VENTURE CORP

Inventor(s):^(std):

SIMON B KENNETH

International class
^(IPC 8-9):

B65D41/34 (Advanced/Invention);
B65D41/34 (Core/Invention)

International class
^(IPC 1-7):

B65D41/34

CPC:

B65D41/3404 B65D41/3442 B65D2101/0038 B65D2101/0053

European class:

B65D41/34A B65D41/34D L65D101/00A3C L65D101/00A3E

US class:

215/230 215/254

Classification Explorer

Cited documents:

US4567991 A, US4548329 A, US4471878 A, US4456136 A, US4452363 A, US4261478 A, US4209101 A, US2169686 A,

Forward Citations:

WO9936326, WO04094244, USD690187, USD584925, USD584569, USD567086, USD545618, USD517322, USD508188, USD508187, USD507937, USD506359, USD479997, USD449530, USD443513, USD442089, USD437226, US7607547, US6926165, US6382440, US6158603, US6095358, US5984125, US5050754, US2016023813, US2008087625, US2004200839, US2002101109, AU744838,

Abstract:

Source: US4727998A A tamper evident mechanism for a bottle and closure assembly. The bottle and closure each have engaging means adapted for engagement with each other upon clockwise rotation of the closure means and for becoming interlocked against counterclockwise rotation to prevent removal of the closure. A tear tab and associated frangible strips are provided on the skirt of the closure. The tear tab is disposed within an indentation on the outer surface of the closure. Pulling off the tear tab along the frangible strips accomplishes removal of the interlocked engaging means, freeing the closure for counterclockwise rotation and removal. At the same time a gaping hole is imparted to the skirt of the cap providing visual evidence of tampering.

116) Family number: 28276240 (US2002134783A)

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Title: LID WITH HINGE FOR PLASTIC PAIL**Priority:** CA20022375965 20020311 US20010804966 20010313

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2375965 AA</u>	20020913	CA20022375965	20020311
	<u>CA2375965 C</u>	20111011	CA20022375965	20020311
	<u>US2002134783 AA</u>	20020926	US20010804966	20010313
	<u>US6712233 BB</u>	20040330	US20010804966	20010313

Probable Assignee: INDUSTRIAL CONTAINERS LTD**Assignee(s):^(std):** ARSHINOFF STEPHEN H**Assignee(s):** DEUTSCHE BANK TRUST CO ; DEUTSCHE BANK TRUST CO AMERICAS ; ICL INDUSTRIAL CONTAINERS ULC ; ICL INDUSTRIAL CONTAINERS ULC ICL CONTENANTS INDUS ; ICL INDUSTRIAL CONTAINERS ULC ICL CONTENANTS INDUSTRIELS ULC ; INDUSTRIAL CONTAINERS LTD**Inventor(s):^(std):** ARSHINOFF STEPHEN H**Agent(s):** SIM AND MCBURNEY; GOUDREAU GAGE DUBUC

International class
 (IPC 8-9): [B65D17/40 B65D21/02 B65D43/02 B65D43/03 B65D43/06 B65D55/02 B65D55/06](#) (Advanced/Invention);
[B65D17/28 B65D21/02 B65D43/02](#) (Core/Invention)

International class
 (IPC 1-7): [B65D17/40 B65D41/48 B65D43/03 B65D43/06 B65D55/02 B65D55/06 B65D7/40](#)

CPC: [B65D21/0219 B65D43/026 B65D2543/00194 B65D2543/00296 B65D2543/00416 B65D2543/00518 B65D2543/00537 B65D2543/00546 B65D2543/00648 B65D2543/00694 B65D2543/00777 B65D2543/00805](#)

European class: [B65D21/02E7A B65D43/02T3E6 L65D543/00Y1F4C3 L65D543/00Y1M6 L65D543/00Y2K3 L65D543/00Y8D1E L65D543/00Y8D3 L65D543/00Y8D3N L65D543/00Y8S1B8 L65D543/00Y8S1D4 L65D543/00Y8S3B12 L65D543/00Y8S3D4](#)

US class: [220/270 220/276 220/847](#)[Classification Explorer](#)**Cited documents:** WO9856675 A1, US6257435 BA, US5617968 A, US5605240 A, US5398829 A, US5273176 A, US5238135 A, US5145088 A, US4934556 A, US4930656 A, US4919286 A, US4790448 A, US4531650 A, US3421654 A, US3272368 A, CA2019225 AA,**Forward Citations:** USD638704, USD637489, USD635366, USD526481, US9493277, US8925755, US8851315, US8839975, US8646648, US8251242, US8083089, US8028851, US7938286, US7475788, US2011210121, US2011024421, US2010236966, US2010102074, US2010065567, US2009206082, US2008190930, US2007012710, US2006266750, US2006175334, US2006006178, US2005045635, EP1864914, AU2009202131,**Abstract:**

Source: US2002134783A A plastic lid for a pail. The lid has an edge section that extends exterior to the pail, one section of the edge section forming a hinge section. The remainder of the edge section has three sections. Each of the sections extends peripherally around the edge of the lid. One section, intermediate between the other sections is integrally formed with the other sections, and tearable therefrom. The hinge section being integral with one section and has a portion of reduced thickness juxtaposed to the rim of the container. The lid is rotatable about the hinge for opening of the pail after removal of the tearable section. The lid and pail are tamper-evident, and the lid is retained on the pail after opening.

117) Family number: 60815728 (WO17046186A1)

© PatBase

Title: A DISPENSING CLOSURE**Priority:** GB20150016188 20150914

Family:	Publication number	Publication date	Application number	Application date
	GB201516188 A0	20151028	GB20150016188	20150914
	<u>WO17046186 A1</u>	20170323	WO2016EP71736	20160914

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** PUDERBACH DIRK ; SCHAWO RAINER ; VERITE SYLVAIN**Agent(s):** BRYERS LLP ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B29C45/00 B65D47/20 (Advanced/Invention)
(IPC 8-9):

CPC: B65D47/2006 B29C45/006[Classification Explorer](#)

Cited documents: WO9319994 A1, WO14068069 A1, US6029866 A, US5058775 A, US2004159684 AA, US2004112927 AA, JP9301403 A2, EP0926075 A1,

Abstract:

A dispensing closure (10) is provided and comprises a base (15) which is attachable to a container and an actuator disc (20) pivotally mounted on the base. The disc is pivotable between a closed position which prevents fluid product dispensing and an open position which allows product fluid dispensing. The base (15) and the disc (20) are formed from different materials.

Title: STORAGE CASE**Priority:** US20050030269 20050106

Family:	Publication number	Publication date	Application number	Application date
	CN1801381 A	20060712	CN200510098613	20050905
	US2006144729 AA	20060706	US20050030269	20050106

Probable Assignee: FORWARD ELECTRONICS MFG CO LTD**Assignee(s):^(std):** FOWARD ELECTRONICS MFG CO ; FOWARD ELECTRONICS MFG COMPANY**Assignee(s):** FOWARD ELECTRONICS MFG CO LTD ; FORWARD ELECTRONICS MFG ; FORWARD ELECTRONICS MFG CO LTD ; FOWARD ELECTRONICS MANUFACTURING COMPANY LIMITED**Inventor(s):^(std):** CHEUNG CHUNG F**Inventor(s):** CHEUNG CHUNG FAI ; CHEUNG CHUNG**Agent(s):** OSTROLENK FABER GERB AND SOFFEN

International class [B65D55/00 B65D85/30 G11B23/03](#) (Advanced/Invention);
 (IPC 8-9): [B65D55/00 B65D85/30 G11B23/03](#) (Core/Invention)

CPC: [G11B33/0427 G11B33/045](#)**European class:** [G11B33/04D1B1 G11B33/04D2B1](#)**US class:** [206/308.1 G9B/33.011 G9B/33.015](#)[Classification Explorer](#)**Cited documents:** US6719133 BB, US6669018 BB, US6516945 BB, US5931291 A, US5385231 A, US2670261 A,**Forward Citations:** US8561093, US2016122076, US2015020085, US2010214905, US2006138007,**Abstract:**

Source: US2006144729A A disc storage case for containing one or more media storage discs. The case having an upper closure member and a lower closure member coupled by a hinge to be pivotally movable between a closed condition, to define therebetween an internal storage space within which the discs can be retained, and an open condition, to expose the internal storage space to allow access to the discs. The case includes at least one disc retaining member disposed from either the lower closure member or upper closure member and provided to be within the internal storage space to restrict lateral movement of the one or more discs. There is also a latch to operate across a junction of the upper and lower closure members to hold, when in a latching condition, the upper and lower closure members together when in the closed condition. A tamper evident locking device is present to maintain the latch in the latching condition, the tamper evident locking device including a frangible zone to allow severing of said tamper evident locking device to allow release of the latch from the latching condition.

Title: Tamper-evident closure cap**Priority:** US19840595534 19840330

Family:	Publication number	Publication date	Application number	Application date
	<u>US4503986 A</u>	19850312	US19840595534	19840330

Probable Assignee: ANCHOR HOCKING CORP**Assignee(s):^(std):** ANCHOR HOCKING CORP**Assignee(s):** ANCHOR HOCKING PACKAGING CO ; CHASE MANHATTAN BANK COLLATERAL AGENT AS ; PROCTER AND GAMBLE CO**Inventor(s):^(std):** NIXDORFF FRANK S ; DORNBUSCH ARTHUR H**International class** B65D41/34 (Advanced/Invention);
(IPC 8-9): B65D41/34 (Core/Invention)**International class** B65D41/34
(IPC 1-7):**CPC:** B65D41/3457**European class:** B65D41/34D3**US class:** 215/252 215/258 215/330[Classification Explorer](#)**Cited documents:** US4461391 A, US4448318 A, US4337870 A, US4278180 A, US3968894 A,**Forward Citations:** WO8910875, USD791591, USD760081, USD756777, US9533802, US9309032, US7735666, US7527161, US6931821, US6685061, US5544768, US5190177, US4930647, US4887746, US4886497, US4805791, US2007108154, US2006113272, DE3725674,**Abstract:**

Source: US4503986A A tamper-evident closure for sealing a package cooperates with a separately applied indicator ring, which is torn apart during the opening of the package, so that a portion of the indicator ring drops clear of the closure to indicate that the closure has been turned at least partially off of the package. The indicator ring has a lower mounting portion and an upper ratchet and indicating portion which is connected to the lower mounting portion of the ring by a series of frangible connectors which are ruptured as the cap is removed.

Title: Injection moulding a tamper evident closure**Priority:** GB19920007514 19920406

Family:	Publication number	Publication date	Application number	Application date
	<u>GB2265890 A1</u>	19931013	GB19920007514	19920406
	<u>GB2265890 B2</u>	19960117	GB19920007514	19920406
	GB9207514 A0	19920520	GB19920007514	19920406

Probable Assignee: RPC CONTAINERS LTD**Assignee(s):^(std):** RPC CONTAINERS LTD**Assignee(s):** RPC CONTAINERS LIMITED**Inventor(s):^(std):** DALE JAMES PATRICK**Inventor(s):** JAMES PATRICK DALE

International class
^{(IPC 8-9):} [B29C45/44 B65D41/34](#) (Advanced/Invention);
[B29C45/33](#) (Advanced/Non-invention);
[B29C45/33](#) (Core/Non-invention)

International class
^{(IPC 1-7):} [B29C45/26 B29C45/44 B29L31/56 B65D41/34 B65D55/02](#)

CPC: [B29C45/33 B29C45/4407 B29L2031/565 B65D41/3409](#)**European class:** [B29C45/44B B65D41/34A1 L29C45/33 L29L31/56B](#)[Classification Explorer](#)**Cited documents:** GB2022063 A1,**Forward Citations:** US8499950, US8365932, US8360257, EP2842886, EP2179942, CN102886862,**Abstract:**

Source: GB2265890A A tamper evident container closure comprising a cap 20 and tamper evident band 21, of outer diameter less or equal to the outer diameter of the cap, is formed in a mould comprising a core 35 defining the inner profile of the closure and an axially movable sleeve 37 arranged around a portion of the core, only axial movement of the mould parts being necessary to release a closure therefrom. A cavity 39 is defined between the core 35 and sleeve 37 to form the tamper evident band 21 of the closure, a shoulder 40 formed in the core being in contact with the inner surface 41 of the sleeve 37 so as to space the band 21 from the cap 20 of the container and the inner surface 41 of the sleeve 37 being formed with axially extending grooves 42 so as to connect the band defining cavity 39 with the cap forming cavity 38. The grooves serve to allow the formation of frangible bridges 22 and gaps 23 between the cap 20 and band 21 in the closure. These bridges 22 extend along the outer surface of the band 21 as ribs 24. A further mould part 31 defines the external profile of the cap and abuts the upper, planar surface of the sleeve 37, the core 35 and the sleeve 37 being removed axially from the part (31, (Figure 7). The tamper evident band 21 may be moulded to carry an internal bead or ratchet teeth for engagement with complementary projections on a container top.

121) Family number: 46560495 (WO11157978A1)

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Title: A TAMPER-EVIDENT CLOSURE**Priority:** GB20100010045 20100616

Family:	Publication number	Publication date	Application number	Application date
	GB201010045 A0	20100721	GB20100010045	20100616
	<u>WO11157978 A1</u>	20111222	WO2011GB00860	20110607

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** HARROWER JAMES ; MCPHERSON ALEXANDER DONALD MEIKLEM ; OBRIST CLOSURES SWITZERLAND ; SKELTON STEVEN ANDREW**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** HARROWER JAMES ; MCPHERSON ALEXANDER DONALD MEIKLEM ; SKELTON STEVEN ANDREW**Agent(s):** GREENWOOD MATTHEW

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D41/62 B65D49/06 B65D55/02 (Advanced/Invention)
(IPC 8-9):**CPC:** B65D41/62 B65D49/06 B65D55/026**European class:** B65D41/62 B65D49/06 B65D55/02G[Classification Explorer](#)**Cited documents:** WO09141581 A1, WO06117505 A1, WO05049443 A1, WO02096771 A1, US5738231 A, US2004129729 AA, GB2302867 A1,**Forward Citations:** WO14016391, ITMI20121324, CN104507821, CN103057823,**Abstract:**

A tamper-evident closure (10) for a container is provided. The closure (10) comprises a first portion including inner (20) and outer (21) parts, and a second portion (22), the portions being provided with an outer shell (5) which is separable into a first (12a) and second (12b) shell section. The first shell part is removable together with the inner and outer parts and the first portion is movable upon first opening from a first position in which the first and second shell parts are adjacent each other to a second position in which there is an unobstructed gap (G) therebetween. The outer part comprises a collar (21) rotatable relative to the inner part as the closure moves from the first to the second position and the first portion comprises locking means (47, 33) for irreversibly locking the closure in the second position upon first opening to prevent closing of the gap. The inner part including a line of weakness (39) which breaks upon first opening to define a tamper-evident member (37) visible in the gap in the second position.

122) Family number: 10275298 (US4763801A)

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Title: Child-resistant, tamper evident dispensing closure**Priority:** US19870105935 19871008

Family:	Publication number	Publication date	Application number	Application date
	<u>US4763801 A</u>	19880816	US19870105935	19871008

Probable Assignee: OWENS ILLINOIS CLOSURE INC**Assignee(s):**^(std): OWENS ILLINOIS CLOSURE INC**Inventor(s):**^(std): NYCZ JOSEPH D

International class
^{(IPC 8–9):} B65D47/30 B65D55/02 (Advanced/Invention);
B65D47/04 B65D55/02 (Core/Invention)

International class
^{(IPC 1–7):} A61J1/00 B65D55/02

CPC: B65D47/305 B65D55/02 B65D2255/20**European class:** B65D47/30B B65D55/02 L65D255/20**US class:** 215/203 215/235 215/237 220/338 222/153 222/153.02 222/153.06 222/534[Classification Explorer](#)**Cited documents:** US4711363 A, US4632266 A, US4595123 A, US4399928 A,

Forward Citations: WO04054921, USD438801, USD426464, USD424944, US8365933, US7958703, US7900789, US7621413, US6896160, US6431381, US6253965, US5829610, US5622284, US5494174, US5462183, US5427260, US5356044, US5314093, US5284264, US5190176, US5145080, US5123561, US5082130, US2011155688, US2008296251, US2007284331, US2007145080, US2005150916, US2004112927, FR2863915, EP1585700, EP1544123, EP0609955, EP0457961,

Abstract:

Source: US4763801A A dispensing closure for attachment to the finish of a bottle and a package which includes a bottle and such a dispensing closure attached to the finish thereof. The closure includes a molded plastic body portion with an irregular, generally horizontal top structure and a dispensing opening in such top structure, a pivotable member which is frictionally and pivotally attached to the top structure and which is pivotable in a vertical plane between a generally horizontal, closing position and an upright, open or dispensing position in which a dispensing passage in the pivotable member is aligned with the dispensing opening in the body portion. The closure also includes a dispensing control member which is rotatable in a horizontal plane with respect to the body portion, the dispensing control member having a horizontal disc with a slot therein, the disc being capable of rotation to bring the slot into alignment with the pivotable member to permit the pivotable member to be pivoted through the slot from the closing position to the open or dispensing position.

123) Family number: 62000963 (WO17121895A1)

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Title: SEALABLE LIFE VEST STOWAGE DEVICE**Priority:** GB20160000820 20160115 GB20160001333 20160125

Family:	Publication number	Publication date	Application number	Application date
	GB201600820 A0	20160302	GB20160000820	20160115
	GB201601333 A0	20160309	GB20160001333	20160125
	<u>GB2546557 A1</u>	20170726	GB20160001333	20160125
	<u>WO17121895 A1</u>	20170720	WO2017EP50783	20170116

Probable Assignee: SERVECOP LTD**Assignee(s):**^(std): SERVECOP LTD**Inventor(s):**^(std): NOEL GREGORY WHITE ; WHITE NOEL GREGORY PHILIP**Agent(s):** THOMPSON GRAY LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B63C9/23 B64D11/06 B65D55/02 (Advanced/Invention)
(IPC 8-9):**CPC:** B64D11/0631 B63C9/23 B65D55/022 B65D2101/0076 B63C9/1255[Classification Explorer](#)**Cited documents:** WO15145121 A1, US2015034641 AA, GB2523179 A1, GB2519180 A1, EP2636332 A2,**Abstract:**

A life vest stowage device 1 according to one embodiment of the disclosure comprises a receptacle 2 with an receptacle opening 3. The life vest stowage device 1 has first and second tabs 17, 18 with first and second tab apertures 25, 26. In a closed configuration, a closure flap 10 is in a folded position in which it at least partially covers the opening 3. The first and second tabs 17, 18 are exposed through the closure flap 10 to allow access to the first and second tab apertures 25, 26 from an outer side of the closure flap 10. A pull strap 12 extends from the interior volume through the opening 3 and over the outer side of the closure flap 10. The pull strap 12 has a pull strap aperture 15 securable to the first and second tab apertures 25, 26 by a frangible seal 31 in such a way that the closure flap 10 can only be moved to an unfolded position by moving the pull strap aperture 15 and the first and second tab apertures 25, 26 away from one another so as to break the frangible seal 31.

124) Family number: 5447009 (US4709823A)

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Title: Tamper evident bottle or package closure**Priority:** US19870011111 19870205

Family:	Publication number	Publication date	Application number	Application date
	<u>US4709823 A</u>	19871201	US19870011111	19870205

Probable Assignee: CREATIVE PACKAGING CORP**Assignee(s):^(std):** BECK JAMES M**Assignee(s):** CREATIVE PACKAGING CORP ; CREATIVE PECKAGING CORP ; WACHOVIA BANK NATIONAL ASSOCIATION ; BANK OF AMERICA NA**Inventor(s):^(std):** BECK JAMES M ; ROHR ROBERT D

International class B65D41/48 B65D51/18 B65D55/08 (Advanced/Invention);
^{(IPC 8-9):} B65D41/32 B65D51/18 B65D55/02 (Core/Invention)

International class B65D41/32
^{(IPC 1-7):}

CPC: B65D41/48 B65D51/18 B65D55/0863 B65D2251/0015 B65D2251/0087**European class:** B65D41/48 B65D51/18 B65D55/08C L65D251/00Y2D L65D251/00Y6J**US class:** 215/235 215/251 215/254[Classification Explorer](#)**Cited documents:** US4487324 A, US4111324 A, US3952901 A,

Forward Citations: WO9852840, WO9014286, WO16092483, WO11085011, WO11085011, USD747201, USD449530, USD442089, USD437226, US9446890, US8584875, US8439212, US8276777, US7988004, US7632244, US7611025, US7243807, US7228979, US6880736, US6655553, US6631820, US6405885, US6073809, US6024256, US5862953, US5829611, US5680965, US5670117, US5667087, US5456374, US5320235, US5238134, US5152413, US5088613, US5065883, US4974735, US4941580, US2011163135, US2011100990, US2010084399, US2008097310, US2006213862, US2005173368, US2005173367, US2005116382, US2005040131, US2003205549, US2002148856, FR2803828, FR2745794, EP1642843, EP1142794, EP0794129, EP0521633,

Abstract:

Source: US4709823A An anti-tamper container closure assembly includes a container having a orifice defining neck which receives a closure cap. The container has a plurality of projecting anti-rotation teeth positioned below the bottom of the closure cap and an overcap is adapted to be snapped over the closure cap, the overcap having a skirt with inner diameter projecting anti-rotation ribs which index with the container teeth to prevent rotation of the overcap. The overcap is effective to prevent opening of the orifice and is provided with frangeable connecting portions allowing a part of the overcap to be removed from the assembly to provide access to the closure cap for an opening actuation of the closure cap. The overcap skirt is provided with an inner diameter ledge which abuts a closure cap outer diameter ledge to prevent removal of the overcap skirt.

125) Family number: 11393813 (US5271512A)

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Title: Tamper-evident closure with reinforced band**Priority:** US19920973029 19921106

Family:	Publication number	Publication date	Application number	Application date
	<u>US5271512 A</u>	19931221	US19920973029	19921106

Probable Assignee: PHOENIX CLOSURES INC**Assignee(s):^(std):** PHOENIX CLOSURES INC**Inventor(s):^(std):** EKKERT LEN

International class B65D41/34 (Advanced/Invention);
 (IPC 8-9): B65D41/34 (Core/Invention)

International class B65D43/14
 (IPC 1-7):

CPC: B65D41/3447**European class:** B65D41/34D1**US class:** 215/216 215/252 215/330[Classification Explorer](#)

Cited documents: WO8304402 A1, USRE32879 E, US5135123 A, US4991733 A, US4919285 A, US4915244 A, US4913299 A, US4848614 A, US4807771 A, US4768666 A, US4756438 A, US4702383 A, US4700859 A, US4679696 A, US4595110 A, US4572387 A, US4567993 A, US4550844 A, US4530437 A, US4493427 A, US4485934 A, US4461391 A, US4436212 A, US4432461 A, US4156490 A, US3980195 A, GB1361180 A, FR2276238 A1,

Forward Citations: WO9923002, US8403160, US8028848, US7451885, US7228979, US6968966, US6913157, US6877624, US6793082, US6622460, US6382443, US6260721, US6089390, US6059134, US6053343, US6047840, US5984123, US5927527, US5826741, US5813553, US5749484, US5609263, US5609262, US5586671, US5450972, US2017021978, US2011036841, US2009242562, US2008314860, US2006169666, US2005167879, US2003192854, US2003160020, US2003121880, JP5000335, JP2008222240, EP2921232,

Abstract:

Source: US5271512A A molded tamper-evident closure for use with a container having a neck. The closure includes a generally planar top portion with an outer peripheral edge, an annular skirt depending from the peripheral edge and having a lower edge margin, an annular breakaway band having a top surface and a bottom surface, the top surface including a plurality of spaced frangible bridge formations integrally joined to the lower edge margin of the skirt. An outer surface of the breakaway band is provided with a plurality of support formations such as gusset members for preventing distortion of the breakaway band as the closure is applied to the container. The closure may also be provided with a plurality of specially configured recess formations for engaging ratchet formations on the neck of the container to provide an anti-backoff feature.

0) GB2125382A – TAMPER EVIDENT CLOSURE

126) Family number: 2035125 (GB2125382A)

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Title: TAMPER EVIDENT CLOSURE**Priority:** GB19820020337 19820713 GB19830018955 19830713

Family:	Publication number	Publication date	Application number	Application date
	<u>GB2125382 A1</u>	19840307	GB19830018955	19830713
	<u>GB2125382 B2</u>	19851002	GB19830018955	19830713
	GB8318955 A0	19830817	GB19830018955	19830713

Probable Assignee: COPE ALLMAN PLASTICS LTD**Assignee(s):^(std):** COPE ALLMAN PLASTICS LTD**Assignee(s):** COPE ALLMAN PLASTICS LIMITED**Inventor(s):^(std):** POVEY ROBERT WILLIAM ; WORTLEY MICHAEL JOHN**Inventor(s):** ROBERT WILLIAM POVEY ; MICHAEL JOHN WORTLEY

International class [B65D41/34](#) (Advanced/Invention);
^{(IPC 8-9):} [B65D41/34](#) (Core/Invention)

International class [B65D55/06](#)
^{(IPC 1-7):}

CPC: [B65D41/3409](#) [B65D2101/0053](#)**European class:** [B65D41/34A1](#) [L65D101/00A3E](#)[Classification Explorer](#)**Cited documents:** GB2096114 A1, GB2059928 A1, GB1265477 A, GB1021712 A,

Forward Citations: US7637384, US7451898, GB2251853, GB2250981, GB2163413, GB2149765,
 EP1440013, EP0706952, EP0514566, EP0511502, EP0262868, EP0133348,
 EP0133348,

Abstract:

Source: GB2125382A A tamper evident closure is in the form of a screw cap having a ring (6) attached to the lower rim of the skirt (4) of the cap (2), in which the ring (6) is in two parts (7,8), the two parts (7, 8) being attached to one another by breakable webs (9). One part (7) is provided with teeth (12) to engage ratchet teeth (17) on the neck (16) of the container (1) during rotation of the cap (2) during opening, and is attached to the cap (2) by easily breakable webs (10); the other part (8) has little or no interaction with the container (1) and is strongly attached to the cap, so that the first opening of the cap results in the breaking off and falling away of the first-mentioned part (7) of the ring (6), whose absence serves to indicate that tampering has taken place.

0) GB2163413A – CLOSURE ASSEMBLY

127) Family number: 22677048 (GB2163413A)

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Title: CLOSURE ASSEMBLY

Priority: GB19840011507 19840504

Family:	Publication number	Publication date	Application number	Application date
	GB2163413 A1	19860226	GB19850011257	19850502
	GB2163413 B2	19871028	GB19850011257	19850502
	GB8411507 A0	19840613	GB19840011507	19840504
	GB8511257 A0	19850612	GB19850011257	19850502

Probable Assignee: JOHNSEN AND JORGENSEN

Assignee(s):^(std): JOHNSEN AND JORGENSEN ; JOHNSEN JORGENSEN PLASTICS LTD

Assignee(s): JOHNSEN AND JORGENSEN PLASTICS LTD

Inventor(s):^(std): MCLAREN KEVIN WILLIAM

Inventor(s): KEVIN WILLIAM MCLAREN

International class
(IPC 8-9): [B65D41/34](#) (Advanced/Invention);
[B65D41/34](#) (Core/Invention)

International class
(IPC 1-7): [B65D55/02](#)

CPC: [B65D41/3409](#) [B65D41/3414](#) [B65D2101/0076](#)

European class: [B65D41/34A1](#) [B65D41/34A1A](#) [L65D101/00A5](#)

[Classification Explorer](#)

Cited documents: GB2125382 A1, GB2121392 A1, FR1581775 A, FR1536459 A, EP0096531 A1, EP0080846 A1, DE1955047 A1,

Forward Citations: WO9742092, WO15109412, WO03037737, US9802737, US7228979, US6073809, US6039199, GB2225778, EP1440013, EP0912412, EP0562553, EP0365136,

Abstract:

Source: GB2163413A A screw on/off closure assembly comprises a tamper evident tear band 12 connected to the skirt of the closure by frangible means 13 and provided with ratchet teeth 14, which cooperate with cam teeth 5 on the container so that movement of the tear band is restrained when the closure is being unscrewed. To minimise the risk of the means 13 breaking when the closure is first screwed on, the band 12 is provided internally with dogs 15 which are driven by dogs 17 on the skirt of the closure.

0) GB2277320A – CONTAINER AND TAMPER EVIDENT CLOSURE.

128) Family number: 13087377 (GB2277320A)

© PatBase

Title: CONTAINER AND TAMPER EVIDENT CLOSURE.

Priority: GB19930006903 19930402

Family:	Publication number	Publication date	Application number	Application date
	GB2277320 A1	19941026	GB19930006903	19930402
	GB2277320 B2	19970129	GB19930006903	19930402
	GB9306903 A0	19930526	GB19930006903	19930402

Probable Assignee: ABLE IND LTD

Assignee(s):^(std): ABLE IND LTD

Assignee(s): ABLE INDUSTRIES LIMITED

Inventor(s):^(std): ROBERTS MICHAEL DOUGLAS

Inventor(s): MICHAEL DOUGLAS ROBERTS

International class [B65D41/34](#) (Advanced/Invention);
(IPC 8-9): [B65D41/34](#) (Core/Invention)

International class [B65D41/34](#) [B65D55/02](#)
(IPC 1-7):

CPC: [B65D41/3409](#)

European class: [B65D41/34A1](#)

[Classification Explorer](#)

Cited documents: GB2241231 A1, GB1117412 A,

Forward Citations: WO15189436, WO09146567, WO08095863, WO0130663, US7775386, US7097058, FR3002521, EP2105386, CN106542191, CN103204303, CN103204303, AU760512,

Abstract:

Source: GB2277320A A container comprises a neck 1 having an interrupted support collar 3 formed by circumferentially spaced projections 9 on its outer surface each having a camming portion 15 and an inverted ramp 11 on its underside and terminating in a face 17, and a closure 21 for the container comprises inwardly projecting ribs 27 having an upper surface configured to engage with a respective inverted ramp 11 of each projection 9, tamper evident means connected to a skirt 25 by frangible means 33, 35 and cammable to be forced past the face 17, and a top 23 with means to seal against the container neck 1. The tamper evident means may comprise windows 31 connected to the skirt 25 by frangible bridges 33, 35 which act as hinges to allow the step 39 of each window to snap engage the radial face 17 of its respective portion 9, and which break on removal of the closure.; The windows 31 may hinge radially outwards or downwards. The neck may have a top annular sealing surface 7 and the cap 21 may have a recess (41, Fig 2) to receive the sealing surface 7 and may have a depending plug portion 43.

129) Family number: 11743815 (US5967352A)

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Title: INTERRUPTED THREAD CAP STRUCTURE**Priority:** US19970828395 19970328 US19970939257 19970929

Publication number	Publication date	Application number	Application date
<u>US5967352 A</u>	19991019	US19970939257	19970929

Probable Assignee: PORTOLA PACKAGING INC**Assignee(s):^(std):** PORTOLA PACKAGING INC**Assignee(s):** HELLER FINANCIAL**Inventor(s):^(std):** REPP RICHARD E ; SANDOR LASZLO G ; WATTS JACK L

International class
(IPC 8-9): B65D1/02 B65D41/34 B65D41/47 (Advanced/Invention) ;
B65D1/02 B65D41/32 B65D41/34 (Core/Invention)

International class
(IPC 1-7): B65D39/00 B65D41/34

CPC: B65D41/47 B29B2911/14446 B65D1/0246 B65D41/3404 B65D2101/0038**European class:** B65D1/02D1B B65D41/34A B65D41/47 L65D101/00A3C**US class:** 215/232 215/256 215/329 220/296[Classification Explorer](#)**Cited documents:** US5775528 A, US5664694 A, US5642825 A, US5542556 A, US5533633 A, US5431291 A, US5415306 A, US5307945 A, US5197621 A, US5190178 A, US4948001 A, US4872571 A, US4721220 A, US4643330 A, US3840143 A, US1866770 A,**Forward Citations:** WO11066062, WO05070781, WO05070781, USD732391, USD447056, US9777551, US9759029, US9725982, US9719320, US9689228, US9656782, US9631453, US9567827, US9562416, US9334703, US9316086, US9157288, US9103177, US9097095, US9074439, US9010411, US8997853, US8955605, US8448800, US8365933, US8348075, US8146769, US7958703, US7621413, US7340324, US7308988, US7246713, US7182213, US7018587, US6878340, US6754965, US6536616, US6438878, US6425480, US6241111, US2014061150, US2011290755, US2011101681, US2011024417, US2009173739, US2008223815, US2008173611, US2008011711, US2007045319, US2007034590, US2005077296, US2004104193, US2004092731, US2003127414, US2002073647, US2002048810, GB2382071, GB2382071, FR2865457, BE1016618, BE1016618, AU2010202765,**Abstract:**

Source: US5967352A A container neck is used with a tamper-evident, snap-on, screw-off closure. The neck has a multiple of four first helical threads on a neck stretch portion, and at least one external ratchet tooth on a locking wall portion below the neck stretch. The closure has an upper skirt having second helical threads mating with the first helical thread of the neck and a lower skirt with at least one internal ratchet tooth shaped and positioned to engage the external ratchet tooth when the closure is applied to the neck. The teeth formed on the skirt interior and neck exterior are arranged to provide at least one circumferentially extending stretch of the tamper-evident band where the teeth are not engaged. A line of weakness extending vertically through the disengaged stretch of the tamper-evident band is ruptured when the closure is unscrewed from the neck. The number of helical threads is preferably eight and, in any event, a multiple of four. In one modification the threads are interrupted and the gaps between thread segments are vertically aligned while in another modification the thread segments are staggered. In still another modification there is a space where vertically aligned segments are omitted to provide space for the down-turned tab of a foil disc sealing the lip on the container. Where the container is made of PET or other accurately molded substance the points of the neck ratchet teeth are rounded to avoid injury to the user.

0) GB2137599A – A CLOSURE CAP

130) Family number: 15342850 (GB2137599A)

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Title: A CLOSURE CAP
Priority: GB19830009607 19830408

Family:	Publication number	Publication date	Application number	Application date
	GB2137599 A1	19841010	GB19830009607	19830408
	GB2137599 B2	19861022	GB19830009607	19830408
	GB8309607 A0	19830511	GB19830009607	19830408

Probable Assignee: ARCHER D
Assignee(s):^(std): ARCHER D ; ARCHER DAVID
Assignee(s): DAVID ARCHER
Inventor(s):^(std): ARCHER DAVID
Inventor(s): DAVID ARCHER
International class
(IPC 8-9): [B65D50/04 B65D55/08](#) (Advanced/Invention),
[B65D50/00 B65D55/02](#) (Core/Invention)
International class
(IPC 1-7): [B65D55/02](#)
CPC: [B65D50/041 B65D55/089](#)
European class: [B65D50/04B B65D55/08F](#)

[Classification Explorer](#)

Cited documents: US3837518, GB1515409, GB1408797,

Forward Citations: WO8607035, US5762215, US4782965, GB2148259, FR2553737, AU589641,

Abstract:

Source: GB2137599A A closure cap for a container comprises an inner cap (18) which can be screwed onto the neck (12) of a bottle, and an outer cap (20) which covers and surrounds the inner cap (18). The outer cap has a tamper evident rim (28) part of which extends into an annular groove (24) in the inner cap. Portions (32) on the top of the inner cap (18) can be brought into engagement with portions (36) provided under the top of the outer cap (20) following downward movement of the outer cap (20). This downward movement of the outer cap enables rotation of the outer cap to effect removal of the cap, but such downward movement is only possible after the tamper evident rim (28) has been removed. A ratchet mechanism provided by portions (32) and dogs (34) allows the closure cap to be applied to the container, but does not allow removal.

131) Family number: 1887528 (GB2149765A)

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Title: Tamper evident closures
Priority: US19830551599 19831114
Family:

Publication number	Publication date	Application number	Application date
BE901042 A	19850301	BE19840213997	19841113
BE901042 A1	19850301	BE19840213997	19841113
DE3441431 A1	19850829	DE19843441431	19841113
FR2554791 A1	19850517	FR19840017287	19841113
GB2149765 A1	19850619	GB19840028738	19841114
GB2149765 B2	19871014	GB19840028738	19841114
GB8428738 A0	19841227	GB19840028738	19841114
IT1178230 A	19870909	IT19840049156	19841113
IT8449156 A0	19841113	IT19840049156	19841113
JP60172662 A2	19850906	JP19840238727	19841114
LU85640 A	19850604	LU19840085640	19841113
NL8403450 A	19850603	NL19840003450	19841112

Probable Assignee: ANCHOR HOCKING CORP

Assignee(s):^(std): ANCHOR HOCKING CORP

Assignee(s): ANCHOR HOCKING TE LANCASTER OHIO VER ST V AM CORP

Inventor(s):^(std): NIXDORFF F S ; NIXDORFF FRANK S ; FURANKU ESU NIKUSUDORUFU

Inventor(s): S NIXDORFF FRANK ; F S NIXDORFF ; FRANK S NIXDORFF ; FS NIXDORFF

International class [B29C45/44](#) [B65D41/34](#) [B65D55/02](#) (Advanced/Invention)
 (IPC 8-9):

International class [B29C33/00](#) [B29C33/76](#) [B29C43/02](#) [B29C51/00](#) [B29D1/00](#) [B29L1/00](#) [B65D41/34](#)
 (IPC 1-7): [B65D41/38](#) [B65D55/02](#) [B65D55/12](#)

CPC: [B29C45/4407](#) [B29L2001/00](#) [B29L2031/565](#) [B65D41/3409](#) [B65D55/022](#)

European class: [B29C45/44B](#) [B65D41/34A1](#) [B65D55/02D](#) [L29L1/00](#) [L29L31/56B](#)

[Classification Explorer](#)

Cited documents: GB2131344 A1, GB2125382 A1, GB2116155 A1, GB2108892 A1, GB1159029 A, GB1035476 A, FR2503672 A1,

Forward Citations: WO08002249, US8256632, GB2225778, FR2600629, EP0261037, DE9210306, DE9014858, DE4134741, DE4134741, DE4126015, DE102007005594,

Abstract:

Source: GB2149765A A tamper evident moulded closure cap (1) for sealing containers has an integrally moulded tamper indicating band (4) with a flared portion at the line of weakness (13) between the cap skirt and the tamper indicating band. The flare facilitates the cap moulding. As the container is sealed, the indicating band passes over a bead on the container having several outwardly projecting stops. When the cap is unscrewed the stops engage cooperating stops on the indicating band causing it to be torn loose. Each of the stops has one inclined flank to permit the cap to be screwed on to the container and one radial flank to resist rotation of the indicating band when the cap is unscrewed. The cap is moulded in moulding means comprising a cavity (17) and a complementary core (16) and sleeve portion (18), the sleeve portion having a shaping portion (20) to form the inner surface of the indicating band. A flared outer edge (22) of the sleeve portion (18) produces the line of weakness.

132) Family number: 42030561 (WO09141581A1)

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Title: A TAMPER-EVIDENT CLOSURE**Priority:** GB20080009058 20080519 WO2009GB01213 20090515

Family:	Publication number	Publication date	Application number	Application date
	CN102076573 A	20110525	CN200980124769	20090515
	CN102076573 B	20130605	CN200980124769	20090515
	GB200809058 A0	20080625	GB20080009058	20080519
	WO09141581 A1	20091126	WO2009GB01213	20090515

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):**^(std) MCPHERSON ALEXANDER DONALD MEICKLEM ; OBRIST CLOSURES SWITZERLAND ; SKELTON STEVEN ANDREW**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):**^(std) SKELTON STEVEN ANDREW ; MEICKLEM MCPHERSON ALEXANDER DONALD ; MCPHERSON ALEXANDER DONALD MEICKLEM ; ANDREW SKELTON STEVEN**Agent(s):** GREENWOOD MATTHEW

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
^(IPC 8-9): [B65D49/06 B65D55/02](#) (Advanced/Invention);
[B65D49/00 B65D55/02](#) (Core/Invention)

CPC: [B65D49/06 B65D55/026](#)**European class:** [B65D49/06 B65D55/02G](#)[Classification Explorer](#)**Cited documents:** WO06117505 A1, WO05049443 A1, GB2302867 A1,**Forward Citations:** WO13068750, WO11157978, US9033169, RU2636376, CN104507821, CN104507821, CN104203767, CN104203767, CN103906689, CN103906689, CN102774562, CN102665930,**Abstract:**

A tamper-evident closure (110) for alpha container (120) is provided. The closure comprising a body part (175) attachable to a container and a cap part (135) having inner (165) and outer (160) parts, the outer part is movable relative to the inner part from a first position to a second position in which a gap (G) is formed in the closure and in which the inner and outer cap parts become irreversibly locked so that the gap cannot be closed, in which the inner part includes locking means (174) for preventing movement relative to the body, and in which the outer part holds the locking means in a locked position when in the first position and until it reaches the second position and thereafter the locking means are released so that the inner part can move relative to the body part.

133) Family number: 9336906 (EP0272431A2)

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Title: Closure for retortable plastic container.**Priority:** US19860942218 19861216

Family:	Publication number	Publication date	Application number	Application date
	<u>DE3783448 D1</u>	19930218	DE19873783448	19871110
	<u>DE3783448 T2</u>	19930506	DE19873783448T	19871110
	<u>EP0272431 A2</u>	19880629	EP19870116572	19871110
	<u>EP0272431 A3</u>	19890301	EP19870116572	19871110
	<u>EP0272431 B1</u>	19930107	EP19870116572	19871110

Probable Assignee: ANCHOR HOCKING CORP**Assignee(s):**^(std): ANCHOR HOCKING CORP**Assignee(s):** ANCHOR HOCKING CORP LANCASTER OHIO US**Inventor(s):**^(std): OCHS CHARLES S ; OCHS S**Inventor(s):** OCHS S CHARLES LANCASTER OHIO 43130 US**Designated states:** BE DE FR GB IT LU NL**International class** B65D41/34 B65D51/14 ^(Advanced/Invention)
(IPC 8-9):**International class** B65D41/34 B65D41/48
(IPC 1-7):**CPC:** B65D41/3404 B65D41/3442 B65D51/145 B65D2101/0038**European class:** B65D41/34A B65D41/34D B65D51/14B L65D101/00A3C[Classification Explorer](#)**Cited documents:** US4151924 A, US1921016 A, GB1278939 A, EP0201613 A1, EP0154467 A2,**Forward Citations:** WO9641751, WO08030640, US6220466, US5839592, FR2682084, EP0559833, EP0411385, EP0395465, EP0330964, BE1006510,**Abstract:**

Source: EP0272431A2 A closure is described of particular value for sealing containers formed of barrier plastic. The closure has a disc shaped central portion (2) of barrier material which has an upwardly and outwardly extending sealing portion (7) at its outer edge coated with sealant. A clamping means (10) holds the sealant against a tapered rim of the container (3).

134) Family number: 4962427 (US4570809A)

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Title: Child proof cap having tamper means**Priority:** US19840659822 19841005

Family:	Publication number	Publication date	Application number	Application date
	<u>US4570809 A</u>	19860218	US19840659822	19841005

Probable Assignee: ARCHER DAVID**Assignee(s):**^(std): ARCHER DAVID**Inventor(s):**^(std): ARCHER DAVID

International class
(IPC 8-9): B65D50/04 B65D55/08 (Advanced/Invention);
B65D50/00 B65D55/02 (Core/Invention)

International class
(IPC 1-7): B65D55/02

CPC: B65D50/041 B65D55/089**European class:** B65D50/04B B65D55/08F**US class:** 215/220 215/256[Classification Explorer](#)**Cited documents:** US4433789 A,

Forward Citations: WO9001451, US8316622, US5676268, US5590799, US5477972, US5005718,
 US4998632, US4832218, US4782965, US2010313527, US2009014404, US2004169000,
 GB2328206, EP0897878, DE4134082,

Abstract:

Source: US4570809A A closure cap for a container comprises an inner cap which can be screwed onto the neck of a bottle, and an outer cap which covers and surrounds the inner cap. The outer cap has a tamper evident rim part of which extends into an annular groove in the inner cap. Portions on the top of the inner cap can be brought into engagement with portions provided under the top of the outer cap following downward movement of the outer cap. This downward movement of the outer cap enables rotation of the outer cap to effect removal of the cap, but such downward movement is only possible after the tamper evident rim has been removed.

135) Family number: 2152042 (US4940168A)

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Title: CONNECTOR

Priority: CA19870540331 19870623 EP19870305594 19870623 US19870064567 19870622
 EP19870305594 19870623 GB19860015410 19860624

Family:

Publication number	Publication date	Application number	Application date
<u>AT60559 E</u>	19910215	AT19870305594T	19870623
<u>AU198774423 A1</u>	19880107	AU19870074423	19870617
<u>AU607916 B2</u>	19910321	AU19870074423	19870617
<u>CA1293935 A1</u>	19920107	CA19870540331	19870623
<u>DE3767792 D1</u>	19910307	DE19873767792	19870623
<u>DK164401 B</u>	19920622	DK19870003201	19870623
<u>DK164401 C</u>	19921109	DK19870003201	19870623
<u>DK320187 A</u>	19871225	DK19870003201	19870623
<u>DK320187 A0</u>	19870623	DK19870003201	19870623
<u>EP0251663 A1</u>	19880107	EP19870305594	19870623
<u>EP0251663 B1</u>	19910130	EP19870305594	19870623
<u>ES2019639 B3</u>	19910701	ES19870305594T	19870623
<u>FI86616 B</u>	19920615	FI19870002698	19870617
<u>FI86616 C</u>	19920925	FI19870002698	19870617
<u>FI872698 A</u>	19871225	FI19870002698	19870617
<u>FI872698 A0</u>	19870617	FI19870002698	19870617
GB8615410 A0	19860730	GB19860015410	19860624
GB8713446 A0	19870715	GB19870013446	19870609
<u>GR3001404 T3</u>	19920925	GR19910400338T	19910131
<u>IE60741 B</u>	19940810	IE19870001527	19870609
<u>IE871527 L</u>	19871224	IE19870001527	19870609
<u>JP63110160 A2</u>	19880514	JP19870155654	19870624
<u>KR19880000314 A</u>	19880324	KR19870006403	19870624
<u>NO174289 B</u>	19940103	NO19870002503	19870616
<u>NO174289 C</u>	19940413	NO19870002503	19870616
<u>NO872503 A</u>	19871228	NO19870002503	19870616
<u>NO872503 A0</u>	19870616	NO19870002503	19870616
<u>NZ220811 A</u>	19901221	NZ19870220811	19870623
<u>PT85139 A</u>	19880701	PT19870085139	19870623
<u>PT85139 B</u>	19930630	PT19870085139	19870623
<u>US4940168 A</u>	19900710	US19890332397	19890328
<u>ZA8704139 A</u>	19871224	ZA19870004139	19870609

Probable Assignee: ZENECA LTD**Assignee(s):^(std):** CWS INTERNAT AG ; ICI PLC ; ZENECA LTD ; CWS AG ; CWS INT AG

Assignee(s): CWS INT BAAR CH AG ; IMPERIAL CHEMICAL INDUSTRIES PLC CWS INTERNATIONAL AG ; SHADWELL DAVID WILLIAM ; JOSEPH MARTIN ; CWS INTERNATIONAL AG ; CWS INTERNATIONAL AG BAAR CH ; IMP CHEMICAL IND PLC ; IMPERIAL CHEM IND PLC ; IMP CHEMICAL IND PLC LONDON GB ; IMP CHEMICAL IND PLC CWS INT AG ; IMP CHEM IND PLC ICI ; ZENECA LIMITED ; IMPERIAL CHEMICAL INDUSTRIES PLC ; IMPERIAL CHEMICAL INDUSTRIES PLC LONDON GB ; IMPERIAL CHEM IND PLC ICI

Inventor(s):^(std): SHADWELL DAVID WILLIAM ; BOLLINGTON ; WILLIAM SHADWELL DAVID ; SHADWELL DAVID W ; MAACHIN JIYOOZEFU ; DEIBUITSUDO UIRIAMU

SHIYADOUER ; JOSEPH MARTIN

Inventor(s): MARTIN JOSEPH ; DAVID WILLIAM SHADWELL ; JOSEPH MARTIN ALTRINCHAM
CHESHIRE WA15 0AZ GB ; DEIBUITSUDO UIRIAMU SHIYADOUERU ; SHADWELL
DAVID WILLIAM MACCLESFIELD CHESHIRE SK10 5BP GB ; SHADWELL DAVID
WILLIAM MACCLESFIELD CHESHIRE SK10

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SMART AND BIGGAR

Designated states: AT BE CH DE ES FR GB GR IT LI LU NL SE

International class (IPC 8-9): B65D25/50 B65D47/06 B65D49/00 B65D55/02 B67C3/22 F16J13/12 (Advanced/Invention);
B65D49/00 (Advanced/Non-invention);
B65D25/38 B65D47/06 B65D49/00 B65D55/02 B67C3/02 F16J13/00 (Core/Invention)

International class (IPC 1-7): B65D23/00 B65D25/38 B65D25/50 B65D47/00 B65D47/02 B65D47/06 B65D49/00
B65D55/00 B65D55/02 B65D83/00 B67B5/00 B67C3/22 B67C3/26 F16J13/12 F16L25/00

CPC: Y10T403/7011 B65D55/02 B65D25/50 B65D47/06 Y02W30/807

European class: B65D25/50 B65D47/06 B65D55/02

US class: 222/153 222/153.14 222/567 285/307 403/351

[Classification Explorer](#)

Cited documents: WO8000828 A1, US4665940 A, US4651901 A, US4543980 A, US4461391 A, US4108475
A, US3773360 A, US3439939 A, US2698113 A, US2099335 A, US2084344 A,
FR1213397 A, EP0133348 A1, EP0080846 A1, DE582308 A, DE360369 A, AU554454
B2, AU554454,

Forward Citations: US8365933, US7958703, US7621413, US6431381, US5593610, US5494174,
US5145080, US2007284331, JP2010247685,

Abstract:

Source: US4940168A A connection device for two components, for example a container and a dispenser, provided with a member moveable between two positions. In the first position the member permits engagement of the two components. The member moves between the first and second position upon either connection or disconnection of the components and can not be readily moved back to the first position with the member. In the second position the components can not be re-engaged.

Title: Closure with tamper evident ring**Priority:** GB19980005235 19980313 IE19980000176 19980310

Family:	Publication number	Publication date	Application number	Application date
	<u>GB2335186 A1</u>	19990915	GB19980005235	19980313
	GB9805235 A0	19980506	GB19980005235	19980313
	<u>IE80427 B3</u>	19980701	IE19980000176	19980310
	<u>IE980176 A2</u>	19980701	IE19980000176	19980310

Probable Assignee: HUGH ARMSTRONG**Assignee(s):**^(std): ARMSTRONG HUGH ; HUGH ARMSTRONG**Inventor(s):**^(std): ARMSTRONG HUGH**Inventor(s):** HUGH ARMSTRONG

International class [B65D41/34](#) (Advanced/Invention);
^{(IPC 8-9):} [B65D41/34](#) (Core/Invention)

International class [B65D41/34](#) [B65D50/00](#)
^{(IPC 1-7):}

CPC: [B65D41/3452](#)**European class:** [B65D41/34D1A](#)[Classification Explorer](#)**Cited documents:** WO9213773 A1, US4560076 A, US4529096 A, GB2076381 A1,**Forward Citations:** WO05051793, EP1689654,**Abstract:**

Source: GB2335186A A screw threaded closure 4 has a frangibly connected tamper evident ring with an inwardly directed lip 10 for resiliently fitting over a container neck clipbead 12, such that when the closure is fully tightened onto a container neck, a portion of the ring other than the lip contacts the clipbead and exerts a radial force thereon. The frangible connections may be short tapering tabs (9 fig 8) with a semi-circular cross-section. The closure may comprise cooperating teeth (24, 25 fig 10) so that the closure can be screwed onto a container neck without breaking the frangible connections. The radial force prevents the ring from "kicking" to one side during removal.

137) Family number: 4793805 (US5054633A)

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Title: Tamper evident safety closure**Priority:** NL19880003179 19881227

Family:	Publication number	Publication date	Application number	Application date
	NL8803179 A	19900716	NL19880003179	19881227
	US5054633 A	19911008	US19890454984	19891222

Probable Assignee: TECHNOPLAST BV**Assignee(s):^(std):** TECHNOPLAST BV**Assignee(s):** TECHNOPLAST B V ; TECHNOPLAST B V TE TILBURG**Inventor(s):^(std):** REIJENGA TJERK

International class [B65D50/04](#) (Advanced/Invention) ;
^{(IPC 8-9) :} [B65D50/00](#) (Core/Invention)

International class [B65D55/02](#)
^{(IPC 1-7) :}

CPC: [B65D50/041](#)**European class:** [B65D50/04B](#)**US class:** [215/203](#) [215/220](#) [215/251](#)[Classification Explorer](#)**Cited documents:** US4669620 A, US4632264 A, US4555036 A, US4527701 A, US4171236 A,**Forward Citations:** US6488187, US6116445, US6095354, US6016931, US5762215, US5667085, US5507419, US5477972, US5305931, US5213238, US5205408,**Abstract:**

Source: US5054633A A tamper evident safety closure for containers composed of an assembly of an inner cap and an outer cap, the inner cap provided with threading for screwing onto the mouth of a container. The outer cap can be depressed over the inner cap against a resilient force and the caps can be unscrewed from a container only after depressing the outer cap. A central upstanding part on the inner cap cooperates with a bridging wall portion, bridging a central opening in the top wall of the outer cap and connected thereto by a rupturable connection. There is an asymmetry in these parts so that the bridging wall portion does not rupture instantaneously all around its periphery but either remains connected to the outer cap with showing plastic deformation or ruptures gradually around its periphery or both.

138) Family number: 3216470 (US4875594A)

© PatBase

Title: Closure cap

Priority: US19880285651 19881216

Family:

Publication number	Publication date	Application number	Application date
<u>US4875594 A</u>	19891024	US19880285651	19881216

Probable Assignee: ANCHOR HOCKING A CORP OF DE CORP

Assignee(s):^(std): ANCHOR HOCKING CORP

Assignee(s): ANCHOR HOCKING PACKAGING CO ; CHASE MANHATTAN BANK COLLATERAL AGENT AS ; ANCHOR HOCKING A CORP OF DE CORP

Inventor(s):^(std): OCHS CHARLES S

International class
(IPC 8-9): B65D41/34 (Advanced/Invention);
B65D41/34 (Core/Invention)

International class
(IPC 1-7): B65D41/48

CPC: B65D41/3419 B65D41/3457

European class: B65D41/34A3 B65D41/34D3

US class: 215/252 215/256

[Classification Explorer](#)**Cited documents:** US4694969 A, US4576298 A, US3980195 A,

Forward Citations: WO9203348, WO9117090, USD547172, USD531505, USD530205, USD529804, US9205946, US8650839, US8251236, US8100277, US7798359, US7780024, US7766178, US7644902, US7413097, US7344039, US7198170, US6981602, US6968966, US6766916, US6729488, US6702133, US6673298, US6622460, US6484896, US6382443, US6371317, US6355201, US6260721, US6253939, US6152316, US6119883, US6085921, US5813553, US5346082, US5255805, US5190177, US5080246, US5058755, US5007545, US4981230, US2013206718, US2010230374, US2010032402, US2009057261, US2008173611, US2007017891, US2006060555, US2005189312, US2005145629, US2003192854, DE102004052509, AU653334, AU647048,

Abstract:

Source: US4875594A A composite closure having a metal shell with metal container engaging lugs and an attached molded plastic tamper evident insert band providing the combination of a pressure resistant seal with a plastic tamper evident indication.

139) Family number: 3605441 (CA1230313A)

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Title: TAMPER EVIDENT CLOSURE**Priority:** CA19830432178 19830711

Family:	Publication number	Publication date	Application number	Application date
	<u>CA1230313 A1</u>	19871215	CA19830432178	19830711

Probable Assignee: GUALA ANGELO SPA**Assignee(s):**^(std): GUALA ANGELO SPA**Assignee(s):** GUALA CLOSURES SPA ; GUALA FIN SPA ; GUALA PIERGIACOMO ; GUALA SPA ; GUALA ANGELO S P A**Inventor(s):**^(std): GUALA PIERGIACOMO**Agent(s):** MACRAE AND CO**International class**
^(IPC 8-9): B65D41/34 (Advanced/Invention) ;
B65D41/34 (Core/Invention)**International class**
^(IPC 1-7): B65D41/34[Classification Explorer](#)**Forward Citations:** CH709172,**Abstract:**

Source: CA1230313A 25579 A tamper evident closure for bottles And containers includes a cap and a tamper-indicating lower ring or belt, those two parts are linked together by a weak breakable circumferential area, which will break at opening of the container leaving behind the lower ring. This closure is the result of a simplified manufacturing process that forms the breakable circumferential area by forming misaligned cuts about the circumference of the closure between the upper cap and lower ring. Upon opening, the lower ring moves down on the neck of the container. Upon reclosing, the space between the cap and ring makes the prior opening of the bottle very evident.

140) Family number: 13119403 (GB2280895A)

© PatBase

Title: Closure devices with compressible core seal**Priority:** GB19930016299 19930804

Family:	Publication number	Publication date	Application number	Application date
	<u>GB2280895 A1</u>	19950215	GB19930016299	19930804
	<u>GB2280895 B2</u>	19971203	GB19930016299	19930804
	GB9316299 A0	19930922	GB19930016299	19930804

Probable Assignee: VICTORY MALCOLM G**Assignee(s):^(std):** VICTORY MALCOLM G ; VICTORY MALCOLM GORDON**Assignee(s):** MALCOLM GORDON VICTORY**Inventor(s):^(std):** VICTORY MALCOLM GORDON**Inventor(s):** MALCOLM GORDON VICTORY

International class [B65D39/12 B65D41/28 B65D47/24](#) (Advanced/Invention) ;
(IPC 8-9) [B65D39/00 B65D41/02 B65D47/04](#) (Core/Invention)

International class [B65D39/12 B65D41/28 B65D45/02](#)
(IPC 1-7)

CPC: [B65D39/12 B65D41/28 B65D47/243](#)**European class:** [B65D39/12 B65D41/28 B65D47/24A2](#)[Classification Explorer](#)**Cited documents:** US4397397 A, GB723545 A, GB2155985 A1,**Forward Citations:** WO16180908, WO0104500, US6953353, US6297741, EP3093253, EP2008942,**Abstract:**

Source: GB2280895A A closure device for a bottle or other container includes a compressible core seal 12 within or adjacent the cap 10 such that under axial pressure applied by the cap 10 through a central shaft 23, the core seal 12 expands radially to form a seal within the container neck or outlet. As shown, the seal 12 initially exerts axial pressure on the cap away from itself but when closed, passes a biasing position and then provides tension in the opposite direction to maintain the closure. Alternatively (see Figures 1, 15), the cap 10 may include means to engage the bottle and the core seal 12 is only able to exert pressure so as to push the cap away. The central shaft may be hollow to form a nozzle 73. In this case a valve plate 74 is provided with slots 75 radially outwards of the nozzle such that when in the closed position, the central shaft 23 engages the valve plate 74 to effect a seal.

141) Family number: 30314102 (US5915579A)

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Title: Container with tamper-evident and pre-lockable closure assembly

Priority: DE19952002309U 19950213 DE19961080076 19960210 DE19965000504 19960210
 DE19981015750 19980408 US19980060005 19980414 DE19972006672U 19970414
 US19960716382 19960919 WO1996EP00594 19960210

Family:	Publication number	Publication date	Application number	Application date
	AT170486 E	19980915	AT19960902266T	19960210
	AU199646652 A1	19960904	AU19960046652	19960210
	BRPI9801059 A	19990914	BR1998PI01059	19980414
	DE19680076 D2	19980520	DE19961080076	19960210
	DE19815750 A1	19981029	DE19981015750	19980408
	DE29502309 U1	19950614	DE19952002309U	19950213
	DE29706672 U1	19970619	DE19972006672U	19970414
	DE59600504 D1	19981008	DE19965000504	19960210
	EP0758988 A1	19970226	EP19960902266	19960210
	EP0758988 B1	19980902	EP19960902266	19960210
	ES2122787 T3	19981216	ES19960902266T	19960210
	GR1003788 B	20020130	GR19980100131	19980410
	GR980100131 A	19981231	GR19980100131	19980410
	IE980275 A1	19981021	IE19980000275	19980409
	IL124031 A1	20030706	IL19980124031	19980409
	JP3717521 B2	20051116	JP19960524651	19960210
	JP9512235 T2	19971209	JP19960524651T	19960210
	KR19970702197 A	19970513	KR19960705711	19961011
	NO963824 A	19960913	NO19960003824	19960913
	NO963824 A0	19960913	NO19960003824	19960913
	TW357708 Y	19990501	TW19980205312U	19980409
	US5915579 A	19990629	US19980060005	19980414
	WO9625342 A1	19960822	WO1996EP00594	19960210

Probable Assignee: MAUSER WERKE GMBH

Assignee(s):^(std): MAUSER WERKE GMBH ; MULDER ALFONS ; PRZYTULLA DIETMAR

Assignee(s): MAUSER WERKE G M B H DE ; MAUSER WERKE GMBH 50321 BRUEHL DE ;
 MAUSER WERKE GMBH AND COKG

Inventor(s):^(std): DIETMAR PRZYTULLA ; KHALED ATTA ; ALFONS MULDER ; PRZYTULLA DIETMAR ;
 MULDER ALFONS ; ATTA KHALED

Inventor(s): ATTA KHALED 50374 ERFTSTADT DE ; MULDER ALFONS D 53332 BORNHEIM DE ;
 PRZYTULLA DIETMAR 50171 KERPEN DE ; PRZYTULLA DIETMAR D 50170 KERPEN
 DE ; PRZYTULLA DIETMAR 50170 KERPEN DE ; MULDER ALFONS 53332 BORNHEIM
 DE

Agent(s): SELIGSOHN GABRIELI AND CO

Designated states: AT AU BE BG BR BY CA CH CN CZ DE DK EE ES FI FR GB GE GR HU IE IS IT JP KE
 KG KR KZ LI LK LT LU LV MC MD MX NL NO NZ PL PT RO RU SE SG SI SK TJ TM TT
 UA US UZ VN

International class [B65D41/34](#) [B65D55/08](#) (Advanced/Invention) ;
 (IPC 8-9) [B65D41/34](#) (Advanced/Non-invention) ;
[B65D41/34](#) (Core/Invention) ;
[B65D55/08](#) (Core/Non-invention)

[B65D101/00](#) [B65D41/04](#) [B65D41/34](#) [B65D45/00](#) [B65D55/08](#)

International class
(IPC 1-7):

CPC: B65D41/3414

European class: B65D41/34A1A

US class: 215/252 215/330 215/331

[Classification Explorer](#)

Cited documents: WO9625342 A1, US5803287 A, US5794803 A, US5667088 A, US5450972 A, US5346082 A, US5027964 A, US4936474 A, US4592476 A, GB1360949 A, FR2270151 A1, EP0364775 A1, DE29706672 U1, DE29502309 U1, CH551321 A,

Forward Citations: WO15109412, WO08092716, US9802737, US8544666, US8517194, US7637384, US7451898, US7097058, US6938787, US6889857, US6688484, US6557714, US2008223813, US2007034590, US2005252878, US2005199574, US2005173435, US2005092750, US2005072751, US2004168999, US2004155006, US2004045925, US2004011757, US2003146185, KR101660932, GR98100131, GR980100131, EP3219637, EP1700790, DE102011006845, CH709172, AU2005223740,

Abstract:

Source: US5915579A A container has a neck formed with projections and a closure assembly for attachment to the neck and movable between a fully released position and a fully closed position. The closure assembly includes a screw cap and an index ring which serves as tamper-evident safety mechanism and is connected to the screw cap via several thin bridge portions forming predetermined breaking points and torn off when the screw cap is released from its fully closed position for the first time for the first time. The neck and the index ring are formed with mutually engaging locking elements (ratchets 36, flexible tongues 34) which are so moved that a tightening of the screw cap from the fully released position into an intermediate position results in at least two of the first locking members of the index ring to engage with the second locking members such that a spontaneous unscrewing and release of the screw cap is prevented while still allowing unscrewing of the screw cap by overcoming a certain retention force applied by the first locking members.

0) IN04708DN2007A – TAMPER-EVIDENT CLOSURE AND BEAD ON CONTAINER NE...

142) Family number: 41748027 (IN04708DN2007A)

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Title: TAMPER-EVIDENT CLOSURE AND BEAD ON CONTAINER NECK

Family:

Publication number	Publication date	Application number	Application date
<u>IN04708DN2007 A</u>	20070817	IN2007DN04708	20070619

Probable Assignee: ABACUS

Assignee(s): ABACUS

Inventor(s): HIGGINS CHRISTOPHER LYNDON

International class B65D41/34
(IPC 1-7).

Abstract:

Source: IN04708DN2007A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102); a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamperevident band (110) frangibly connected to said skirt; the neck of a container including a tamper bead adapted to engage with tabs (122) on said tamperevident band to facilitate separation of the band (110) from the skirt of the closure and an inwardly and downwardly sloping container neck surface beneath said tamper bead, said inwardly and downwardly sloping surface urging said separated tamper-evident band downwards away from said skirt

143) Family number: 8527200 (WO9515285A1)

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Title: VENTED SNAP-ON, SCREW-OFF CAP AND CONTAINER NECK**Priority:** WO1993US11676 19931202

Family:	Publication number	Publication date	Application number	Application date
	AU199457354 A1	19950619	AU19940057354	19931202
	WO9515285 A1	19950608	WO1993US11676	19931202

Probable Assignee: PORTOLA PACKAGING INC**Assignee(s):^(std):** BIETZER STEVEN H ; LUCH DANIEL ; PORTOLA PACKAGING INC**Inventor(s):^(std):** BIETZER STEVEN H ; LUCH DANIEL**Inventor(s):** STEVEN H BIETZER ; DANIEL LUCH**Designated states:** AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CZ DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR KZ LK LU LV MC MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SK SN TD TG UA US UZ VN**International class**
(IPC 8-9): [B65D41/34](#) [B65D51/16](#) (Advanced/Invention);
[B65D41/34](#) [B65D51/16](#) (Core/Invention)**International class**
(IPC 1-7): [B65D51/16](#) [B65D55/02](#)**CPC:** [B65D41/3409](#) [B65D51/1611](#)**European class:** [B65D41/34A1](#) [B65D51/16C1](#)[Classification Explorer](#)**Cited documents:** US5090581 A, US5050753 A, US4712705 A, US4573599 A, US4105133 A, US4071156 A,**Forward Citations:** WO9807634, USD509738, DE19633472,**Abstract:**

A tamper-evident closure (21) is used with a container neck (22). The neck (22) has first helical thread on an upper neck stretch portion and external ratchet teeth (51, 81) on a locking wall portion below the upper neck stretch portion. The closure (21) has an upper skirt (64) having second helical thread mating with the first helical thread. A downward extending lower skirt portion (63) includes an outer skirt portion and a shoulder extending inwardly from the outer skirt portion. A frangible section (87) interconnects the shoulder and the upper skirt portion. Fins (100) are formed upstanding from the shoulder (73) preventing upward deformation of the lower skirt portion (63) without breaking the frangible section (87), the lower skirt portion (63) has internal ratchet teeth and is formed with a line of weakness (87) extending through the outer skirt portion and the shoulder. The lower skirt (63) has a tear tab (86) which, when pulled fractures the lower skirt (63) on a vertical line.

0) AU199055057A – IMPROVED TAMPER EVIDENT CLOSURE SYSTEM

144) Family number: 3310407 (AU199055057A)

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Title: IMPROVED TAMPER EVIDENT CLOSURE SYSTEM
Priority: AU19890004298 19890519 AU1989PJ04298 19890519 AU19900055057D 19890519
 AU19900055057 19890519

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199055057 A1</u>	19901122	AU19900055057	19900516

Probable Assignee: GV ENG PTY LTD

Assignee(s):^(std): GV ENG PTY LTD

Assignee(s): GV ENGINEERING PTY LTD ; G V ENGINEERING PTY LTD

Inventor(s):^(std): VERTER MICHAEL

Inventor(s): MICHAEL VERTER

Agent(s): BARKER BLENKINSHIP AND ASSOCIATES

International class B65D41/34 (Advanced/Invention);
 (IPC 8-9): B65D41/34 (Core/Invention)

International class B65D41/34
 (IPC 1-7):

[Classification Explorer](#)

Abstract:

Source: AU199055057A Application Date 19.05.89 1. A tamper evident closure system for a container comprising a thermoplastic closure having an internally threaded skirt, frangible bridges maintaining an annular pilfer band i.n a spaced. relationship beneath said skirt; the pilfer band having a first set of two or more radially inwardly directed teeth; spanning an arc of at leaset 160 degrees; a set of two or more teeth radially outwardly directed from the neck of the container spanning an arc of at least 160 degrees and adapted to align with and cooperate with the first set of teeth on the pilfer band when the closure is run up onto the container; the shape and orientation of both sets of the teeth being such that rotation of the pilfer band about the container neck results in a ratchet type action between the two sets of teeth; the ratchet action being such that upon screwing the closure and pilfer band onto such container the teeth slide over each J 21 ~-cc~

145) Family number: 51342456 (WO12085942A1)

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Title: TIGHT HEAD PLASTIC DRUM BUNG CLOSURE SYSTEM WITH SAFETY CAP**Priority:** IN2010MU03531 20101224

Family:	Publication number	Publication date	Application number	Application date
	IN03531MU2010 A	20140307	IN2010MU03531	20101224
	TW201231353 A	20120801	TW20110148173	20111223
	WO12085942 A1	20120628	WO2011IN00879	20111220

Probable Assignee: GENEX SCIENCE AND TECHNOLOGIES PVT LTD**Assignee(s):**^(std) GENEX SCIENCE AND TECHNOLOGIES PVT LTD ; JAIN NAVEEN KUMAR**Inventor(s):**^(std) JAIN NAVEEN KUMAR**Inventor(s):** NAVEEN KUMAR JAIN**Agent(s):** GOLERIA KARUNA ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65B7/28](#) [B65D39/08](#) [B65D41/08](#) [B65D51/18](#) [B67B3/18](#) (Advanced/Invention)
(IPC 8-9).

CPC: [B65D39/088](#) [B65D41/083](#) [B65D51/18](#)**European class:** [B65D39/08A3](#) [B65D41/08A](#) [B65D51/18](#)[Classification Explorer](#)**Cited documents:** US4785963 A, EP1514806 A2, DE3637644 A1, DE29821764 U1,**Forward Citations:** WO16173355, WO16173354, WO15117761, CN106163937, CN104787435, CN104787435,**Abstract:**

Accordingly the present invention provides T.H. plastics drums used for the transportation of liquid dangerous goods. A T.H. plastics drum is a flat ended circular cross section packaging with internally threaded openings for filling and emptying in the head not exceeding 70 mm in diameter. The openings are designed as standard bung closure systems. The standard bung of the pilfer proofed bung closure system is changed to allow the durable snap on of a safety cap with filling good collection feature in a unscrewed upside down position. This feature reduces the danger of human contamination with the dangerous filling good and allows a refilling of the collected dangerous filling good.

146) Family number: 15562992 (JP2001130608A)

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Title: TAMPER-PROOF CLOSURE STRUCTURE AND INNER CONTAINER OF BAG-IN-BOX**Priority:** JP19990316965 19991108

Family:	Publication number	Publication date	Application number	Application date
	<u>JP2001130608 A2</u>	20010515	JP19990316965	19991108

Probable Assignee: FUJIMORI KOGYO CO**Assignee(s):^(std):** FUJIMORI KOGYO CO**Assignee(s):** FUJIMORI KOGYO CO LTD**Inventor(s):^(std):** ICHIKAWA MAKOTO ; YONEYAMA MICHINORI**International class** B65D41/34 (Advanced/Invention)
(IPC 8-9):**International class** B65D41/34
(IPC 1-7):**CPC:** B65D41/3409 B65D41/3447**European class:** B65D41/34A1 B65D41/34D1[Classification Explorer](#)**Cited documents:** JP9150846, JP9058720, JP7291317, JP59221247, JP11189255, JP11124156,**Forward Citations:** FR2862620,**Abstract:**

Source: JP2001130608A PROBLEM TO BE SOLVED: To give a tamper-proof function formed of a fin-lock type cap to a closure structure for an inner container of bag-in-box and also to give a function for preventing falling of a tamper-evident band after opening to the closure structure. SOLUTION: A tamper-proof closure structure A is made up of a cap 3 having a tamper-evident band 32 connected with a bridge 31 at its lower part and a closure main body 2 where to the cap 3 is screwed down. The tamper-evident band 32 has fin-shaped members 34 fixed to the inner circumferential face thereof with each of their ends being free, and the closure main body 2 has a ratchet to be engaged with the fin-shaped members 34 for checking the tamper-evident band 32 from turning in the direction of opening and a protuberant part 23 to be engaged with the fin-shaped members 34 for checking the tamper-evident band 32 from moving upward.

147) Family number: 30831317 (US2008308554A)

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Title: PACKAGING ARTICLE**Priority:** GB20040014069 20040623 WO2005GB02480 20050623

Family:	Publication number	Publication date	Application number	Application date
	<u>EP1789337 A2</u>	20070530	EP20050755381	20050623
	GB200414069 A0	20040728	GB20040014069	20040623
	<u>US2008308554 AA</u>	20081218	US20050570956	20050623
	<u>WO06000779 A2</u>	20060105	WO2005GB02480	20050623
	<u>WO06000779 A3</u>	20060323	WO2005GB02480	20050623

Probable Assignee: DUBOIS LTD**Assignee(s):**^(std): DUBOIS LTD ; FARRAR PETER ANTONY ; HEIN JOHN ; FRASER ANTHONY HENRY JOSEPH**Assignee(s):** DUBOIS LIMITED**Inventor(s):**^(std): FARRAR PETER ANTONY ; FRASER ANTHONY HENRY JOSEPH ; HEIN JOHN**Agent(s):** MEADWESTVACO CORP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
^{(IPC 8-9):} B65D45/32 B65D51/18 (Advanced/Invention);
B65D45/00 B65D51/18 (Core/Invention)

International class
^{(IPC 1-7):} B65D45/32

CPC: B65D45/325 B65D45/327 B65D47/122**European class:** B65D45/32A1 B65D45/32A3 B65D47/12B**US class:** 220/281[Classification Explorer](#)**Cited documents:** US5615788 A, US4359169 A, US2002125249 AA, LU33480 A, GB800043 A, FR2172176 A1, EP0989065 A1, DE1914313 A1,

Forward Citations: WO14173556, WO07119075, US9802751, US8584877, US8360256, US2015158659, US2013134123, US2011114595, US2009184086, US2009101620, US2008308519, JP2009534259, GB2464320, GB2464320, GB2437275, EP3002228, DE102014014110, DE102013207551, AU2007238403,

Abstract:

Source: US2008308554A A beverage container comprising a container body (10) with an opening (11) and closure means (12) to close the opening (11), the closure means comprising a first part (12A) for closing the opening (11) and a second part (12B) adapted to be connected to the first part (12A) so that the first and second parts (12A, 12B) are rotatable relative to each other between a first position in which they are held together and a second position in which the second part (12B) holds the first part (12A) in a sealing relationship with the container body (10).

148) Family number: 28108927 (US2001019022A)

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Title: Combination vessel of a cap type sealing tool having tamper function and a bottle portion**Priority:** JP20000028911 20000201

Family:	Publication number	Publication date	Application number	Application date
	<u>DE60110277 D1</u>	20050602	DE20016010277	20010201
	<u>DE60110277 T2</u>	20060216	DE20016010277T	20010201
	<u>EP1122183 A2</u>	20010808	EP20010102147	20010201
	<u>EP1122183 A3</u>	20030625	EP20010102147	20010201
	<u>EP1122183 B1</u>	20050427	EP20010102147	20010201
	<u>JP2001213457 A2</u>	20010807	JP20000028911	20000201
	<u>JP4588149 B2</u>	20101124	JP20000028911	20000201
	<u>US2001019022 AA</u>	20010906	US20010774579	20010201
	<u>US6536586 BB</u>	20030325	US20010774579	20010201

Probable Assignee: MENICON CO LTD**Assignee(s):^(std):** DOKE ATSUIHIRO ; ICHIKAWA SEIICHI ; MENICON CO LTD ; NAKAO MASAHARU ; OGAWA YUKIHIRO ; TAISEI KAKO CO ; YOKOYAMA YASUHIRO ; TAISEI KAKO CO LTD**Assignee(s):** MENICON CO**Inventor(s):^(std):** YOKOYAMA YASUHIRO ; OGAWA YUKIHIRO ; NAKAO MASAHARU ; ICHIKAWA SEIICHI ; DOKE ATSUIHIRO**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR**International class**
(IPC 8-9): [A45C11/00 A45C11/04 B65D41/32 B65D41/34 B65D85/38](#) (Advanced/Invention);
[A45C11/00 A45C11/04 B65D41/32 B65D41/34 B65D85/38](#) (Core/Invention)**International class**
(IPC 1-7): [A45C11/04 B65D41/32 B65D41/34 B65D85/38](#)**CPC:** [A45C11/005 B65D41/3414](#)**European class:** [A45C11/00L B65D41/34A1A](#)**US class:** [206/5.1 206/51 215/252 215/258](#)[Classification Explorer](#)**Cited documents:** US6085921 A, US5893474 A, US5667088 A, US5648037 A, US5373954 A, US5056675 A, US4830208 A, US4721218 A, US4529096 A, US4479586 A, US4147268 A, JPH0721556 U, JP9058720 A2, JP7021556 U1, JP7021556 A2, JP61100223 U1, JP61100223 u1, JP60123308 U1, JP60123308 u1, JP56131362 U1, JP56131362 A2, GB2330133 A1, FR2205451 A1, FR1347895 A,**Forward Citations:** WO15101541, WO11100087, WO08008073, WO06053550, WO06053550, WO05051793, US9415906, US8869975, US8317016, US7562768, US2015225134, US2011198242, US2005045495, TWI362349, JP5059615, JP4790845, JP2008520293, FR2862620, EP2415686, EP2415686, EP1689654, AU2011216173,**Abstract:**

Source: US2001019022A To develop a combination vessel capable of carrying out temporary fastening while always bringing down a ring portion subsequently to breakage of a bridge part during opening. A cap portion (11) and a ring portion (12) in a cap type sealing tool (1) are coupled to each other through a bridge part (13). Through breakage of the bridge part during opening, the ring portion is pulled down while a sliding protrusion (12uc) on an internal wall in a lower stage area of the ring portion always interposes an upward spread zone (2nx) on an external wall of a neck zone of a bottle portion (2) by pressure. In addition, a vertical convex to block the opening turn (12rc) provided on an inner periphery of the ring portion and a vertical convex (2rc) to block opening turn provided on the external wall (2rz) of the neck zone of the bottle portion do not block attachment of the cap type sealing tool (1) but blocks accompanied rotation of the ring portion during the opening of the cap portion, thereby breaking the bridge part. At least one higher vertical convex (2rcT) is provided in the convexes (2rc). Consequently, it is possible to prevent the ring portion from an erratic opening. Furthermore, the bridge part is not broken during the temporary mounting of the cap type sealing tool and subsequent opening.

149) Family number: 41611845 (WO08028220A1)

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Title: TAMPER EVIDENT CLOSURE AND CONTAINER NECK WITH INNER RIDGE

Priority: AU20060904829 20060904

Family:

Publication number	Publication date	Application number	Application date
<u>WO08028220 A1</u>	20080313	WO2007AU01286	20070904

Probable Assignee: CTECH CLOSURES PTY LTD

Assignee(s):^(std): CTECH CLOSURES PTY LTD ; HIGGINS CHRISTOPHER LYNDON

Inventor(s):^(std): HIGGINS CHRISTOPHER LYNDON

Agent(s): DAVIES RUSSELL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): B65D1/02 B65D1/40 B65D23/00 B65D41/34 B65D55/02 (Advanced/Invention);
B65D1/02 B65D1/40 B65D23/00 B65D41/34 B65D55/02 (Core/Invention)

CPC: B65D41/0414

European class: B65D41/04B1

[Classification Explorer](#)

Cited documents: US5105960 A, US4771904 A, US4354609 A, US4166552 A, US3940004 A, US2007158295 AA,

Abstract:

A container and a closure wherein the closure (100) includes an upper wall (105), a skirt (110) extending downwardly, a tamper evidence band frangibly connected to the skirt, and an annular sealing projection (130) extending downwardly from the upper wall; and the container includes a neck (200) with thread mean (215). The blow moulded neck (200) has inner and outer walls, an engagement means adapted to engage with and sever said frangible connections thereby facilitating separation of said tamper evidence band from the skirt of the closure, an annular ridge (224) projecting from the inner wall towards an vertical axis of the neck and the annular ridge adapted to sealingly engage the annular sealing projection (130) on the closure. Upon removal rotation of the closure said sealing engagement is maintained between the closure and the container neck at least until the tamper evidence band is separated from the skirt of the closure.

Title:

Tamper evident closure

Priority:

CA19922065070 19920403

US19910680762 19910405

Family:

Publication number	Publication date	Application number	Application date
CA2065070 AA	19921006	CA19922065070	19920403
US5100011 A	19920331	US19910680762	19910405

Probable Assignee:

WEST PHARMACEUTICAL SERVICES INC

Assignee(s):^(std):

WEST CO ; WEST CO INC

Assignee(s):

WEST PHARMACEUTICAL SERVICES INC ; MAIETTA MICHAEL G

Inventor(s):^(std):

MAIETTA MICHAEL G

Agent(s):

BORDEN LADNER GERVAIS LLP

International class
^(IPC 8-9):

[B65D41/34](#) [B65D55/06](#) (Advanced/Invention);
[B65D41/34](#) (Core/Invention)

International class
^(IPC 1-7):

[B65D41/34](#) [B65D55/06](#)

CPC:

[B65D41/3409](#)

European class:

[B65D41/34A1](#)

US class:

[215/253](#) [215/254](#) [215/256](#)

[Classification Explorer](#)

Cited documents:

US4930647 A, US4805807 A, US4760941 A, US4562931 A, US4526283 A, US4402415 A, US3955716 A, US3837518 A, US3650428 A,

Forward Citations:

US7891510, US7735664, US6988642, US6655553, US6644491, US5829613, US5642825, US5222950, US2008264894, US2004079765,

Abstract:

Source: US5100011A A combination of a cap and tube in which a tube has an opening terminating in a tapered nozzle with an open end. The nozzle has a first diameter proximate said tube and is designed for rotational engagement with a cap. The nozzle includes a ring with a diameter which is the largest diameter of the nozzle and is located at least a band width distance from the junction of the nozzle to the tube. The cap is sized to engage the nozzle at its open end and has a closed outer terminal end. The outer end of the cap includes an axially centered locating cup for engagement with the outer open end of the nozzle. This forms a first seal in a first position and a second seal in a second position which is closer to the outer cap end by the band width distance. The cap is designed for rotational engagement with the nozzle. At its nozzle engaging end, the cap terminates with a circumferential band having an axial width defining the above mentioned band width distance. The band has a frangible junction with the cap to permit removal therefrom. It also has a flange positioned to fit over the nozzle ring to fasten the cap to the nozzle. The cap can only be removed or moved to the second position when the band has been removed.

0) US4440306A – TAMPER-EVIDENT CLOSURE

151) Family number: 4294881 (US4440306A)

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Title: Tamper-evident closure

Priority: US19830457370 19830112

Family:	Publication number	Publication date	Application number	Application date
	<u>US4440306 A</u>	19840403	US19830457370	19830112

Probable Assignee: SILVER IND

Assignee(s):^(std): SILVER IND

Assignee(s): SILVER INDUSTRIES

Inventor(s):^(std): ENNIS JAMES ; VAN BUSKIRK E JAMES

International class B65D55/02 (Advanced/Invention) ;
B65D55/02 (Core/Invention)

International class B65D55/02
(IPC 1-7) :

CPC: B65D55/02

European class: B65D55/02

US class: 215/230

[Classification Explorer](#)

Cited documents: US2939597 A,

Forward Citations: USD456292, USD439534, US9656032, US9649455, US9265901, US9242057, US9168343, US9032953, US8973784, US8944285, US8869735, US8662075, US8627968, US8596265, US8578934, US8534220, US8505773, US8327847, US8181591, US8157128, US8141550, US8082873, US8079362, US8074643, US8074594, US7984826, US7886934, US7757688, US7743945, US7650883, US7621273, US7597102, US7584712, US7575130, US7568481, US7543582, US7516738, US7341057, US7100530, US7004164, US6997349, US6953039, US6938796, US6929137, US6926002, US6761161, US6745760, US6729330, US6561384, US6435372, US6336453, US6328037, US6161724, US6142339, US6089180, US6082358, US5477972, US5299701, US5265744, US5261548, US5176269, US4984700, US4736857, US4723673, US2016159537, US2010264108, US2010163031, US2010126508, US2010101570, US2010095962, US2009320839, US2009272312, US2008245759, US2008029085, US2007175474, US2007084467, US2007056502, US2006180606, US2006175345, US2006162724, US2006150976, US2006102182, US2006086749, US2006060192, US2005205512, US2005126469, US2004222655, US2004222237, US2003230304, US2003178020, RU2524879, EP1413526,

Abstract:

Source: US4440306A A tamper evident closure including a threaded cap for a threaded container neck and an enclosing cap mounted on the threaded cap. The threaded cap is provided with indicia which is permanently visible through a transparent portion or aperture in the enclosing cap after the closure is removed from the container.

152) Family number: 4621149 (DE3605963A1)

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Title: Safety container closure**Priority:** DE19863605963 19860225

Family:	Publication number	Publication date	Application number	Application date
	<u>DE3605963 A1</u>	19870827	DE19863605963	19860225
	<u>IT1202548 A</u>	19890209	IT19870019387	19870213
	<u>IT8719387 A0</u>	19870213	IT19870019387	19870213

Probable Assignee: DEUSSEN STELLA KG**Assignee(s):^(std):** DEUSSEN STELLA KG**Assignee(s):** STELLA KG WERNER DEUSSEN**Inventor(s):^(std):** WERNER DEUSSEN ; DEUSSEN WERNER**Inventor(s):** VERZICHT DES ERFINDERS AUF NENNUNG

International class B65D41/34 B65D50/04 (Advanced/Invention);
^{(IPC 8-9):} B65D41/34 B65D50/00 (Core/Invention)

International class B65D41/62 B65D51/18 B65D55/12
^{(IPC 1-7):}

CPC: B65D41/3438 B65D50/041**European class:** B65D41/34C3 B65D50/04B[Classification Explorer](#)**Cited documents:** US4493427 A, DE3300347 A1, DE3206245 A1,

Forward Citations: WO12163409, WO05049443, USD630093, US9790011, US9586738, US9546027, US9242768, US9162803, US9102448, US8757407, US8522991, US8490804, US8453856, US8413830, US7830263, US5819965, US5788101, US5762215, US5667088, US5381917, US5219084, US2013087523, FR2687378, EP3081506, EP1694576, EP1262416, DE4204977, DE4204977, DE3925119, DE10126098, DE10126098, CN105173363,

Abstract:

Source: DE3605963A1 A safety container closure, having a threaded closure cap, which can only be unscrewed by applying an additional opening action, that is to say is fitted with a child-resistant safeguard, and having a tamper-indicating securing device which is fitted with a tear-off ring, is improved to the extent that a tamper-indicating securing ring is provided, which can be produced separately, can be inserted in the inner cap of the threaded closure cap and comprises a tear-off ring and a carrier ring which is connected to the latter via tear-off elements, the carrier ring being in frictional engagement with the inner cap only by means of catch devices which become hooked axially in the unscrewing direction. Additionally, a frictional engagement can be formed between the collar of the container neck via the carrier ring of the tamper-indicating securing ring onto the inner cap of the threaded closure cap, which makes the function of the child-resistant safeguard on the threaded closure cap safer. In this case, however, the tear-off ring must be kept outside this frictional engagement.

0) GB2546244A – CHILD RESISTANT CLOSURE

153) Family number: 61845827 (GB2546244A)

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Title: CHILD RESISTANT CLOSURE

Priority: GB20150023059 20151229

Family:	Publication number	Publication date	Application number	Application date
	GB201523059 A0	20160210	GB20150023059	20151229
	<u>GB2546244 A1</u>	20170719	GB20150023059	20151229

Probable Assignee: ORIGIN PHARMACEUTICAL PACKAGING LTD

Assignee(s):^(std): ORIGIN PACKAGING LTD ; ORIGIN PHARMACEUTICAL PACKAGING LTD

Inventor(s):^(std): JONATHAN MARK LANT

International class B65D47/32 B65D50/04 (Advanced/Invention)
(IPC 8-9).

CPC: B65D2205/00 B65D51/1616 B65D53/04 B65D2101/0023 B65D50/041 B65D47/32 B65D2215/02

[Classification Explorer](#)

Cited documents: WO15062771 A1, WO10038192 A1, US7988003 BA, US5280842 A, GB2276153 A1,

Abstract:

Source: GB2546244A A child resistant closure comprises an inner portion (9, fig 3) for fitting to a container and an outer portion 1 into which the inner portion (9, fig 3) fits, the inner and outer portions (9, fig 3) 1 each having a tubular side wall and an end wall. The outer portion 1 operably engages with the inner portion for turning the latter in a closing direction, but is able to turn in an opening direction without operably engaging with the inner portion (9, fig 3). A passageway 23 extends into the closure between the tubular side walls 10, 2 of the inner and outer portions to an end region of the closure disposed between the end walls 11, 3 of the inner and outer portions. An Aperture (13, fig 4) are formed in the end wall 11 of the inner portion. Preferably, a breathable sealing disc 25 is disposed inside the inner portion (9, fig 3) against the end 11 wall thereof. The disc 25 allows gases to pass into and/or out of the container through the aperture (13, fig 4), yet prevents liquids from passing into and/or out of the container through the apertures (13, fig 4).

154) Family number: 13090180 (GB2277080A)

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Title: Tamper evident closure and container with thread positioning means**Priority:** GB19930007517 19930413

Family:	Publication number	Publication date	Application number	Application date
	GB2277080 A1	19941019	GB19940007088	19940413
	GB9307517 A0	19930602	GB19930007517	19930413
	GB9407088 A0	19940601	GB19940007088	19940413

Probable Assignee: PLYSU PLC**Assignee(s):**^(std): PLYSU PLC**Inventor(s):**^(std): BOUNDS GERALD JOSEPH**Inventor(s):** GERALD JOSEPH BOUNDS

International class [B65D41/04](#) [B65D41/34](#) (Advanced/Invention);
^{(IPC 8-9):} [B65D41/04](#) [B65D41/34](#) (Core/Invention)

International class [B65D41/48](#)
^{(IPC 1-7):}

CPC: [B65D41/0414](#) [B65D41/0471](#) [B65D41/3409](#) [B65D2101/0038](#)**European class:** [B65D41/04B1](#) [B65D41/04E](#) [B65D41/34A1](#) [L65D101/00A3C](#)[Classification Explorer](#)**Cited documents:** GB2250981 A1, GB2136408 A1, GB2114553 A1,**Forward Citations:** WO9735773, WO9735773, WO12018994, WO08047165,**Abstract:**

Source: GB2277080A A closure (1) for a container (20) e.g. of the push-on, screw-off type has a cap portion (2) with a dependent skirt (3) having a screw-thread (8) for engagement with a corresponding screw thread (22) on the container (20). The skirt (3) has a frangible removable annular tear band (4) having a plurality of teeth (13) for engagement with at least one tooth (24) on the container (20). At least one of the tear band teeth (13) has a leading edge (14) which is angled so that, as the closure (1) is pushed onto the container (20), said tear band tooth (13) engages with said at least one container tooth (24) to cause the closure (1) to rotate backwards to ensure proper relative orientation between the threads on the closure and container to effect a seal. A dependent plug 7 may be provided within the cap to seal against the wall of the neck 21. Sealing may be effected with the closure as much as one full rotation short of fully home.

155) Family number: 11464291 (NZ330594A)

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Title: Container with engageable spout**Priority:** NZ19980330594 19980605

Family:	Publication number	Publication date	Application number	Application date
	AU199933148 A1	19991216	AU19990033148	19990603
	AU781093 B2	20050505	AU19990033148	19990603
	NZ330594 A	20001124	NZ19980330594	19980605

Probable Assignee: AEP IND NZ LTD**Assignee(s):^(std):** AEP IND NZ LIMITED ; AEP IND NZ LTD ; RAPAK ASIA PACIFIC LTD**Assignee(s):** RAPAK ASIA PACIFIC LIMITED**Inventor(s):^(std):** FINCH KELVIN WARREN MITCHELL ; SCOTT BRUCE WAYNE**Inventor(s):** BRUCE WAYNE SCOTT ; KELVIN WARREN MITCHELL FINCH**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD

International class [B65D25/40](#) [B65D39/00](#) [B65D39/08](#) [B65D41/34](#) [B65D41/46](#) [B65D43/10](#)
 (IPC 8-9): [B65D51/20](#) (Advanced/Invention);
[B65D25/38](#) [B65D39/00](#) [B65D41/32](#) [B65D41/34](#) [B65D43/08](#) [B65D51/18](#) (Core/Invention)

International class [B65D25/40](#) [B65D39/00](#) [B65D39/08](#) [B65D41/34](#) [B65D41/46](#) [B65D43/10](#) [B65D51/20](#)
 (IPC 1-7):

[Classification Explorer](#)**Cited documents:** US4298129 A, US3923181 A, US3695475 A,**Abstract:**

Source: NZ330594A Firstly there is provided is a spout for a container of substantially cylindrical shape having a bore therethrough with a mouth region and a base region which is container engageable or engaged to provide in use (when engaged with the container) a sealed connection with the container, the spout comprising an annular flange formed externally to provide a threaded section between the annular flange and base, the spout adapted to be releasably engageable with a) a first spout engaging means releasably engageable by rotational screw engagement with the screw thread means, and b) a second spout engaging means, releasably press engageable with the external annular flange, wherein the annular flange has a region of discontinuity through, which complimentary thread engaging means of the first spout engaging means, is able to pass. Secondly there is provided a combination of a closure and a spout for a container wherein the spout comprises a cylindrical neck portion including a bore therethrough and terminating having a mouth region and a base attachable or attached to a container providing a sealed connection with the container, an annular flange formed externally on the neck portion at or below the mouth region, an external screw threaded section between the annular flange and the base, and a closure releasably press engageable in the direction axial to the axis of the cylindrical neck portion, with the spout in at least two conditions: a first condition where a bore locating portion of the closure releasably but securely locates with the spout within the bore, and in a second and axially more advanced condition where a frangibly detachable ring of the closure locates with a frangible detachable ring engageable flange disposed from the cylindrical neck portion between the tread region and the base, where the annular flange has a region of discontinuity through which, a complimentary thread of a threaded spout engaging means to engage with the external thread is able to pass.

156) Family number: 4352673 (US4448318A)

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Title: Tamper evident container–closure assembly**Priority:** US19820410047 19820820

Family:	Publication number	Publication date	Application number	Application date
	<u>US4448318 A</u>	19840515	US19820410047	19820820

Probable Assignee: WEST PHARMACEUTICAL SERVICES INC**Assignee(s):^(std):** WEST CO**Assignee(s):** WEST PHARMACEUTICAL SERVICES INC ; WEST PHARMACEUTICAL SERVICES INC 101 GORDON ; THE WEST COMPANY**Inventor(s):^(std):** LOWE ALLEN D

International class B65D41/34 (Advanced/Invention);
 (IPC 8–9): B65D41/34 (Core/Invention)

International class B65D41/34
 (IPC 1–7):

CPC: B65D41/3409**European class:** B65D41/34A1**US class:** 215/252[Classification Explorer](#)**Cited documents:** US4225050 A, US3874540 A, US3504818 A,

Forward Citations: US8544666, US8215507, US8123056, US7198170, US5450972, US5318192, US5115932, US5056675, US5040692, US4756438, US4749095, US4572387, US4537319, US4503986, US2015298869, US2010012614, US2009152229, US2005145629, US2004040928, CN103097254, CN103097254,

Abstract:

Source: US4448318A A closure for containers having a discharge opening and a finish with means for supporting the closure over the discharge opening comprising a cap portion of generally cup–like form having a top and a depending skirt with means on the interior peripheral surface thereof cooperating with means on the container finish for applying and removing the cap portion; a tamper–evident ring or band connected to the lower terminal edge of said skirt by at least a pair of fracturable bridge means and at least one lug cooperatively associated with at least one cam element below the container finish operable in one direction of movement of the cap portion relative to the container to effect fracturing of the bridge means to separate the tamper–evident ring from the cap portion, said bridge means being oriented in a predetermined manner relative to one another to effect sequential breaking in a given pattern upon relative movement of said cap portion and ring in said one direction.

157) Family number: 30176655 (US2007095834A)

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Title: FITMENTS**Priority:** GB20030026619 20031104 GB20030026619 20031114 WO2004GB02744 20040625**Family:**

Publication number	Publication date	Application number	Application date
AT388900 E	20080315	AT20040743095T	20040625
AU2004295141 AA	20050616	AU20040295141	20040625
BRPI0416043 A	20070102	BR2004PI16043	20040625
CA2546114 AA	20060515	CA20042546114	20040625
CN1878700 A	20061213	CN200480033402	20040625
DE602004012441 D1	20080424	DE200460012441T	20040625
DE602004012441 T2	20090326	DE200460012441T	20040625
DE602004012441 T8	20090716	DE200460012441T	20040625
DK1687212 T3	20080714	DK20040743095T	20040625
EP1687212 A1	20060809	EP20040743095	20040625
EP1687212 B1	20080312	EP20040743095	20040625
ES2303082 T3	20080801	ES20040743095T	20040625
GB200326619 A0	20031217	GB20030026619	20031114
GB2408040 A1	20050518	GB20030026619	20031114
GB2408040 B2	20051012	GB20030026619	20031114
MY130704 A	20070731	MY20040004706	20041110
NZ546726 A	20080926	NZ20040546726	20040625
RU2006118724 A	20071227	RU20060118724	20040625
RU2346863 C2	20090220	RU20060118724	20040625
TH72710 A	20051124	TH20041002671	20040714
TW200523178 A	20050716	TW20040119459	20040630
TWI311971 B	20090711	TW20040119459	20040630
US2007095834 AA	20070503	US20040595820	20040625
WO05054068 A1	20050616	WO2004GB02744	20040625
ZA200603666 A	20070926	ZA20060003666	20040625

Probable Assignee: BAPCO CLOSURES RESEARCH LTD**Assignee(s):^(std):** BAPCO CLOSURES RES LIMITE ; BAPCO CLOSURES RES LTD ; BAPCO CLOSURES RESEARCH LTD ; BEHPKO KLOUZHES RISECH LTD ; MCGEOUGH PETER MICHAEL ; SPRECKELSEN MCGEOUGH LTD ; VON SPRECKELSEN HENNING**Assignee(s):** SPRECKELSEN MCGEOUGH LIMITED ; BAPCO CLOSURES RESEARCH LIMITE ; BAPCO CLOSURES RESEARCH LIMITED**Inventor(s):^(std):** SPRECKELSEN HENNING VON ; PETER MICHAEL MCGEOUGH ; PETER M MCGEOUGH ; MICHAEL SPRECKELSEN HENNING VO ; MICHAEL MCGEOUGH PETER ; MCGEUGH PETER MICHAEL ; MCGEOUGH PETER MICHAEL ; MCGEOUGH PETER M ; VON SPRECKELSEN HENNING ; HENNING VON SPRECKELSEN ; MKGEU PITER MAJKL ; FON SHPREKEL ZEN KHENNING**Inventor(s):** FON SHPREKEL'ZEN KHENNING ; SPRECKELSEN HENNING VON MCGEOUGH PETER MICHAEL ; MCGEOUGH PETER**Agent(s):** ALLENS ARTHUR ROBINSON PATENT AND TRADE MARKS ATTORNEYS; ALLENS PATENT AND TRADE MARK ATTORNEYS; GOWLING LAFLEUR HENDERSON LLP; COOKSON BARBARA ELIZABETH; CHRISTOPHER J KULISH ESQ**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC

SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA
ZM ZW

International class
(IPC 8-9): B65D17/34 B65D45/28 B65D5/74 B65D51/20 (Advanced/Invention);
B65D17/28 B65D5/74 B65D51/18 (Core/Invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D45/28 B65D47/10 B65D5/74

CPC: B65D5/749

European class: B65D5/74D1C

US class: 220/258.2 220/270

[Classification Explorer](#)

Cited documents: WO9961337, WO9841452, US6682686 BA, US6464096 BB, US6179147 BA, US6129228 A, US6047878 A, US5915574 A, US5890609 A, US5799840 A, US5765747 A, US5735426 A, US5632440 A, US5397013 A, US5303838 A, US5147591 A, US5133486 A, US5110040 A, US5069372 A, US4948015 A, US4887765 A, US4819819 A, US4815618 A, US3260411 A, US2006138137 AA, US2002033395 AA, US2001054616 AA, US2001015355 AA, JP2002332054, EP1127798,

Forward Citations: WO12085153, WO12085153, WO12048935, WO08035117, USD720227, USD645755, US9452857, US9238531, US9145239, US9126719, US8807377, US8663419, US8430262, US2013273214, US2009308832, TWI537190, RU2596464, GB2457273, GB2454441, GB2454441, GB2444048, GB2444048, EP1925559, EA023634, CN103153801, AU2011315778,

Abstract:

Source: US2007095834A A carton fitment (2) has a base flange (4) and a pour spout (6) closed by a screw on overcap (8). The base flange (4) has a barrier foil (30) coated on both sides with a plastic layer embedded in a sacrificial receiving wall (32) surrounding the periphery of the base flange (4).

158) Family number: 3781396 (US5115932A)

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Title: SEALING OF CONTAINERS WITH A SCREW SEALING CAP AND A TEAR-OFF SECURITY STRIP**Priority:** CA19902032249 19901214 FR19890017203 19891215

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2032249 AA</u>	19910616	CA19902032249	19901214
	<u>CA2032249 C</u>	19970610	CA19902032249	19901214
	<u>EP0433193 A1</u>	19910619	EP19900420540	19901211
	<u>FI906188 A</u>	19910616	FI19900006188	19901214
	<u>FI906188 A0</u>	19901214	FI19900006188	19901214
	<u>FR2655953 A1</u>	19910621	FR19890017203	19891215
	<u>FR2655953 B1</u>	19920221	FR19890017203	19891215
	<u>IE904511 A1</u>	19910619	IE19900004511	19901214
	<u>IS3653 A7</u>	19910616	IS19900003653	19901212
	<u>JP4215962 A2</u>	19920806	JP19900417677	19901214
	<u>NO905365 A</u>	19910617	NO19900005365	19901212
	<u>NO905365 A0</u>	19901212	NO19900005365	19901212
	<u>PT96193 A</u>	19910930	PT19900096193	19901213
	<u>US5115932 A</u>	19920526	US19900627048	19901213

Probable Assignee: CEBAL**Assignee(s):**^(std): CEBAL**Assignee(s):** CEBAL OF 98 BD VICTOR HUGO ; CEBAL SA ; SCHNEIDER BERNARD**Inventor(s):**^(std): BERNARD SCHNEIDER ; BERUNAARU SHIYUNADAA ; SCHNEIDER BERNARD**Agent(s):** ROBIC; KAWAGUCHI YOSHIO**Designated states:** AT BE CH DE DK ES GB GR IT LI LU NL SE**International class**
^{(IPC 8-9):} [B65D41/34 B65D45/02 B65D51/18 B65D55/10](#) (Advanced/Invention);
[B65D41/34 B65D45/00 B65D51/18](#) (Core/Invention)**International class**
^{(IPC 1-7):} [B65D B65D41/34 B65D41/38 B65D45/02 B65D51/18 B65D55/08 B65D55/10](#)**CPC:** [B65D41/3409](#)**European class:** [B65D41/34A1](#)**US class:** [215/252 215/258](#)[Classification Explorer](#)**Cited documents:** US5056675 A, US4848613 A, US4830207 A, US4771904 A, US4638917 A, US4609115 A, US4548329 A, US4534480 A, US4448318 A, US4415094 A, US4337870 A, US4326639 A, US4062466 A, US3980195 A, US3955696 A, US3902621 A, US3874540 A, US3650428 A, US3415403 A, US3310191 A, US3249247 A, US3199702 A, US2970711 A, US2423582 A, JP56014538 A2, GB2102774 A1, FR2229620 A1, EP0008190 A1, CH570311,**Forward Citations:** WO9962770, USD747201, US7975863, US7611025, US7581652, US6044992, US5740932, US5318192, US5314085, US5292019, US2007034591, US2006278599, US2005173367, US2005116382, JP2005219814, GB2269163, EP2966002, EP1927553, EP1440013, EP0711711, DE9418851, DE102014010164, DE102014010164,**Abstract:**

Source: US5115932A A container and its threaded sealing cap with a tear-off security strip, a constricted portion of the container being threaded and provided with flexible teeth having an increasing spring action ratcheting with notches of the security strip, and having a mechanical strength making it possible to guarantee that the container is tamper-proof, while insuring ease of opening after tearing off the security strip.

159) Family number: 2245555 (WO8702009A1)

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Title: IMPROVEMENTS IN OR RELATING TO TAMPER EVIDENT CLOSURES
Priority: AU1985PH02731 19851003 AU19860065273 19861002 WO1986AU00289 19861002
Family:

Publication number	Publication date	Application number	Application date
AU198665273 A1	19870424	AU19860065273	19861002
EP0240521 A1	19871014	EP19860905686	19861002
EP0240521 A4	19880128	EP19860905686	19861002
WO8702009 A1	19870409	WO1986AU00289	19861002

Probable Assignee: DAWSON ELECTRICS**Assignee(s):**^(std): DAWSON ELECTRICS**Assignee(s):** DAWSON ELECTRICS PTY LTD**Inventor(s):**^(std): DAWSON ROBERT JAMES**Inventor(s):** ROBERT JAMES DAWSON**Designated states:** AT AU BE CH DE FR GB IT JP LI LU NL SE US

International class
 (IPC 8-9): [B65D23/00](#) [B65D41/34](#) [B65D55/12](#) (Advanced/Invention);
[B65D23/00](#) [B65D41/34](#) [B65D55/02](#) (Core/Invention)

International class
 (IPC 1-7): [B60T8/40](#) [B65D23/00](#) [B65D41/34](#) [B65D55/12](#)

CPC: [B65D41/34](#) [B65D41/3447](#)**European class:** [B65D41/34](#) [B65D41/34D1](#)[Classification Explorer](#)**Cited documents:** GB809398 A, GB2022063 A1, FR2439138 A1, EP0137352 A2, EP0029274 A2, AU5195479 A1, AU4705879 A1, AU3265284 A1, AU2362477 A1, AU23624, AU23624,**Forward Citations:** GB2240098, GB2240098, EP1853492,**Abstract:**

A container for use with a tamper evident closure (18) has a neck (10) with first (11) and second (13) opposed thread portions spaced apart and adapted to respectively engage the cap (19) and interconnected ring (20) of the closure when it is initially installed on the container. When the closure is first rotated to remove the cap the ring is caused to rotate therewith and because the thread portions are opposed the cap and ring move in opposite axial directions, that is, in opposite directions along the axis of rotation. This axial movement causes the interconnection to fracture and subsequent tightening of the cap leaves a readily discernible gap between the cap and ring. A stepped ledge (14) between the two thread portions prevents removal of the ring after initial installation.

160) Family number: 4956128 (US5096078A)

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Title: Tamper-evident closure assembly**Priority:** US19900538159 19900614

Family:	Publication number	Publication date	Application number	Application date
	<u>US5096078 A</u>	19920317	US19900538159	19900614

Probable Assignee: MURRIE WHITE DRUMMOND LIENHART**Assignee(s):^(std):** MURRIE WHITE DRUMMOND LIENHART**Assignee(s):** MURRIE WHITE DRUMMOND LIENHART AND ASSOCIATES ; MURRIE WHITE DRUMMOND LIENHART AND ASSOCIATES A CO**Inventor(s):^(std):** MCQUEENY THOMAS P**International class** B65D51/26 (Advanced/Invention);
(IPC 8-9): B65D51/24 (Core/Invention)**International class** B65D51/26
(IPC 1-7):**CPC:** B65D51/26**European class:** B65D51/26**US class:** 206/522 206/524.8 206/528 215/231 215/262 215/269 215/270 220/232 220/256 220/259.4[Classification Explorer](#)**Cited documents:** US4998638 A, US4798302 A, US4684033 A, US4640428 A, US4482072 A, US447974 A, US4392578 A, US4215786 A, US3863795 A, US3396864 A, US3343701 A, US288603 A, US2880900 A, US2833398 A, US2040798 A, FR1488306 A, DE2628296 A1, CA553190 A,**Forward Citations:** WO07123194, WO0166420, US9783343, US9764100, US9656029, US9492624, US9211381, US9119912, US9016512, US8920387, US8920372, US8887937, US8887936, US8881929, US8845586, US8821011, US8662334, US8636691, US8579137, US8487738, US8444599, US8342344, US8313462, US8226605, US8226293, US7740611, US7389627, US6775957, US6619494, US6543514, US6505457, US6398051, US6352153, US6240708, US6164471, US5806707, US5749460, US5460282, US5411156, US5407640, US5407087, US5372786, US5306469, US5263518, US2014061198, US2012181276, US2011266244, US2011114592, US2011024316, US2010222763, US2010222762, US2010102058, US2009179032, US2008205481, US2007106243, US2005142013, US2004149674, US2003114795, US2002185463, DE29510830, DE19936808, DE19936808, DE112010003906,**Abstract:**

Source: US5096078A A closure assembly for a container which includes an air-impervious diaphragm which when subjected to differential pressure will expand to retain articles in place within a container. The diaphragm is retained in position by a ring member that secures the marginal portions of the diaphragm in position. the diaphragm may be secured to a container filled in a vacuum chamber so that atmospheric pressure will extend the diaphragm into the desired position or it may be subject to high pressure air to extend the diaphragm. Means for exhausting the high pressure air or for admitting atmospheric air into the interior of the container for facilitating removal of the closure assembly from the container are also described.

161) Family number: 10758150 (US5423441A)

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Title: Closure system for a container and cap**Priority:** US19930169066 19931220 US19940291521 19940815

Family:	Publication number	Publication date	Application number	Application date
	<u>US5423441 A</u>	19950613	US19930169066	19931220
	<u>US5740933 A</u>	19980421	US19940291521	19940815

Probable Assignee: INTRAPAC PLATTSBURGH INC**Assignee(s):^(std):** AMERICAN SAFETY CLOSURE

Assignee(s): AMERICAN SAFETY CLOSURE CORP ; ANTARES CAPITAL LP ; ANTARES CAPITAL LP SUCCESSOR AGENT AS ; BANK OF NOVA SCOTIA ; CCL NEWCO INC ; CCL PLASTIC INC ; CREDIT SUISSE AS FIRST LIEN COLLATERAL AGENT ; CREDIT SUISSE AS SECOND LIEN COLLATERAL AGENT ; CCL PLASTIC (PLATTSBURGH) INC ; CREDIT SUISSE FIRST LIEN COLLATERAL AGENT AS ; CREDIT SUISSE SECOND LIEN COLLATERAL AGENT AS ; GENERAL ELECTRIC CAPITAL CORP ; INTRAPAC (HARRISONBURG) INC ; INTRAPAC (PLATTSBURGH) INC ; INTRAPAC (SWEDESBO) INC ; CCL PLASTIC PLATTSBURGH INC ; INTRAPAC HARRISONBURG INC ; INTRAPAC INC ; INTRAPAC PLATTSBURGH INC ; INTRAPAC SWEDESBO INC

Inventor(s):^(std): CONTI VINCENT N ; YEAGER DON**International class** B65D41/48 B65D50/06 (Advanced/Invention)
(IPC 8-9):**International class** B65D41/48 B65D50/02 B65D55/02
(IPC 1-7):**CPC:** B65D41/48 B65D50/061**European class:** B65D41/48 B65D50/06B**US class:** 215/224 215/225 215/230 215/256 215/258 215/295 215/43 215/44 215/46[Classification Explorer](#)

Cited documents: US5423441 A, US5366774 A, US5358129 A, US5351845 A, US5213225 A, US5158194 A, US5143235 A, US5097974 A, US4919286 A, US4832220 A, US4811857 A, US4770309 A, US4687113 A, US4676389 A, US4658977 A, US4646926 A, US4592884 A, US4591063 A, US4573599 A, US4524876 A, US4511051 A, US4449639 A, US4417666 A, US4342400 A, US4280632 A, US4071943 A, US4071156 A, US3991904 A, US3881622 A, US3703974 A,

Forward Citations: WO0136288, WO0061449, USD731170, USD711739, USD657244, US9511890, US9016489, US8955684, US8672153, US8413813, US8353414, US8231025, US8046974, US7942280, US7882977, US7857154, US7731048, US7568585, US7513377, US7243807, US6739466, US6612450, US6561369, US6484895, US6464686, US6425639, US6386380, US6170683, US6095364, US5938082, US5938054, US5740933, US5725132, US2014291360, US2014231376, US2012219734, US2012000879, US2011180540, US2011155758, US2011068079, US2010230321, US2010133225, US2009301985, US2008277367, US2008093363, US2007267384, US2007181578, US2006186079, US2006131256, US2006102583, US2005092751, US2005040131, US2004011790, GB2372985, GB2372985,

Abstract:

Source: US5423441A Tamper indicating, child proof system includes annular tear strip on the cap; and a rotatably indexing latch finger on the cap which engages a raised annular retainer ridge with bypass opening on the neck of the container. A tactile indicator of the rotational location of the bypass opening is under the tear strip for sensing by a finger that is in simultaneous contact with the cap, when the tear strip is removed. A lower ridge includes an index key for orienting the latch finger away from the bypass opening during assembly of the system.

162) Family number: 65135925 (WO17039428A1)

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Title: TAMPER-EVIDENT SEAL FOR ELECTRICITY METERS**Priority:** MX20150011480 20150902 MX20160009940 20160729

Family:	Publication number	Publication date	Application number	Application date
	<u>MX2015011480 A1</u>	20170301	MX20150011480	20150902
	<u>WO17039428 A1</u>	20170309	WO2016MX00089	20160829

Probable Assignee: DARIO ITURRIA AVALOS**Assignee(s):^(std):** DARIO ITURRIA AVALOS ; ITURRIA AVALOS DARIO**Inventor(s):^(std):** ITURRIA MACAZAGA GUILLERMO ; ITURRIA AVALOS DARIO ; GUILLERMO ITURRIA MACAZAGA ; DARIO ITURRIA AVALOS**Agent(s):** CASTANEDA FRANCO ANA ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D63/10 G09F3/00 G09F3/03 (Advanced/Invention) ;
 (IPC 8-9) : H04B10/00 (Core/Invention)

CPC: G09F3/00[Classification Explorer](#)**Cited documents:** US6457754 BA, US4674778 A, US2012261476 AA, US2010231388 AA, US2005231365 AA,**Abstract:**

The present invention relates to a disposable, single use tamper-evident seal for electricity meters, with a padlock-type mechanical lock, for sealing or closing a container, box, door, cabinet, meter, valve, pump, bag, sack, tank, etc., the seal being used primarily for electricity meters commonly used in countries in North America, Central America and South America. The purpose of the seal is to protect against and monitor the theft of electricity, guaranteeing the security thereof. The tamper-evident seal has a unique form that fits exactly with the cavities of the meters and pushes into place. Therefore, if the seal is outside of the cavity, the external manipulation thereof is obvious. The seal also comprises a cover, a base, a continuity-based verification system, and a tag or an RFID tag to guarantee the integrity of the seal.

163) Family number: 67084010 (WO17161410A1)

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Title: ANTI-TAMPER AND ANTI-COUNTERFEIT CLOSURE FOR A CONTAINER

Priority: AU20160901117 20160324 AU20160902967 20160728 AU20160903291 20160819
 AU20160904041 20161005 AU20160904112 20161011 AU20170900073 20170112
 AU20170900568 20170221

Family:

Publication number	Publication date	Application number	Application date
<u>WO17161410 A1</u>	20170928	WO2017AU00072	20170324

Probable Assignee: INTRINSIC MAN PTY LTD

Assignee(s):^(std): INTRINSIC MAN PTY LTD

Assignee(s): INTRINSIC MANAGEMENT PTY LTD

Inventor(s):^(std): SWEENEY MICHAEL ANDREW THOMAS

Agent(s): ANDERSON STEPHEN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
 CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD
 GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP
 KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW
 MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC
 SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ
 VC VN ZA ZM ZW

International class
 (IPC 8-9): B65D41/34 B65D41/40 B65D41/48 B65D41/58 B65D41/62 B65D51/18
B65D55/02 (Advanced/Invention)

CPC: B65D41/34 B65D5/749 B65D41/40 B65D41/48 B65D41/58 B65D41/62 B65D47/122
B65D47/123 B65D51/18 B65D55/02 B65D2101/00 B65D2203/10

[Classification Explorer](#)

Cited documents: US5096077 A, US4387818 A, US2010258520 AA, US2008290061 AA, GB930625 A,
 GB2124599 A1,

Abstract:

The present invention is a tamper evident closure assembly for a container that has been pre-filled with a product. The assembly includes a body portion and a cap portion. The container is manufactured to have a necked portion that defines the opening of the container, and the sidewall of the necked portion is manufactured with a specific shape, and the body portion of the assembly is adapted to be attached onto that specific shape and be non-removable from the container, once it has been attached, and the body portion includes a first portion that is adapted to sit internally with respect to the necked portion of the container, and a second portion that is adapted to sit externally with respect to the necked portion of the container, and act like a collar around it, and the closure includes at least one feature that permanently indicates any effort to remove the closure from the container.

0) US4469233A – TAMPER EVIDENT CLOSURE

164) Family number: 4479619 (US4469233A)

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Title: Tamper evident closure
Priority: US19830474139 19830310

Family:	Publication number	Publication date	Application number	Application date
	<u>US4469233 A</u>	19840904	US19830474139	19830310

Probable Assignee: WEGSCHEID STANLEY C

Assignee(s):^(std): WEGSCHEID STANLEY C

Inventor(s):^(std): WEGSCHEID STANLEY C

International class
 (IPC 8-9): B65D55/02 (Advanced/Invention);
B65D55/02 (Core/Invention)

International class
 (IPC 1-7): B65D55/02

CPC: B65D55/02

European class: B65D55/02

US class: 215/230 215/252

[Classification Explorer](#)

Cited documents: US2054031 A,

Forward Citations: US7124904, US7124904, US7111746, US7000789, US6802427, US4991729, US2004226907, US2004123518,

Abstract:

Source: US4469233A Difficulties have heretofore been encountered by having unscrupulous persons open containers used to package pills and other medicinal products, prior to the sale to the ultimate customer, and substitute or place in the container poisonous substances which have on occasion resulted in the death of users of the medicinal products. This invention is directed to the provision of a closure member having relatively movable cap members operable when the cap is moved to the container opening position to permanently display an indicator showing that the container has been opened. The ultimate purchaser can thus be protected from purchasing a container which had been opened after being packaged at the factory where the medicinal supplies originated.

165) Family number: 12238717 (US5465876A)

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Title: Container and closure resealable bottle cap with push pull closure**Priority:** US19940258201 19940609

Family:	Publication number	Publication date	Application number	Application date
	<u>US5465876 A</u>	19951114	US19940258201	19940609

Probable Assignee: PORTOLA PACKAGING INC**Assignee(s):^(std):** PORTOLA PACKAGING INC**Assignee(s):** HELLER FINANCIAL INC ; HELLER FINANCIAL INC A DELAWARE BUSINESS TRUST ; NORTHERN ENGINEERING AND PLASTICS CORP**Inventor(s):^(std):** CRISCI ROBERT E

International class B65D47/24 (Advanced/Invention);
 (IPC 8-9): B65D47/04 (Core/Invention)

International class B67D5/32
 (IPC 1-7):

CPC: B65D47/243 B65D2101/0023**European class:** B65D47/24A2 L65D101/00A3**US class:** 215/253 215/356 222/153.1 222/525 222/541.9[Classification Explorer](#)

Cited documents: US5105960 A, US5104008 A, US4927065 A, US4826055 A, US4813577 A, US4801032 A, US4749103 A, US4589561 A, US4561553 A, US4500016 A, US4084716 A, US4053077 A, US4034882 A, US3980195 A, US3963139 A, US3902621 A, US3682345 A, US3504818 A,

Forward Citations: WO9912815, WO9741042, WO17023850, WO04074120, WO04074120, WO03050033, WO03049583, USD802360, USD584151, USD531505, USD530205, USD529804, USD438114, USD435793, USD424442, USD423358, USD419447, US9815598, US9296531, US9181001, US8763830, US8292101, US8231025, US7882977, US7861873, US7857154, US7823723, US7819276, US7537133, US7530469, US7413097, US7261226, US7228979, US7107783, US6981602, US6874664, US6866164, US6769575, US6766916, US6758376, US6758359, US6702161, US6631832, US6631820, US6571994, US6484896, US6405885, US6398132, US6321924, US6286733, US6206230, US6135329, US6112923, US6095375, US6073810, US6073809, US6070766, US6056161, US6039218, US6024255, US5975369, US5944235, US5931350, US5862953, US5860545, US5842612, US5772076, US5699924, US2016214770, US2014231468, US2014131394, US2012091134, US2011174761, US2011168292, US2011155758, US2010089776, US2009283492, US2009277861, US2008245683, US2008093363, US2007272647, US2007215627, US2007181578, US2007133909, US2007007231, US2006071032, US2006060555, US2005263480, US2005263479, US2005218015, US2005061822, US2004251276, US2004173556, US2004144792, US2004007553, US2003205549, US2003000907, US2002148909, GB2320924, EP1585676, EP0914280, AU2002366627,

Abstract:

Source: US5465876A A tamper evident resealable cap for use on a bottle, the cap having an upstanding pour spout registering with an opening in the center of the cap and a smaller diameter plug positioned thereabove on a plurality of upwardly angled legs on the pour spout. The cap having a flexible annular ring attached to the cap by a plurality of radially extending frangible elements with the plurality of circumferentially spaced radially inwardly extending angular projections arranged for registration with a neck portion on the bottle to prevent rotation in one direction without removal of the ring.

0) US5320237A – SEALED CLOSURE FOR DRUM

166) Family number: 11602075 (US5320237A)

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Title: SEALED CLOSURE FOR DRUM

Priority: US19920912520 19920713

Family:	Publication number	Publication date	Application number	Application date
	<u>US5320237 A</u>	19940614	US19920912520	19920713

Probable Assignee: STOLZMAN MICHAEL L

Assignee(s):^(std): STOLZMAN MICHAEL L

Inventor(s):^(std): STOLZMAN MICHAEL L

International class
(IPC 8-9): B65D39/08 (Advanced/Invention);
B65D39/00 (Core/Invention)

International class
(IPC 1-7): B65D1/02 B65D51/20

CPC: Y10S215/901 B65D39/08A

European class: B65D39/08A1

US class: 215/251 215/31 215/45 215/901 220/257 220/257.2 220/259.4 220/288 220/601 285/202 285/21 285/21.1

[Classification Explorer](#)

Cited documents: US4246859 A, US3958719 A, US3873132 A, US3353849 A,

Forward Citations: WO9700814, WO9700814, USD714671, US9731872, US9371161, US9156223, US8066433, US7690526, US7690525, US6854806, US6536844, US6415941, US6168722, US5965019, US5680955, US5413242, US2015069008, US2009232423, US2007190827, US2006237463, US2006138141, US2006096985, US2006012165, US2004174062, US2002108974, EP0788975,

Abstract:

Source: US5320237A A closure is used for selectively closing an opening of a container, the container including a tubular collar defining an opening and surrounded at the opening by an annular collar flange. An embossment includes a tubular collar retainer having an outer diameter slightly less than an inner diameter of the container collar and defining a through passage. A cap is threaded into the through passage to close the same. An annular retainer flange extends outwardly from an outer wall of the collar retainer and is seated on the collar flange incident to the retainer being inserted in the container collar. The retainer flange is secured to the collar flange by vibration welding so that the cap closes the container opening.

167) Family number: 55883548 (WO14028998A1)

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Title: PLASTIC PACKAGE FOR CARBONATED BEVERAGES AND FOODSTUFFS, HAVING A LARGE DIAMETER PLASTIC LID, MANUAL OPENING METHOD, SECURITY SYSTEM WITH TAMPER-EVIDENT FEATURES, AND FINAL CLOSURE AND OPENING SYSTEMS

Priority: BR20121021280 20120824

Family:	Publication number	Publication date	Application number	Application date
	<u>BR102012021280 A2</u>	20140610	BR20121021280	20120824
	<u>WO14028998 A1</u>	20140227	WO2013BR00323	20130823

Probable Assignee: LIMA BERNARDO ARY ROMCY DE SANFORD

Assignee(s):^(std): LIMA BERNARDO ARY ROMCY DE SANFORD

Assignee(s): BERNARDO ARY ROMCY DE SANFORD LIMA

Inventor(s):^(std): LIMA BERNARDO ARY ROMCY DE SANFORD

Inventor(s): BERNARDO ARY ROMCY DE SANFORD LIMA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D1/02 B65D1/16 B65D1/20 B65D43/10 B65D45/30 B65D53/02
(IPC 8-9): B65D85/72 (Advanced/Invention)

CPC: B65D45/30 B65D53/02 B65D1/165 B65D11/02 B65D17/02 B29B2911/14426 B29L2031/565 B29L2031/716

[Classification Explorer](#)

Cited documents: US3556338 A, US2006091099 AA, US2003052076 AA, US2002079286 AA, GB2398267 A1, BRPI0512495,

Abstract:

The present invention, which pertains to the packaging field, generally relates to a package or container for beverages, carbonated beverages or foodstuffs, the package being made of plastics, with a can-like shape, and being formed of four parts, as follows: a vessel (figures 08–12), a lid (figures 13–19), a closing ring (figures 20–22) and a sealing ring (figures 23 and 24), which form the subject matter of claims 1, 3, 4, 5 and 8, respectively; the present invention also relates to each of the four components that form the package, and which are the subject matter of claims 3, 4, 5 and 8; the present invention also relates to a moulded thermoplastic preform (figures 01–07), which is the subject matter of claim 2; the present invention also relates to the closing system with final sealing of the lid assembly, which is the subject matter of claims 6 and 7; the present invention also relates to the method for assembling, filling and closing the package, which is the subject matter of claim 9; the present invention also relates to the method for manually opening said package (figure 28), which is the subject matter of claim 10; and the present invention further relates to two sealing systems (figures 23, 24 and 25) that can be used with same, and which are the subject matter of claims 10 and 11.

168) Family number: 18170937 (DE2254688A1)

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Title: KINDERSICHERER VERSCHLUSS, VORZUGSWEISE MIT ORIGINALITAETSICHERUNG CHILDREN SAFE LOCK, PREFERABLY WITH ORIGINALITAETSICHERUNG (Machine translation)

Priority: DE19722254688 19721108

Publication number	Publication date	Application number	Application date
<u>DE2254688 A1</u>	19740516	DE19722254688	19721108

Probable Assignee: HEINLEIN HANS

Assignee(s):^(std): HEINLEIN HANS

Assignee(s): HEINLEIN HANS 8502 ZIRNDORF

Inventor(s):^(std): HEINLEIN HANS

Inventor(s): HEINLEIN HANS 8502 ZIRNDORF

International class
(IPC 8-9): B65D41/34 B65D50/04 (Advanced/Invention);
B65D41/34 B65D50/00 (Core/Invention)

International class
(IPC 1-7): B65D55/08 B65D55/12

CPC: B65D41/3409 B65D50/041

European class: B65D41/34A1 B65D50/04B

[Classification Explorer](#)

Forward Citations: US5749484, US5609262, DE3632057, DE3025911,

Abstract:

Source: DE2254688A1 (Claim1) A n s r)uecheeS Kindersicherer Verschluss, vorzw;sweise mit Originalitaet sicherung, insbesondere fuer Arzneimittelflaschen oder dgl ausKunststoff, dadurch Uekennzeichnet, dass eine elastische Si cherungskappe (5) unverlierbar mit der Schraubkappe (1) ver bunden ist, dass die Schraubkappe (1) an der Aussenmantelflaeche und die Sicherungskappe (3) an der Innenmantelflaeche achs parallele Rippen (10, 11) aufweisen, dass der freie Innendurch messer der Sicherungskappe ()) groesser ist als der gesamte Aus sendurchmesser der Schraubkappe (1), dass die Schraubkappe (1) an ihrer aeusseren oberen Deckflaeche (17) Rasten (15) aufweist und die innere obere Flaeche (18) der Sicherungskappe (3) ana log geformte Rasten (16), und d die Rasten (15, 10) derSchraubkappe (1) und der Sicherungskappe ()) derart ausgebildet und angeordnet sind, dass sie in Schliessrichtung kraft- oder formschluessig zusammenwirken, in oeffnungsrichtung frei gleiten.

Machine translation: (Claim1) A nsr) ruecheeS Kinderslcherer closure, vorzw; Sweis with tamper-evident, especially for medicine bottles or the like ausKunststoff, thereby Uekennzeichnet that an elastic Si cherungskappe (5) can not be lost with the screw (1) connected to the screw cap (1) of the Aussenmantelflaeche and the securing cap (3) of the Innenmantelflaeche axle parallel ribs (10, 11) show that the free inner diameter of the securing cap ()) is greater than the total from outer diameter of the screw (1) that the screw cap (1) on its outer upper Deckflaeche (17) catches (15) that and the inner upper surface (18) securing cap (3) ana log-shaped notches (16), and d the notches (15, 10) dersch consuming cap (1), and the securing cap ()) is configured and arranged to cooperate in closing force or form-fitting, slide freely in the opening.

0) EA012762B – CLOSURE WITH EXTENSIBLE TAMPER EVIDENT MEANS

169) Family number: 44110096 (EA012762B)

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Title: CLOSURE WITH EXTENSIBLE TAMPER EVIDENT MEANS

Priority: EA20080000703 20080328

Family:	Publication number	Publication date	Application number	Application date
	EA012762 B1	20091230	EA20080000703	20080328
	EA200800703 A1	20091030	EA20080000703	20080328

Probable Assignee: BIRYUKOV NIKOLAJ PETROVICH

Assignee(s):^(std) BIRYUKOV NIKOLAJ PETROVICH ; PAKHOMOV DMITRIJ IVANOVICH

Inventor(s):^(std) BIRYUKOV NIKOLAJ PETROVICH ; PAKHOMOV DMITRIJ IVANOVICH

International class [B65D49/00](#) (Advanced/Invention);
(IPC 8-9) [B65D49/00](#) (Core/Invention)

[Classification Explorer](#)

Cited documents: WO06114106 A1, JP7002264 A2, EP1867576 A1, EP1574450 A1,

Abstract:

Source: EA012762B Closure for a bottle with tamper-evident means is proposed comprising a decorative outer cap with a tear-off element, discharge sleeve with external thread fixed in the decorative outer cap, and screw cap with internal thread. Additionally the device comprises a seat body with bevel surfaces and elements of ratchet engaging on the external wall and an extensible pouring block with a possibility of axial forward movement on the direction of opening relative to decorative outer cap and seat body. The invention can be used in food industry, is related to bottle closures for storage and bottling strong beverages, and is intended to indicate first opening and prevent refilling of the bottle with off-grade alcohol products.

170) Family number: 48765810 (US2011089173A)

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Title: BIODEGRADABLE MATERIAL AND CONTAINER FOR FLUIDS

Priority: US20090603395 20091021 US20100709496 20100221 US20110270573 20111011
 US20120590377 20120821 US20140483155 20140911 US20140515468 20141015
 WO2010US31887 20100421 WO2010US60794 20101216 WO2011US22316 20110125
 US20140553479 20141125 US20140553437 20141125 US20150948335 20151122

Family:

Publication number	Publication date	Application number	Application date
<u>CN102232042 A</u>	20111102	CN201080002441	20101216
<u>CN102232042 B</u>	20150114	CN201080002441	20101216
<u>US2011089173 AA</u>	20110421	US20100709496	20100221
<u>US2011091672 AA</u>	20110421	US20090603395	20091021
<u>US2012138503 AA</u>	20120607	US20110270573	20111011
<u>US2012315688 AA</u>	20121213	US20120590377	20120821
<u>US2014377797 AA</u>	20141225	US20140483155	20140911
<u>US2015032060 AA</u>	20150129	US20140515468	20141015
<u>US2015075532 AA</u>	20150319	US20140553479	20141125
<u>US2015079413 AA</u>	20150319	US20140553437	20141125
<u>US2016145413 AA</u>	20160526	US20150948335	20151122
<u>US8519018 BB</u>	20130827	US20100709496	20100221
<u>US8852157 BB</u>	20141007	US20120590377	20120821
<u>US9527619 BB</u>	20161227	US20110270573	20111011
<u>WO11049640 A1</u>	20110428	WO2010US31887	20100421
<u>WO11102873 A1</u>	20110825	WO2010US60794	20101216
<u>WO11102940 A1</u>	20110825	WO2011US22316	20110125

Probable Assignee: INNOVATIVE BOTTLES LLC**Assignee(s):^(std):** INNOVATIVE BOTTLES LLC ; PATEL SHANTU ; SAI TECHNOLOGIES INC ; INNOVATIVE BOTTLES INC**Assignee(s):** INNOVATIVE BOTTLES LCC**Inventor(s):^(std):** PATEL SHANTU ; SHANTU PATEL**Agent(s):** LARRY E; MINTZ LEVIN COHN FERRIS GLOVSKY AND POPEO PC; FRED C; SEVERIN LARRY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
 (IPC 8-9): A61B17/32 A61L31/04 A61L31/06 A61L31/14 A61M16/06 A61M16/10 A61M5/00 A61M5/178 A61M5/20 A61M5/32 B01L3/00 B32B1/00 B32B1/02 B32B27/06 B32B27/08 B32B27/30 B65D1/02 B65D50/04 B65D51/00 B65D55/02 B65D6/28 B65D65/46 B65D83/04 B65D85/84 C08F2/42 C08F2/46 C08F2/48 C08F2/50 C08J3/28 C08J7/18 C08K3/34 C08K5/11 C08L1/00 C08L1/02 C08L23/06 C08L3/02 C08L33/08 C08L67/00 C08L67/02 C08L67/04 C08L83/06 C12P1/00 C12S99/00 H05H1/24 (Advanced/Invention); C08F222/10 (Advanced/Non-invention)

CPC: A61M2005/3126 C08K5/0016 C08L101/16 Y10T428/1352 Y10T428/1397 A61M16/0622 A61M16/0694 A61M16/1005 A61M16/104 A61M2016/103 Y10T428/31786 Y10T428/31938 Y10T428/31971 Y02W90/14 B65D65/466 B65D41/065 B65D41/3447 B65D50/046 B65D2251/0015 B65D2251/0093 A61L31/14 A61L31/148 C12P1/00 A61L31/041 A61L2300/80 C08L1/02 C08L67/02 C08L67/04 A61M5/3216 A61M5/3202 A61M5/3205 A61M2205/6081 C08K5/11 A61L31/06 B65D1/0215 B65D65/46 C08F2/50 C08F222/1006 C08J7/18 C08J2300/16 C08J2367/04 C08J2433/06 Y02W90/12 Y02W90/13 C08L23/06 A61L31/141

European class: B32B9/02 B65D1/02B1 B65D41/06B B65D41/34D1 B65D50/04F2 B65D65/46 B65D65/46C C08F2/50 C08K5/00P1 C08L101/16 L65D251/00Y2D L65D251/00Y6M M08F222/10B

US class: 106/163.01 128/206.24 206/524.7 206/524.700P 220/200 264/322 264/328.17 264/523 422/547 422/557 427/385.5 427/385.500S 427/387 427/387S 427/393.5 427/393.500S 427/496 427/496S 427/508 427/508S 427/579 427/579S 428/35.7 428/35.700P 428/36.92 428/446 428/446S 428/480 428/523 428/532 435/262 435/262.5 435/41 522/113 522/120 522/121 522/144 522/148 522/162 522/172 522/178 522/182 522/182S 522/87 522/88 522/89 523/124 523/125 523/128 524/311 524/506 524/506S 524/560 524/560S 524/585 524/599 524/599S 524/601 524/604 524/605 600/235 604/181 604/187 604/189 604/19 604/192 604/218 604/246 604/317 604/48 604/93.01 606/167 606/181

[Classification Explorer](#)

Cited documents: WO07130402 A2, WO07011119 A1, US8852157 BB, US7569619 BB, US7422780 BB, US7279205 BB, US7084187 BB, US6767980 BB, US6756422 BA, US6736898 BB, US6706345 BA, US6419729 BA, US6279766 BA, US6235832 BA, US6168035 BA, US6168035 B1, US6112921 A, US6039899 A, US6036036 A, US5908125 A, US5865330 A, US5706963 A, US5602321 A, US4477529 A, US3917097 A, US2015079413 AA, US2015075532 AA, US2015032060 AA, US2014377797 AA, US2010282623 AA, US2010184926 AA, US2010015200 AA, US2009258175 AA, US2009246544 AA, US2009246250 AA, US2009234035 AA, US2009226655 AA, US2009220545 AA, US2009162683 AA, US2009124756 AA, US2009047531 AA, US2008264894 AA, US2008213209 AA, US2008188597 AA, US2008145564 AA, US2008067141 AA, US2007267304 AA, US2007264520 AA, US2007043148 AA, US2007034589 AA, US2005236354 AA, US2005173436 AA, US2002160201 AA, JP5086307 A2, JP2013091763 A2, JP2008220811 A2, JP2004277682 A2, JP2004161802 A2, JP10305532 A2, CN1919696 A, CN101142260 A, CN101031477 A,

Forward Citations: WO16025670, USD756776, USD756234, USD753287, US9725548, US9655517, US9505858, US9458268, US9452863, US9228050, US9228044, US9193818, US9187597, US9174000, US9090372, US8870003, US8701905, US2016213250, US2016145413, US2014291273, US2013126462, US2013023830, US2012205373, US2010252617, US2010155396, US2010084361, EP3214006,

Abstract:

Source: US2011089173A A resin includes: an acrylate; and a curing agent to cure the acrylate. The resin is adapted to adhere to a degradable material selected from the group consisting of polylactic polymer (PLA), polyhydroxyalkonate (PHA), poly 3 hydroxybutrate co 3 hydroxyhexanote (PHBH), and paper. The curing agent includes a photoinitiator or a sensitizer that, when cured, form a hard coat when the resin is exposed to ultraviolet radiation or an electron beam.

171) Family number: 33552271 (FR2884502B)

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Title: DISPOSITIF D'INVOLABILITE POUR CONTENEUR**Priority:** FR20050003736 20050414

Family:	Publication number	Publication date	Application number	Application date
	FR2884502 A1	20061020	FR20050003736	20050414
	FR2884502 B1	20100205	FR20050003736	20050414

Probable Assignee: KNAUF SNC SNC**Assignee(s):^(std):** KNAUF SNC ; KNAUF SNC SNC**Assignee(s):** KNAUF SNC SOC EN NOM COLLECTIF ; KNAUF SNC SOCIETE EN NOM COLLECTIF**Inventor(s):^(std):** LEUVREY LAURENT**Inventor(s):** LAURENT LEUVREY**Agent(s):** NOVAGRAAF IP

International class [B65D50/00](#) [B65D55/02](#) (Advanced/Invention) ;
^(IPC 8-9) [B65D50/00](#) [B65D55/02](#) (Core/Invention)

CPC: [B65D55/024](#) [B65D2101/00](#)**European class:** [B65D55/02F](#) [L65D101/00](#)[Classification Explorer](#)**Cited documents:** WO9323306 A1, US6877631 BA, US6491328 BA, US5893475 A, GB2239866 A1, GB2226545 A1, DE20215850 U1,**Abstract:**

The device has an inviolability indicator forming unit to indicate that a container is closed in a position, and to indicate that the container is opened in another position. The unit has an inviolability tab (41) that is connected in a separable manner to a movable part (42) before the opening of the container. The part (42) moves related to a fixation part (43) on a receptacle or a closing unit of the container. The movable and fixation parts are of different colors.

172) Family number: 41982470 (FR93758E)

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Title: Dispositif de fermeture, notamment pour bidons et recipients analogues.**Priority:** FR19670102218 19670411 FR19670111045 19670620

Family:	Publication number	Publication date	Application number	Application date
	<u>ES151839 Y</u>	19701216	ES19680151839U	19680422
	<u>FR1530475 A</u>	19680628	FR19670102218	19670411
	<u>FR93758 E</u>	19690516	FR19670111045	19670620

Probable Assignee: JACQUES GEORGES LUCIEN LEMER**Assignee(s):^(std):** JACQUES GEORGES LUCIEN LEMER**Assignee(s):** REMY SOC ; SOCIETE REMY**Inventor(s):^(std):** LEMER JACQUES GEORGES LUCIEN

International class B65D41/34 B65D47/12 (Advanced/Invention);
 (IPC 8-9): B65D41/34 B65D47/12 (Core/Invention)

CPC: B65D41/3495 B65D47/122**European class:** B65D41/34H B65D47/12B[Classification Explorer](#)**Abstract:**

Source: FR1530475A (Claim 1) **ATTENTION** debut du champ CLMS peut contenir fin de DESC **. couronne 21, les ponts 15 et l'angle inferieur de la paroi 17 du capuchon sont egalement venus en appui sur la surface 9 du goulot On emmanche alors a force la partie inferieure 7 de ce goulot dans l'orifice 3 du recipient de facon a ce que le rebord 5 de ce dernier s'engage dans la gorge 11 et y soit maintenu a demeure par le retour elastique du collet 12. (Claim 1) ** WARNING ** start of CLMS field may contain ** end of DESC. ring 21, bridges 15 and the lower corner of the wall 17 of the capsule are also coming to bear on the surface 9 of the neck lower portion is then force-fitted to the neck 7 in the orifice 3 of the way of container has that the rim 5 of the latter engages in the groove 11 and is still being kept by the elastic return of the collar 12.

173) Family number: 21533205 (FR1439971A)

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Title: PERFECTIONNEMENTS AUX TERRINES, NOTAMMENT POUR LE STOCKAGE ET LA PRESENTATION DE DENREES ALIMENTAIRES Improvements to TERRINES, ESPECIALLY FOR STORAGE AND PRESENTATION FOOD FOOD (Machine translation)

Priority: FR19656945788 19650322

Family:	Publication number	Publication date	Application number	Application date
	FR1439971 A	19660527	FR19650045788	19650322

Probable Assignee: PARIZOT S A

Assignee(s):^(std): PARIZOT S A

International class B65D45/28 B65D55/06 (Advanced/Invention);
(IPC 8-9): B65D45/00 B65D55/02 (Core/Invention)

International class B65D17/16
(IPC 1-7):

CPC: B65D45/28 B65D55/06

European class: B65D45/28 B65D55/06

[Classification Explorer](#)

Forward Citations: US5931351, FR2813860, FR2753179, FR2545713, EP0829430, EP0232550, EP0087088, DE3206531,

Abstract:

Source: FR1439971A **ATTENTION** debut du champ CLMS peut contenir fin de DESC **. emplacement soigneusement dimensionne ainsi qu'on le verra plus loin, le lien C comporte un autre cran d'encliquetage 12, lui aussi realise suivant un profil en dent de scie et dont la face inclinee est dirigee dans le mme sens que celle du cran 10. Enfin, au-delà du cran 12, le lien C se termine par un organe de prehension 13 qui peut tre constitue par une simple surepaisseur. La mise en place du lien d'inviolabilite C s'effectue de la facon suivante On engage l'organe 13 de bas en haut a travers l'une des perforations 7 du corps A de la terrine, comme indique par exemple par la fleche 14 (fig. 1). Lorsque le cran 12 vient buter par sa face inclinee contre cette anse 8 (a droite en fig. 1 et 3), on lui fait franchir cette derniere a force en tirant l'organe 13 vers le haut. On poursuit le mouvement jusqu'a ce que le cran 19 vienne a son tour buter contre l'anse 8 de droite. On la lui fait a nouveau franchir a force. Apres ce passage, le cran 10 revient elastiquement sur lui-mme si bien que l'anse 8 de droite reste emprisonnee entre le bossage 9 et ledit cran 10 (fig. 1 et 3). Apres remplissage de la terrine et mise en place successive de la capsule 4 et du couvercle B, la fermeture inviolable de l'ensemble s'effectue en introduisant de haut en bas l'organe 13 dans la perforation 7 de l'anse 8 de gauche, et en le tirant dans le sens indique par la fleche 15 jusqu'a ce que le cran 12 vienne franchir a force cette perforation 7. Cette operation s'effectue en allongeant elastiquement le lien C. Apres le passage du cran 12 (fig. 1), ce dernier revient elastiquement sur lui-mme et il s'accroche solidement sous l'anse 8 de gauche d'ou il est desormais impossible de le retirer sans l'arracher, e'est-a-dire en deteriorant le lien C de facon visible. 11 doit d'ailleurs tre entendu que la description qui precede n'a ete donnee qu'a titre d'exemple et qu'elle ne limite nullement le domaine de l'invention dont on ne sortirait pas en remplaçant les details d'execution decrits par tous autres equivalents. En particulier on ne quitterait pas le cadre de l'invention en prevoyant sur le lien C des organes ou des elements de rupture favorisant son sectionnement ou son dechirement lorsqu'on desire ouvrir la terrine. RESUME Terrine, notamment pour le stockage et la presentation de denrees alimentaires, principalement remarquable en ce que, d'une part elle est dimensionnee de facon a pouvoir intercaler entre sa partie superieure et son couvercle, une capsule d'etancheite en matiere deformable, alors que, vautre part, un lien en matiere plastique souple muni de crans d'encliquetage inviolables, permet d'assurer son scellement apres mise en place a force a travers des perforations prevues sur le corps de la terrine afin d'enserrer le couvercle au moyen dudit lien. ** WARNING ** beginning of CRUD field may contain ** end of DESC. site carefully dimensioned as will be seen below, the link C has another snap notch 12, also realized according to a sawtooth profile and the inclined face is directed in the same direction as that of the notch 10. Finally, beyond-to the notch 12, the link ends with a C 13 prehension body that can be is through a simple ALLOWANCE. The establishment of inviolability C link is performed in the following way It urges the member 13 upwardly through one of the perforations 7 of the body A of the bowl, as shown for example by the arrow 14 (Fig. 1). When the notch 12 abuts its face inclined against the cove 8 (right in Fig. 1 and 3), we make it through this last has the force pulling the member 13 upwards. Movement is continued until the notch 19 in turn come up against the handle 8 to the right. It makes him a new cross has strength. After this passage, the notch 10 returns elastically on itself so that the handle 8 right is trapped between the boss said notch 9 and 10 (Fig. 1 and 3). After filling of the pot and set up successively of the capsule 4 and the cover B, the tamper evident closure of the assembly is carried out by introducing downward member 13 in the hole 7 of the handle 8 left, and pulling it in the direction indicated by the arrow 15 until the notch 12 comes to cross a strength this perforation 7. This operation is performed by extending elastically link C. After the passage of the notch 12 (Fig. 1), it returns elastically on itself

and is securely hooks under the handle 8 left or is henceforth impossible to remove it without tearing, E 'to say, by damaging the link C visible way. It should also be understood that the foregoing description has been given only by way of example and does not limit the scope of the invention which would not be exceeded by replacing the details of execution described by any other equivalent. In particular, we would not leave the scope of the invention in providing for the link C organs or break Elements favoring its cutting or tearing thereof when desired open the bowl. SUMMARY Terrine, including storage and presentation of foodstuffs, especially remarkable in that, firstly, it is sized to be inserted between the upper part and lid, a capsule tightness in deformable matter, then that wallows hand, a flexible plastic material in cord with inviolable detent notches allows dassu- rer sealing it after setting up a force provided for through holes on the body of the bowl to clamp the lid Moven of that link.

174) Family number: 43685763 (CO4440594A)

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Title: CAPSULA DE TAPONAMIENTO PARA UN RECIPIENTE QUE TIENE UN CUELLO CON COLLARIN DE ASEGURAMIENTO UNICO CAPSULE plugging for a container having a neck with a collar ASSURANCE ONLY (Machine translation)

Priority: CO19950031553 19950717

Publication number	Publication date	Application number	Application date
<u>CO4440594 A1</u>	19970507	CO19950031553	19950717

Probable Assignee: RICAL SA

Assignee(s):^(std): RICAL SA

Assignee(s): RICAL S A

Inventor(s):^(std): GUGLIELMINI BERNARD

Inventor(s): BERNARD GUGLIELMINI

Agent(s): ERNESTO CAVELIER

International class B65D41/32 (Advanced/Invention);
(IPC 8-9); B65D41/32 (Core/Invention)

International class B65D41/32
(IPC 1-7);

[Classification Explorer](#)

Abstract:

Source: CO4440594A 1. UNA CAPSULA DE TAPONAMIENTO MOLDEADA DE UNA SO- LA PIEZA PARA RECIPIENTES, QUE COMPRENDE UN ANILLO PROVISTO AL INTERIOR DE UN COJINETE PARA SU SUJE- CION MEDIANTE TRINQUETE DETRAS DE UN COLLARIN EX- TERIOR DEL CUELLO DEL RECIPIENTE A TAPONAR, UN TAPON UNIDO MEDIANTE UN EJE AL ANILLO, Y PROVISTO DE UN FALDON DE CIERRE HERMETICO COOPERANTE CON EL INTERIOR DEL CUELLO, Y UNA BANDA DE INVOLABILIDAD QUE UNE EL TAPON AL ANILLO HASTA SU DESGARRE DE LA PRIMERA ABERTURA, LA CUAL CAPSULA ESTA CARACTERI- ZADA POR HECHO DE QUE PARA EL TAPONAMIENTO DE UN RECIPIENTE QUE COMPRENDE UN CUELLO CON UN UNICO COLLARIN DE SUJECION SITUADO A DISTANCIA DEL BORDE SUPERIOR DEL CUELLO, EL TAPON COMPRENDE UNA SUPER- FICIE DE APOYO ANULAR PRODUCIDA SOBRE EL BORDE SUPERIOR DEL CUELLO Y QUE RODEA EL FALDON, EL FALDON SOBRESALE SOBRE LA SUPERFICIE DE APOYO SO- BRE UNA LONGITUD POR LO MENOS IGUAL A LA DISTANCIA QUE SEPARA EL FLANCO INFERIOR DEL COLLARIN DEL BORDE SUPERIOR DEL CUELLO, Y EL EJE ESTA DESFASA- DO EN RELACION A LA SUPERFICIE ANULAR DE APOYO EN DIRECCION DEL ANILLO, POR UN VALOR POR LO MENOS I- GUAL A LA DICHA DISTANCIA. FIGURA 1 1. TAMPONADE capsule molded in one single piece for containers, comprising a PROVIDED WITHIN A BEARING FOR BY RATCHET clamping BEHIND A collar outer CUELLO VESSEL OF RING to plug, a plug attached by a HUB ring, and having a closure skirt HERMETICO COOPERATING WITH THE INTERNAL NECK AND A tamper band that connects the cap to tear RING UNTIL THE FIRST OPENING, WHICH BY capsule is characterized in that for plugging a container comprises a neck with a single locking collar located remotely from the upper edge of the neck, cap comprises one surface of annular PRODUCED ON TOP EDGE AND AROUND NECK skirt, the skirt EXCEL SUPPORT ON SURFACE S0 BRE a length at least equal to the distance separating the lower flank the upper edge COLLAR NECK, AND DO axis is out of phase relative to the annular direction SURFACE SUPPORT RING, WORTH AT LEAST TO I- GUAL this distance. Figure 1

175) Family number: 43766210 (WO09146567A1)

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Title: TAMPER-PROOF DEVICE FOR THREADED CLOSURE FOR CONTAINER**Priority:** EP20080405150 20080604 EP20080405162 20080625

Family:	Publication number	Publication date	Application number	Application date
	EP2105386 A1	20090930	EP20080405162	20080625
	WO09146567 A1	20091210	WO2009CH00179	20090527

Probable Assignee: ROCHAT JEAN DENIS**Assignee(s):^(std):** ROCHAT JEAN DENIS**Inventor(s):^(std):** ROCHAT JEAN DENIS**Agent(s):** SAVOYE JEAN PAUL; SAVOYE JEAN PAUL ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D41/34](#) (Advanced/Invention);
 (IPC 8-9): [B65D41/34](#) (Core/Invention)

CPC: [B65D41/3404](#) [B65D2101/003](#)**European class:** [B65D41/34A](#) [L65D101/00A3B](#)[Classification Explorer](#)**Cited documents:** WO9708071 A1, WO9528334 A1, WO9005681 A1, WO07085927 A2, GB2277320 A1, GB2240098 A1, EP1650135 A1,**Forward Citations:** WO14108781, US8256632, JP4967017, JP2009541158, ITFI20130005, DE102013004466,**Abstract:**

This device comprises a cap (2) screwed onto a neck, (1) that has at least one screw thread (4) and a snap-fastening system comprising an abutment face (7) integral with the neck and a resilient snap-fastening enlargement (9) integral with the cap (2) and whose shortest radial distance from the axis of revolution of the neck (1) is less than the outside radius of the abutment face (7) and that ends in an abutment face (8). When the cap (2) is screwed on, the abutment faces (7, 8), one integral with the neck and the other with the cap are face to face to resist the unscrewing of the cap (2). The abutment face (7) integral with the neck (1) is a terminal screw thread runout face (7). The resilient enlargement (9) is positioned, when the cap is screwed on, in the open space which follows the terminal screw thread runout end (7), within the height of the pitch of the thread.

176) Family number: 30572360 (US2004094548A)

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Title: TAMPER-EVIDENT CLOSURE WITH UTENSIL**Priority:** US20020298627 20021118

Family:	Publication number	Publication date	Application number	Application date
	<u>US2004094548 AA</u>	20040520	US20020298627	20021118

Probable Assignee: ALCOA CLOSURE SYSTEMS INT**Assignee(s):^(std):** LAVEAULT RICHARD**Assignee(s):** ALCOA CLOSURE SYSTEMS INT**Inventor(s):^(std):** LAVEAULT RICHARD

International class B65D51/24 (Advanced/Invention);
 (IPC 8-9): B65D51/24 (Core/Invention)

International class B65D51/24
 (IPC 1-7):

CPC: B65D51/246 B65D2101/0023**European class:** B65D51/24H L65D101/00A3**US class:** 206/541 220/212 220/266 220/367.1[Classification Explorer](#)

Cited documents: USD309845 S1, US6604646 BB, US6604645 BA, US6006930 A, US5706974 A, US4930637 A, US3624787 A, US3208625 A, US2433926 A, US1740872 A, US1657325 A, US1619412 A, US1607865 A,

Forward Citations: USD719786, USD718148, USD715646, USD685227, USD644068, USD636890, USD634985, USD602775, USD599617, USD585698, USD577960, USD547124, USD510503, US9821951, US9061793, US8991630, US8950635, US8919594, US8834948, US8833589, US8727149, US8651311, US8528736, US8523016, US8511500, US8485360, US8360262, US8313001, US8146766, US8127961, US8123064, US8091242, US8087530, US7900793, US7736747, US2014318080, US2014217101, US2010072205, US2009206090, US2009184120, US2009120942, US2009120937, US2007138180, US2007065545, US2006216908, US2005189351, US2005006390,

Abstract:

Source: US2004094548A A package for heating and dispensing a food product includes a container body having a top opening and an outside thread, and a lid assembly. The lid assembly includes an outer shell having an inside thread and an integrally formed utensil, and an inner disk. The utensil is defined by a weakened segment or outline formed into an end wall of the outer shell and has a convex region. The disk has a protrusion that is shaped to be received into the convex region when the outer shell is placed on the container body and threaded tightly onto the body over the disk. A sufficient friction force exists between the disk and the body that prevents the disk from turning when the outer shell is unscrewed an initial amount. The protrusion forcibly leaving the convex region causes the weakened segment to rupture creating tamper evidence and a vent for heating.

177) Family number: 12117454 (WO9803411A1)

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Title: SEALING CAP WITH AN AUXILIARY CONTAINER, AND METHOD FOR MAKING SAME**Priority:** WO1996FR01129 19960718

Family:	Publication number	Publication date	Application number	Application date
	EP0879183 A1	19981125	EP19960925816	19960718
	WO9803411 A1	19980129	WO1996FR01129	19960718

Probable Assignee: S I R O**Assignee(s):^(std):** MONTANIA ; S I R O**Inventor(s):^(std):** CLOCHET JEAN**Designated states:** AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE**International class** [B65D51/28](#)
(IPC 1-7):**CPC:** [B65D51/28](#) [B65D2543/00435](#)**European class:** [B65D51/28](#) [L65D543/00Y6](#)[Classification Explorer](#)**Cited documents:** US5397017 A, US3413128 A, US3085709 A, US2549404 A, GB771889 A, FR2045700 A1, FR1108581 A, DE9303428 U, DE9110424 U,**Forward Citations:** WO09057038, WO0162286, US8703783,**Abstract:**

A plastic sealing cap with a first transverse sealing wall (2) and a first side skirt (3) provided with portions (4), particularly releasable portions, for fastening the cap to a container of which the neck (5) is provided with complementary fastening portions, is disclosed. The cap further comprises a second skirt (6) adjacent to the first transverse wall (2) and/or the first skirt (3) such that an empty space (7) is defined therebetween on the external side of the cap for receiving a predetermined substance. A sealing assembly, a packaging and a method for making the sealing assembly are also disclosed.

178) Family number: 16452449 (ES1025576Y)

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Title: TAPON INVOLABLE PARA ENVASES, PERFECCIONADO**Priority:** ES19930002204U 19930804

Family:	Publication number	Publication date	Application number	Application date
	<u>ES1025576 UA</u>	19940116	ES19930002204U	19930804
	<u>ES1025576 Y1</u>	19950101	ES19930002204U	19930804
	<u>ES1025576 YA</u>	19950101	ES19930002204U	19930804

Probable Assignee: CUSI LAB**Assignee(s):^(std):** CUSI LAB**Assignee(s):** LABORATORIOS CUSI S A ; LABORATORIOS CUSI SA**Inventor(s):^(std):** GIMENEZ GUASCH ; GIMENEZ GUASCH FRANCESC XAVIER

International class B65D47/18 B65D50/00 (Advanced/Invention);
 (IPC 8-9): B65D47/06 B65D50/00 (Core/Invention)

International class B65D47/18 B65D50/00
 (IPC 1-7):

[Classification Explorer](#)**Abstract:**

Source: ES1025576U TAPON INVOLABLE PARA ENVASES, PERFECCIONADO, DEL TIPO DE LOS CONSTITUIDOS POR UNA CAZOLETA INVERTIDA, CON UN NERVIO HELICOIDAL INTERIOR PARA CONEXION ROSCADA AL GOLLETE DEL ENVASE, CONTANDO ADEMAS CON UN ARO EN PROLONGACION DE SU PARED LATERAL, QUE DEFINE EL ARO DE PRECINTO, A LA QUE SE UNE MEDIANTE UNA PLURALIDAD DE NERVIOS AXIALES QUE EVIDENCIAN SU ROTURA, EXISTIENDO MEDIOS ANTIGIRATORIOS PARA EL ARO DE PRECINTO, EN EL SENTIDO DE DESENROSCADO DEL TAPON, Y MEDIOS QUE AYUDAN AL ARRASTRE DE DICHO ARO DE PRECINTO DURANTE LA FASE DE CIERRE O ENVASADO, CARACTERIZADO PORQUE LOS MEDIOS ANTIGIRATORIOS EN EL SENTIDO DE DESENROSCADO, ESTAN DETERMINADOS POR UNAS LENGUETAS (11) QUE EMERGEN EN DIRECCION AXIAL DESDE UNA PEQUENA PESTANA ANULAR (12) QUE SE CONFIGURA EN EL BORDE SUPERIOR DEL ARO DE PRECINTO (5), ACUSADAMENTE OBLICUAS EN RELACION CON EL PLANO RADIAL CORRESPONDIENTE, Y DESPEGADAS DE LA PARED LATERAL APARTIR DE UN CORTO TRAMO INICIAL, ESTANDO VENTAJOSAMENTE AFECTADAS DE UN CORTE BISELADO QUETRUNCA EL VERTICE LIBRE MAS PROXIMO A LA PARED LATERAL, TODO EN ORDEN A CONSEGUIR MAXIMA ELASTICIDAD INICIAL POR FLEXION DEL EXTREMO LIBRE DE LAS LENGUETAS DURANTE LA FASE DE ENROSCADO DEL TAPON, AL DESLIZAR E IR ALCANZANDO LOS PERFILES DE LOS DIENTES EN SIERRA (10) QUE DEFINEN LOS MEDIOS COMPLEMENTARIOS PARA EL ANTIGIRO, PREVISTOS EN UN NERVIO ANULAR DEL GOLLETE DEL ENVASE (9). Tamper Evident Cap for containers, perfected, OF THE TYPE CONSTITUTED BY AN inverted bowl, WITH A HELICAL RIB INSIDE FOR THREADED CONNECTION TO THE NECK OF THE CONTAINER, ALSO HAVING A RING IN EXTENSION OF ITS side wall, WHICH DEFINES THE SEALING RING, WHICH IS ATTACHED BY A plurality of axial ribs that demonstrate its breakage, THERE BEING MEANS FOR THE ANTIGIRATORIOS RING SEAL, IN THE SENSE OF unscrewing of the CAP, AND MEANS THAT HELP THE ENTRAINMENT OF SAID SEALING RING DURING THE CLOSING PHASE OR PACKAGING, characterized IN THAT THE ANTIGIRATORIOS IN THE UNSCREWING DIRECTION, ARE DETERMINED BY tabs (11) EMERGING IN THE AXIAL DIRECTION FROM A SMALL ANNULAR flange (12) Set in the upper edge of the seal ring (5), markedly OBLIQUE IN RELATION TO THE CORRESPONDING RADIAL plane, and peeled off from a short initial SECTION OF THE SIDE WALL ADVANTAGEOUSLY BEING AFFECTED BY A CUT BEVELED QUETRUNCA. THE FREE APEX CLOSER TO THE SIDE WALL, ALL IN ORDER TO GET MAXIMUM INITIAL ELASTICITY BY BENDING THE FREE END OF THE TABS DURING THE SCREWING OF THE CAP, THE SLIDE AND GO REACHING THE PROFILES OF THE TEETH IN THE SIERRA (10) defining the complementary means for rotation, PROVIDED IN AN ANNULAR RIB OF THE NECK OF THE CONTAINER (9).

Title: Container cap with double function ring**Priority:** MX19990009171 19991007

Family:	Publication number	Publication date	Application number	Application date
	<u>US6561370 BA</u>	20030513	US20000680939	20001010

Probable Assignee: ESCOBAR HARRITY MIGUEL FRANCIS**Assignee(s):^(std):** ESCOBAR HARRITY MIGUEL FRANCIS**Inventor(s):^(std):** ESCOBAR HARRITY MIGUEL FRANCIS**Inventor(s):** ESCOBAR HARRITY MIGUEL FRANCISCO

International class
(IPC 8-9): B65D41/34 B65D50/04 B65D50/08 (Advanced/Invention);
B65D41/34 B65D50/00 (Core/Invention)

International class
(IPC 1-7): B65D41/34 B65D50/08

CPC: B65D41/3409 B65D50/046**European class:** B65D41/34A1 B65D50/04F2**US class:** 215/218 215/219 215/221 215/252[Classification Explorer](#)**Cited documents:** US6053343 A, US6039196 A, US5176270 A, US4630743 A, US4548329 A, US4540098 A, US4471878 A, US4105132 A, US3967745 A,**Forward Citations:** US8444610, US8210376, US7527160, US2016023813, US2010145287, US2007278256, US2007051692, US2005103741,**Abstract:**

Source: US6561370B A cap with a double function ring is provided, which furnishes the features of showing it has been opened and of being child proof. The ring comprises two pieces of the same size joined to the cap. One of the pieces will be released from the cam when opening the container is attempted, the other piece will remain joined to the cap, when the container is being opened, it will be necessary to press two opposite ends of the double function ring, for the purpose of releasing the movement preventing elements.

- **search:** SS6 (4) and FT=((band or belt) W3 (remov* or detach*)) (Results 207)
- List: SS6 1–50 ((4) and FT=((band or belt) W3 (remov* or detach*))) (Results 207)

0) US2001000602A – SNAP–ON, SCREW–OFF CAP AND CONTAINER NECK

1) Family number: 30455912 (US2001000602A)

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Title: Snap-on, screw-off cap and container neck

Priority:

CA19912047916	19910725	EP19910309273	19911009	GB19930011495	19930603
GB19950017979	19940310	GB19940004495	19921006	GB19940023499	19921006
GB19950011099	19921006	GB19960011601	19951208	GB19950025299	19921006
GB19960021311	19940310	US19950456781	19950601	US19940213864	19940316
US19950456744	19950601	US19920951653	19920925	US19950456741	19950601
US19940274911	19940714	US19930029177	19930310	US19920830133	19920131
US19910772945	19911008	US19900565638	19900809	US19940329210	19941026
WO1997US17340	19970926	US20050057952	20050214	US20020210716	20020730
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US19980071625	19980501	US19970853669	19970509	US19970956633	19971023

Family:

Publication number	Publication date	Application number	Application date
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AU199464027 A1	19940926	AU19940064027	19940310
AU199516602 A1	19960216	AU19950016602	19950117
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CA2120952 C	20050322	CA19922120952	19921006
CA2157398 AA	19950831	CA19942157398	19940310
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CA2330924 AA	20001031	CA19992330924	19990412
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EP1107919 A1	20010620	EP19990917417	19990412
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GB2265892 B2	19940727	GB19930011495	19930603
GB2274838 A1	19940810	GB19940004495	19921006
GB2274838 B2	19950412	GB19940004495	19921006
GB2281905 A1	19950322	GB19940023499	19921006
GB2281905 B2	19960529	GB19940023499	19921006
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GB2290782 B2	19971015	GB19950017979	19940310
GB2295145 A1	19960522	GB19950025299	19921006
GB2295145 B2	19960911	GB19950025299	19921006
GB2299329 A1	19961002	GB19960011601	19951208
GB2299329 B2	19970402	GB19960011601	19951208
GB2305167 A1	19970402	GB19960021311	19940310
GB2305167 B2	19980121	GB19960021311	19940310
GB2312423 A1	19971029	GB19970019294	19940310
GB2312423 B2	19980114	GB19970019294	19940310
GB2331512 A1	19990526	GB19990004400	19970926
GB2331512 B2	20001004	GB19990004400	19970926

GB9311495 A0	19930818	GB19930011495	19930603
GB9404495 A0	19940420	GB19940004495	19921006
GB9423499 A0	19950111	GB19940023499	19921006
GB9511099 A0	19950726	GB19950011099	19921006
GB9517979 A0	19951115	GB19950017979	19940310
GB9525299 A0	19960207	GB19950025299	19921006
GB9611601 A0	19960807	GB19960011601	19951208
GB9621311 A0	19961127	GB19960021311	19940310
GB9719294 A0	19971112	GB19970019294	19940310
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<u>US2001000602 AA</u>	20010503	US20000746882	20001222
<u>US2002190021 AA</u>	20021219	US20020210716	20020730
<u>US2004055991 AA</u>	20040325	US20030668780	20030922
<u>US2005269282 AA</u>	20051208	US20050057952	20050214
<u>US5190178 A</u>	19930302	US19900565638	19900809
<u>US5213224 A</u>	19930525	US19910772945	19911008
<u>US5267661 A</u>	19931207	US19920830133	19920131
<u>US5415306 A</u>	19950516	US19920951653	19920925
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<u>US5593055 A</u>	19970114	US19940213864	19940316
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<u>ZA9300100 A</u>	19930810	ZA19930000100	19930107

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): CAP SNAP CO ; PORTOLA PACKAGING INC

Assignee(s): WAYZATA INVESTMENT PARTNERS LLC ; WELLS FARGO FOOTHILL LLC AS AGENT ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AGENT AS ; HELLER FINANCIAL INC A DELAWARE BUSINESS TRUST ; LUCH DANIEL ; PORTOLA PACKAGING INC F K A CAP SNAP CO ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS ; REPP RICHARD E ; CAP SNAP CO A CORP OF CALIFORNIA ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; HELLER FINANCIAL INC A DE CORP

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ABSOLOM ANNA ; BIETZER STEVEN H ; CHENAULT RAWSON L ; LUCH DANIEL ;
REPP RICHARD E ; WEST WILLIAM R ; KRISCHKE KURT A ; KRISCHKE KURT ;
HENSON JOHNNY S ; RICHARD E REPP ; DANIEL LUCH

Inventor(s): ANNA ABSOLOM ; RAWSON L CHENAULT ; STEVEN H BIETZER

Agent(s): SMART AND BIGGAR; DORSEY AND WHITNEY LLP

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CS CU CY CZ
DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE
KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO
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International class
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B65D41/34 B65D41/46 B65D41/47 B65D41/48 B65D51/18 B65D51/20 B65D55/08
B65D77/20 B67B3/00 B67B3/20 (Advanced/Invention);
B65D77/20 (Advanced/Non-invention);
B29C65/00 B29C65/02 B65D1/02 B65D41/02 B65D41/04 B65D41/32 B65D41/34
B65D51/18 (Core/Invention);
B65D77/10 (Core/Non-invention);
B65D (Subclass/Invention)

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 BE1016618, BE1016618, AU768786, AU2010202765,

Abstract:

Source: US2001000602A A tamper-evident, snap-on, screw-off closure is used with a specially shaped

container neck. The neck has double lead external threads and, below the threads, a conical wall having external ratchet teeth. The closure has an upper skirt having internal threads mating with the neck threads. A conical lower skirt is connected to the upper skirt by a plurality of frangible bridges. The lower skirt has internal ratchet teeth to mate with the neck ratchet teeth. The cap skirt threads are double pitch and slightly over 360 degrees in length. When the cap is applied to the neck it snaps on in two stages. The lower skirt has a tear tab which, when pulled, fractures the lower skirt on a vertical line. Continued pulling on the tab sequentially fractures the bridges.

0) US2002030031A – TAMPER EVIDENT CLOSURE

2) Family number: 34432422 (US2002030031A)

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Title: Tamper evident closure

Priority: AU1992PL03569 19920716 AU1992PL05933 19921118 IL19930106350 19930714
 EP19930915531 19930714 EP19980201802 19930714 AU19930045484 19930714
 IN1996CA00630 19960408 IN1993CA00405 19930715 NZ19930253982 19930714
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: BERRY PLASTICS CORP

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Assignee(s): RODNEY MALCOLM DRUITT OF DIGBY COTTAGE NORTH LUFFENHAM HALL ; REXAM CLOSURE SYSTEMS LLC ; RODNI MEHLKOM DRUITT ; PRESIZHN VEHLV AUSTREHLIA PTI LTD ; PRECISION VALVE AUSTRALIA PTY LTDAU ; MARSH PETER CRISPIN LAWRENCE ; Ltd. ; M.K. Plastics Pty ; M K PLASTICS PTY LTD ; CLOSURES AND PACKAGING SERVICES LTD (APPLICANT... ; PRECISION VALVE AUSTRALIA PTY LIMITED ; PRECISION VALVE AUSTRALIA PTY LTD ; PRECISION VALVE TRALIA PTY LTD ; R C S RAIL ROAD CONSTRUCTION SAAR GMBH ; PRESISION VALVE AUSTRALIA PTY LTD ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT ; CLOSURES AND PACKAGING SERVICES LTD GUERNSEY ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT GB ; CLOSURES AND PACKAGING SERVICES LTD APPLICANT SUBSTITUTED UNDER S ; CLOSURES AND PACKAGING SERVICES LIMITED ; BERRY PLASTICS CORP ; CLOSING AND PACKAGING SERVICE CO ; CLOSING AND PACKAGING SERVICE CO LTD

Inventor(s):^(std): TANSEY CHARLES MARTIN ; DRUITT RODNEY MALCOLM

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Agent(s): FB RICE; FB RICE PTY LTD; KIRBY EADES GALE BAKER; REINHOLD COHN AND PARTNERS; SANFORD TCOLB AND CO

Designated states: AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CZ DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR KZ LI LK LU MC MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SK SN TD TG UA US VN

International class
(IPC 8-9): B29C45/26 B65D41/32 B65D41/34 B65D49/12 B65D53/02 B65D55/02 H04L12/28 H04L12/46 H04L29/08 (Advanced/Invention);
B65D41/32 B65D41/34 (Advanced/Non-invention);
B65D41/34 B65D55/02 H04L12/28 H04L12/46 H04L29/08 (Core/Invention);
B65D41/32 (Core/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B29C45/00 B29C45/26 B29C45/40 B45D41/34 B65D41/04 B65D41/32 B65D41/34 B65D41/43 B65D49/12 B65D51/08 B65D51/16 B65D53/00 B65D55/02 B65D56/02

CPC: B65D41/3447

European class: B65D41/34D1

US class: 215/252 215/307 215/344 215/344S 264/328.1 264/328.100S 264/334 425/547

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Abstract:

Source: US2002030031A A container closer (10) particularly for use on screw top containers such as carbonated beverage containers, the container closure (10) having a generally cylindrical continuous tamper evident band (11) joined by a plurality of frangible bridges (13) to the free edge of a skirt (16) of the closure (10). The band (11) has a segmented internal rib (18) which engages an external retaining flange of the container when the closure (10) is applied to the container so that on removal of the closure (10) the tamper evident band (11) remains on the container or is visually clearly damaged by removal of the closure (10) from the container. The band (11) is provided with longitudinal reinforcement by projections (25 and 28) or other areas of thickening (26) to provide the band (11) with longitudinal stiffness while still permitting it to expand over the retaining flange on the container. The rib (18) has a first annular side (21), the first annular side (21) having a compound surface comprising a radially outer frusto-conical to (23) which assists in the molding of the rib (18) and a radially inner substantially planar portion (24) which increases the difficulty of removing the closure (10) intact from the container without rupturing the bridges joining the tamper evident band (11) from the remainder of the closure (10).

0) US5174465A – ONE-PIECE FITMENT AND CAP WITH TAMPER-EVIDENT B...

3) Family number: 50639889 (US5174465A)

© PatBase

Title: One-piece fitment and cap with tamper-evident band

Priority: CA19922062008 19920227 US19910664658 19910305 US19920822200 19920117
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Family:

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<u>ZA9300103 A</u>	19930810	ZA19930000103	19930107
<u>ZA9300104 A</u>	19930810	ZA19930000104	19930107

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; CAP SNAP CO ; INC ; INK ; PORTOLA PEHKADZHING

Assignee(s): WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS ; LUCH DANIEL ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; ADAMS BRIAN M ; WAYZATA INVESTMENT PARTNERS LLC ; WELLS FARGO FOOTHILL LLC AS AGENT ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; CAP SNAP CO A CORP OF CA ; CAP SNAP CO A CORP OF CALIFORNIA ; CAP SUNATSUPU CO ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; HELLER FINANCIAL INC A DELAWARE BUSINESS TRUST ; HELLER FINANCIAL INC A DE CORP ; PORTOLA PACKAGING INC A DE CORP ; PORTOLA PACKAGING INC F K A CAP SNAP CO

Inventor(s):^(std): CHENAULT RAWSON L ; CHENAULT RAWSON ; BURAIAN EMU ADAMUSU ; ADAMS BRIANS M ; ADAMS BRIAN M ; ADAMS BRIAN ; DEHNIEL LACH ; BRAJAN M EHDAMS ; LUCH DANIEL ; DANIERU RUUKU

Inventor(s): DANIEL LUCH ; BRAJAN MEHDAMS ; BRIANS M ADAMS ; BRIAN M ADAMS

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR LI LK LU MC MG ML MN MR MW NL NO NZ PL PT RO RU SD SE SN TD TG UA

International class
(IPC 8-9): B29C45/38 B29C45/44 B29C57/12 B29C65/56 B65B55/02 B65D39/00 B65D39/08 B65D41/32 B65D41/34 B65D41/47 B65D47/06 B65D47/12 B65D47/14 B65D47/36 B65D5/74 B65D55/02 B65D55/06 B65D75/58 F16J13/12 (Advanced/Invention); B65B55/02 B65D55/02 (Advanced/Non-invention); B29C57/00 B29C65/56 B65D39/00 B65D41/34 B65D47/00 B65D47/12 B65D5/74 F16J13/00 (Core/Invention)

International class
(IPC 1-7): B29C45/38 B29C45/44 B65B55/02 B65D17/40 B65D25/42 B65D3/26 B65D33/38 B65D39/00 B65D39/04 B65D39/08 B65D39/16 B65D41/00 B65D41/32 B65D41/34 B65D41/38 B65D41/47 B65D41/62 B65D43/04 B65D43/14 B65D47/06 B65D47/10 B65D47/14 B65D47/36 B65D5/14 B65D5/74 B65D50/00 B65D51/18 B65D51/20 B65D55/02 B65D55/08 B65D55/16 B65D59/08 B65D75/58

CPC: B65D39/08 B65D55/06 B65D75/5877 B65D47/141 B65D2101/00 B29C45/006 B29L2031/565 Y10S425/058 B29C66/53247 B29C65/56 B29C65/58 B65D5/749 B29C57/12 B29C65/568 B29C66/8322 B65D39/00 B65D39/0023 B65D39/0076 B65D39/084 B65D41/3409 B65D47/121 B65D47/36 B65D2101/0038 B65D2539/003 B65D2539/006 B29C66/61 B29C66/112 B29C66/135 B29C66/1312 B29C66/24221 B29C66/232

European class: B29C45/00J3 B29C57/12 B29C65/56 B29C65/56H2 B29C65/58 B29C66/532 B29C66/8322 B65D39/00 B65D39/00F3 B65D39/00G4 B65D39/08 B65D39/08A1 B65D41/34A1 B65D47/12A B65D47/14A B65D47/36 B65D5/74D1C B65D55/06 B65D75/58G3A L29C66/53246 L29L31/56B L65D101/00 L65D101/00A3C L65D539/00Y2 L65D539/00Y6

US class:

215/213 215/214 215/216 215/225 215/232 215/250 215/253 215/256 215/318 215/356
215/44 220/254 220/255.1 220/256 220/258 220/258.3 220/265 220/266 220/270 220/276
220/288 220/307 220/375 220/790 222/541 222/541.2 222/541.5 222/541.6 222/541.9
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US2006213935, US2006186079, US2006186078, US2006138138, US2006138136, US2006138073, US2006054625, US2006037958, US2006011637, US2005252916, US2005252839, US2005199313, US2005145629, US2005139609, US2005121478, US2005072804, US2005061840, US2005035130, US2005035129, US2005033240, US2004226950, US2004178235, US2004118880, US2004035883, US2004035426, US2004011829, US2004000532, US2003195143, US2003159403, US2002000441, RU2577740, JP4044631, JP10086953, GB2435467, GB2435467, GB2398560, GB2398560, GB2396151, GB2396151, GB2368835, GB2368835, GB2301098, GB2301098, FR2836897, FR2836896, FR2765194, ES2264332, EP2614009, EP2614009, EP2581323, EP2256056, EP1980498, EP1843949, EP1647311, EP1415926, EP1352840, EP1352840, EP1298063, EP1281626, EP1161379, EP1100676, EP1100676, EP1092646, EP1042178, EP0968120, EP0931729, EP0763482, EP0663344, EP0621848, DE19815413, DE10146466, DE10146466, CN103231847, AU689478, AU2006209845, AU2002300136,

Abstract:

Source: US5174465A A fitment and cap therefor are integrally molded with lugs interconnecting the part. The fitment has a flange to be attached to a container and an internally threaded spout. The cap has an externally threaded skirt. The lugs are diametrically spaced and interconnect the bottom edge of the skirt and upper edge of the spout. After molding, force is applied to break the lugs and snap the skirt inside the spout, the threads slipping past each other and inter-engaging. A temper-evident band extends around the skirt and is connected thereto by frangible bridges. At diametrically spaced locations vertically projecting fingers extend down from the temper evident band and are received in sockets on the fitment flange shaped so that the band fingers prevent unscrewing the cap without removing the temper-evident band. A pull tab and thumb tab assist the consumer in removing the tamper evident band so that the cap may be unscrewed from the fitment.

4) Family number: 44129158 (US2011024423A)

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Title: TAMPER-EVIDENT PACKAGE WITH IMPROVED OPENING PERFORMANCE
Priority: US20080125981P 20080430 US20090934916 20090430 WO2009US02632 20090430
Family:

Publication number	Publication date	Application number	Application date
AU2009260868 AA	20091223	AU20090260868	20090430
AU2009260868 BB	20150702	AU20090260868	20090430
CA2721234 AA	20091223	CA20092721234	20090430
CN102015472 A	20110413	CN200980115609	20090430
CN102015472 B	20130828	CN200980115609	20090430
EG26024 A	20121211	EG20100101820	20101028
EP2268554 A2	20110105	EP20090766980	20090430
EP2268554 A4	20111207	EP20090766980	20090430
IN06911CN2010 A	20110708	IN2010CN06911	20101027
JP2011519330 T2	20110707	JP20110507444T	20090430
MX2010011796 A1	20101130	MX20100011796	20090430
RU2010148807 A	20120610	RU20100148807	20090430
RU2507137 C2	20140220	RU20100148807	20090430
US2011024423 AA	20110203	US20090934916	20090430
US8807360 BB	20140819	US20090934916	20090430
WO09154666 A2	20091223	WO2009US02632	20090430
WO09154666 A3	20100218	WO2009US02632	20090430
ZA201006949 A	20110629	ZA20100006949	20100929

Probable Assignee: CLOSURE SYSTEMS INT INC

Assignee(s):^(std): CLOSURE SYSTEMS INT ; CLOSURE SYSTEMS INT INC ; CLOSURE SYSTEMS INTERNAT ; CLOSURE SYSTEMS INTERNATIONAL ; CLOSURE SYSTEMS INTERNATIONAL INC ; MCBRIDE STEVE ; SMEYAK LAWRENCE M ; GEVERS DAVE ; ERSPAMER JOHN ; CLOSURE SYSTEMS INTERNTIONAL INC ; KLOUZHER SISTEMZ INTERNEHSHNL INK

Inventor(s):^(std): DAVE GEVERS ; DZHEVERS DEHJV ; EHRSPAMER DZHON ; ERSPAMER JOHN ; GEVERS DAVE ; JOHN ERSPAMER ; LARRY SMEYAK ; MAKBRAJD STIV ; MCBRIDE STEVE ; SMEYAK LARRI ; SMEYAK LARRY ; SMEYAK LAWRENCE M ; STEVE MCBRIDE ; MEBRIDE STEVE

Agent(s): FB RICE; FB RICE PTY LTD; ALGEMEEN OCTROOI EN MERKENBUREAU; WOOD PHILLIPS KATZ CLARK AND MORTIMER; GEIMER D STEPHEN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
^{(IPC 8-9):} [B65D B65D1/02 B65D39/00 B65D41/34 B65D41/36 B65D41/38](#)
[B65D41/62](#) (Advanced/Invention);
[B65D41/34](#) (Advanced/Non-invention);
[B65D39/00 B65D41/00](#) (Core/Invention)

International class
^{(IPC 1-7):} [B65D39/00](#)

CPC: [B65D41/3428](#)

European class: [B65D41/34C1](#)

US class: [215/252 215/307 215/329 215/336 215/344 215/44 215/902 220/266 220/268 220/276](#)

Cited documents: WO9743190 A1, US7975864 BB, US7942287 BB, US7637384 BB, US7607547 BB, US7503468 BB, US7451898 BB, US7344039 BB, US7014055 BB, US6991123 BB, US6779672 BB, US6705479 BB, US6673298 BB, US6557714 BB, US6527132 BA, US6484896 BB, US6371317 BA, US6325225 BA, US6276543 BA, US6202872 BA, US6089390 A, US6006930 A, US5950850 A, US5860542 A, US5800764 A, US5797506 A, US5782369 A, US5715959 A, US5588545 A, US5564582 A, US5501349 A, US5450972 A, US5356021 A, US5328044 A, US5205426 A, US5167335 A, US5050753 A, US5004112 A, US4997097 A, US4993570 A, US4971212 A, US4938370 A, US4573601 A, US4562931 A, US4550844 A, US4506795 A, US4505401 A, US4470513 A, US4458822 A, US3667638 A, US2009159555 AA, US2008087625 AA, US2007131641 AA, US2007125785 AA, US2006163193 AA, US2005189312 AA, US2004238478 AA, US2004155007 AA, US2004060893 AA, US2003116523 AA, US2002134747 AA, US2002066713 AA, US2002030031 AA, US2001027957 AA, JP9501636 T2, JP8503189 T2, JP2011114313 A2, JP2007514619 T2, JP2001114313 A2, JP2000503944 T2, JP2000085810 A2, GB1593072 A,

Forward Citations: WO15123666, USD732391, US9708105, US9428292, US9290306, US2016185586, US2016068311, US2016046421, US2014360970, US2014319144, US2014263475, US2014021157, US2013202228, JP2013209104, CN106103297,

Abstract:

Source: US2011024423A A tamper-evident package having pressurized contents includes a closure and associated container which cooperate to provide desired tamper-evidence upon initial removal of the closure from the container, while promoting convenient and comfortable removal and use by consumers. In particular, the package is configured such that from a fully applied position of the closure on the container, the closure is movable through a predetermined angle prior to actuation of the tamper-evident feature on the package. In this fashion, the torque which must be applied to the closure for overcoming the static friction at the sealing interface between the closure and the container can be overcome prior to the application of torque required for operating the tamper-evident feature of the package. The present invention contemplates enhancing the opening performance of the package by configuring the package to include certain structure features to facilitate convenient, consistent, and comfortable use by consumers.

0) US2002033374A – TAMPER EVIDENCING CLOSURE

5) Family number: 28185285 (US2002033374A)

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Title: Tamper evidencing closure

Priority: EP20030770468 20030924 KR20007000005U 20000522 US19970904878 19970801
 US19990323571 19990601 US20000653679 20000901 US20050250249 20051011
 US20080203992 20080904 WO2000US12283 20000505 WO1998US15527 19980723
 WO2003US30350 20030924 US20020266091 20021004 US20010955844 20010918
 US20010900505 20010705

Family:

Publication number	Publication date	Application number	Application date
AT361239 E	20070515	AT19980937158T	19980723
AU199885938 A1	19990222	AU19980085938	19980723
AU200048219 A1	20001218	AU20000048219	20000505
AU200048219 A5	20001218	AU20000048219	20000505
AU200191356 A1	20030123	AU20010091356	20011115
AU200191356 A5	20030123	AU20010091356	20011115
AU2003278956 AA	20040504	AU20030278956	20030924
AU2003278956 AH	20040504	AU20030278956	20030924
AU785404 B2	20070419	AU20010091356	20011115
CA2298700 AA	20000131	CA19982298700	19980723
CA2298700 C	20070522	CA19982298700	19980723
CA2501327 AA	20050404	CA20032501327	20030924
CA2501327 C	20110823	CA20032501327	20030924
CN1089711 C	20020828	CN19988007824	19980723
CN1275114 A	20001129	CN19988007824	19980723
CN1701028 A	20051123	CN20038025129	20030924
DE69837713 D1	20070614	DE19986037713	19980723
DE69837713 T2	20080110	DE19986037713T	19980723
EP1025015 A1	20000809	EP19980937158	19980723
EP1025015 A4	20050727	EP19980937158	19980723
EP1025015 B1	20070502	EP19980937158	19980723
EP1556280 A2	20050727	EP20030770468	20030924
EP1556280 A4	20090624	EP20030770468	20030924
EP2123569 A1	20091125	EP20090010762	20030924
KR200227370 Y1	20010615	KR20000014667U	20000524
MXPA04000110 A1	20040521	MX2004PA00110	20040107
MXPA05003566 A1	20050603	MX2005PA03566	20030924
US2002033374 AA	20020321	US20010900505	20010705
US2002066713 AA	20020606	US20010955844	20010918
US2003071007 AA	20030417	US20020266091	20021004
US2006060555 AA	20060323	US20050250249	20051011
US2009057261 AA	20090305	US20080203992	20080904
US5913437 A	19990622	US19970904878	19970801
US6112923 A	20000905	US19990323571	19990601
US6484896 BB	20021126	US20010900505	20010705
US6766916 BB	20040727	US20010955844	20010918
US6981602 BB	20060103	US20020266091	20021004
WO0073164 A1	20001207	WO2000US12283	20000505
WO03004369 A1	20030116	WO2002US19318	20020617

<u>WO04033312 A2</u>	20040422	WO2003US30350	20030924	
<u>WO04033312 A3</u>	20040826	WO2003US30350	20030924	
<u>WO9906295 A1</u>	19990211	WO1998US15527	19980723	
<u>ZA200109159 A</u>	20021106	ZA20010009159	20011106	
<u>ZA200205290 A</u>	20030410	ZA20020005290	20020702	

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; ADAMS BRIAN M ; MA MIKE X ; MA MIKE XIAOLI

Assignee(s): MA XIAOLI ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL CORP ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; WAYZATA INVESTMENT PARTNERS LLC ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AS AGENT ; WELLS FARGO FOOTHILL LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS

Inventor(s):^(std): MIKE X MA ; MA XIAOLI ; MA MIKE XIAOLI ADAMS BRIAN M ; MA MIKE X ; ADAMS BRIAN M ; XIAOLI MA ; MA MIKE XIAOLI ; BRIAN M ADAMS

Inventor(s): THE DESIGNATION OF THE INVENTOR HAS NOT YET BEEN FILED ; MA MIKE ; ADAMS BRIAN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL; DAVID J BREZNER DORSEY AND WHITNEY LLP; ADAM K SACHAROFF MUCH SHELST FREED DENENBERG AMENT AND RUBENSTEIN PC; DORSEY AND WHITNEY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B28B13/06 B28B7/10 B29C41/42 B29C45/44 B65D1/00 B65D39/00 B65D41/00 B65D41/32 B65D41/34 B65D49/12 B65D50/00 B65D51/00 B65D51/16 B65D55/02 (Advanced/Invention); B65D41/34 (Advanced/Non-invention); B65D39/00 B65D41/34 B65D50/00 B65D55/02 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B28B13/06 B28B7/10 B29C41/42 B65D0/0000 B65D1/00 B65D39/00 B65D41/00 B65D41/34 B65D50/00 B65D55/02

CPC: B65D41/3428 B29C43/42 B29C43/50 B29C45/4407 B29L2031/565 B65D41/3409 B65D2101/0046

European class: B29C43/42 B29C43/50 B29C45/44B B65D41/34A1 B65D41/34C1 L29C43/50 L29L31/56B L65D101/00A3D

US class: 215/252 215/254 215/256 215/258 215/258S 215/307 215/307S 215/329 215/344 215/344S 215/43 215/44 264/328.1 264/328.100S 264/334 264/334S

[Classification Explorer](#)

Cited documents: WO0012402 A1, US7228979 BB, US6736280 BA, US6474491 BA, US6276543 BA, US6224802 BA, US6177041 BA, US6177041 B1, US6173853 BA, US6152316 A, US6119883 A, US6116442 A, US6112923 A, US6109464 A, US6105802 A, US6102226 A, US6053344 A, US6015054 A, US5913437 A, US5893474 A, US5868281 A, US5853095 A, US5779075 A, US5775527 A, US5749484 A, US5727705 A, US5715959 A, US5692628 A, US5685443 A, US5660288 A, US5657889 A, US5609262 A, US5570798 A, US5533633 A, US5480045 A, US5465876 A, US5456376 A, US5415306 A, US5400913 A, US5346082 A, US5307946 A, US5307945 A, US5295600 A, US5285912 A, US5246125 A, US5232125 A, US5190178 A, US5105961 A, US5105960 A, US5080246 A, US5078290 A, US5076453 A, US4981230 A, US4978016 A, US4875594 A, US4813561 A, US4801031 A, US4732289 A, US4664278 A, US4526282 A, US4511053 A, US4196818 A, US3338446 A, US3329296 A, US3329295 A, US2007108154 AA, US2005199573 AA, US2002001637 AA, US2001027957 AA, FR2421812 A1, EP0635434 A1, EP0489865 A1, EP0341992 A1, EP0049876 A1, DE3912137 A1,

Forward Citations:

WO15046889, WO13001454, WO13001454, WO11070326, WO09095297, WO08092716, WO08092716, WO07081656, WO07033722, WO04048220, WO03050033, WO03016161, WO03004369, USD763691, USD756776, USD756234, USD747201, USD746685, USD723919, USD664852, USD654362, USD619003, USD613162, USD606401, USD584619, USD584149, USD564879, USD553987, USD550084, USD538654, USD534802, USD531505, USD530205, USD529804, USD527631, USD525523, USD525125, USD518716, USD508204, USD507745, USD457433, USD449991, US9821934, US9738409, US9676129, US9617045, US9522759, US9409680, US9403310, US9290306, US9205946, US8931243, US8926590, US8845256, US8807360, US8650839, US8567619, US8544666, US8529501, US8517194, US8499950, US8443999, US8413830, US8408208, US8348576, US8251236, US8231018, US8206377, US8100277, US8066139, US8061543, US8016142, US7891511, US7875000, US7798359, US7780024, US7766178, US7735664, US7721510, US7644902, US7637384, US7451898, US7445130, US7422169, US7413097, US7293396, US7261226, US7198170, US7059553, US7032772, US6974046, US6968966, US6968965, US6948630, US6877624, US6702161, US6659297, US6622460, US6571994, US6557714, US6382443, US2017057139, US2015166225, US2014263475, US2014190968, US2013206718, US2013038992, US2012111822, US2012067892, US2012018401, US2011309048, US2011151980, US2011100947, US2011024423, US2010314391, US2010308050, US2010230374, US2010215548, US2010102021, US2010089863, US2010084364, US2010032402, US2009302037, US2009200259, US2009200258, US2009020530, US2009013642, US2008218362, US2008210745, US2008173612, US2007257002, US2007251950, US2007232893, US2007173756, US2007158295, US2007125785, US2007125783, US2007034590, US2007000932, US2006266727, US2006208115, US2006163192, US2006151423, US2006070972, US2005252878, US2005199574, US2005167879, US2005167389, US2005145629, US2005092750, US2005072751, US2005040176, US2005000931, US2004251276, US2004168999, US2004159727, US2004155006, US2004094501, US2004045925, US2003192854, US2003150833, US2003116522, TWI498258, KR200462672, JP4932710, JP2008508151, JP2007501169, ITMI20111912, GB2476089, FR2911584, ES2321471, EP2586721, EP2223656, EP2123569, EP2088090, EP1953091, EP1660379, EP1445207, EP1288133, DE102010039036, CN103857599, CN103857599, AU2003302391, AU2002333387,

Abstract:

Source: US2002033374A A container including a neck and an opening, in combination with a tamper-evidencing closure including a top, a depending annular skirt and a tamper-evidencing band frangibly connected to the annular skirt. The container includes a first securing structure on the neck spaced from the opening. The tamper-evidencing band includes an inwardly turned retaining rim that extends at least partially upwardly. The retaining rim has a free edge for engagement with the locking surface as the closure is removed from the neck. The retaining rim includes a plurality of outwardly directed flutes spaced circumferentially thereon and a second securing structure located on the retaining rim between the flutes.

0) US5258191A – VACUUM-SEALED FOOD CONTAINER HAVING PRESS-ON, P...

6) Family number: 8380493 (US5258191A)

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Title: Vacuum-sealed food container having press-on, pry-off closure

Priority: US19910694149 19910501 US19910694903 19910502 US19930015284 19930208
US19920819462 19920110 US19920820445 19920113 US19940256242 19940701
WO1991US03028 19910502 WO1993US00222 19930108 WO1991US03028 19920502

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199179019 A1</u>	19921221	AU19910079019	19910502
	<u>AU199335824 A1</u>	19930803	AU19930035824	19930108
	<u>AU660614 B2</u>	19950706	AU19910079019	19910502
	<u>BRPI9107304 A</u>	19940614	BR1991PI07304	19910502
	<u>CA2109097 AA</u>	19931022	CA19912109097	19910502
	<u>CA2127693 AA</u>	19940708	CA19932127693	19930108
	<u>EP0583240 A1</u>	19940223	EP19910910049	19910502
	<u>EP0583240 A4</u>	19941109	EP19910910049	19910502
	<u>HU67206 A2</u>	19950228	HU19930002978	19910502
	<u>HU9302978 A0</u>	19940128	HU19930002978	19910502
	<u>JP7500795 T2</u>	19950126	JP19910509396T	19910502
	<u>KR19947000264 A</u>	19940221	KR19937003297	19920502
	<u>RU93057880 A</u>	19960610	RU19930057880	19931029
	<u>US5258191 A</u>	19931102	US19920820445	19920113
	<u>US5341949 A</u>	19940830	US19930015284	19930208
	<u>US5443853 A</u>	19950822	US19940256242	19940701
	<u>WO9219506 A1</u>	19921112	WO1991US03028	19910502
	<u>WO9313990 A1</u>	19930722	WO1993US00222	19930108

Probable Assignee: ANCHOR HOCKING PACKAGING CO

Assignee(s):^(std): ANCHOR HOCKING CORP ; ANCHOR HOCKING PACKAGING

Assignee(s): ANCHOR HOCKING PACKAGING CO ; ANCHOR HOCKING PACKAGING CO US ;
CITICORP NORTH AMERICA INC ; CROWN CORK AND SEAL TECHNOLOGIES ;
DEUTSCHE BANK AG ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS ;
DEUTSCHE BANK NEW YORK BRANCH AGENT AG AS ; CHASE MANHATTAN BANK
COLLATERAL AGENT AS ; HAYES THOMAS H ; CROWN PACKAGING TECHNOLOGY
INC

Inventor(s):^(std): HAYES THOMAS H

Inventor(s): HAYES THOMAS H US ; THOMAS H HAYES

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; MACRAE AND CO

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CZ DE DK ES FI FR GA GB GN GR
HU IE IT JP KP KR LI LK LU MC MG ML MN MR MW NL NO NZ PL PT RO RU SD SE
SK SN SU TD TG UA US

International class
^{(IPC 8-9):} B65D41/34 B65D41/48 B65D41/52 B65D43/10 B65D51/14 B65D51/24
B65D81/34 (Advanced/Invention);
B65D41/32 B65D51/00 (Core/Invention)

International class
^{(IPC 1-7):} B65B41/00 B65B55/00 B65D41/16 B65D41/48 B65D41/52 B65D43/00 B65D43/10
B65D53/04 B65D81/34 B65D85/00 H05B6/00

CPC: B65D41/48 B65D51/145 B65D2101/0023 B65D41/3428 B65D51/24 B65D81/3453
B65D2101/0053 B65D2205/00

European class: B65D41/34C1 B65D41/48 B65D51/14B B65D51/24 B65D81/34M1 L65D101/00A3
L65D101/00A3E L65D205/00

US class:

Classification Explorer

Cited documents: US5078290 A, US5009324 A, US4993572 A, US4942277 A, US4813561 A, US4721218 A, US4694970 A, US4694969 A, US4509654 A, US4478349 A, US4473163 A, US4448345 A, US4390552 A, US4362253 A, US4171084 A, US4129226 A, US4024976 A, US4018353 A, US3940004 A, US3930589 A, US3913771 A, US3866782 A, US3850330 A, US3820678 A, US2517542 A, GB2021530 A1, EP0366617 A2, EP0323812 A2, EP0280065 A1, AU604029 B2, AU604029,

Forward Citations: WO9923007, WO9744262, WO9641751, WO9610522, WO9610522, WO16014825, WO15153952, WO14145569, WO14088781, WO11112285, WO06045196, WO05092730, WO04106174, WO04085257, WO02068285, USD668555, USD626790, USD592954, USD587115, USD584145, US9809360, US9795165, US9717272, US9676504, US9630762, US9611073, US9474397, US9469445, US9445631, US9359117, US9340332, US9334082, US9032698, US9022079, US8998030, US8991632, US8915395, US8910781, US8650839, US8556070, US8458996, US8418870, US8251236, US8210377, US8132600, US8100285, US8100277, US8071004, US7954521, US7886928, US7798359, US7798319, US7789254, US7784629, US7780024, US7766178, US7748525, US7644902, US7571829, US7454884, US7401452, US7231753, US7175039, US7134565, US7131250, US7076929, US7004341, US7003928, US6981601, US6974046, US6823651, US6702133, US6688081, US6375023, US6253940, US5992660, US5875906, US5785198, US5740914, US2016318686, US2014374446, US2014326735, US2013233845, US2011215097, US2011215023, US2011052768, US2011036839, US2010307113, US2010282706, US2010200588, US2010065557, US2009241477, US2009236353, US2009223986, US2009061044, US2009057318, US2007108155, US2007095781, US2007090111, US2006278601, US2006231519, US2006138141, US2006091100, US2006081625, US2005115964, US2004182047, US2004149676, US2004084333, US2003178385, US2003150833, JP5442850, JP5442850, JP2011513150, JP2011118551, JP2006526547, FR2897043, ES2187341, EP1857372, EP1732818, EP1633639, EP0949156, DE102005019291, DE102005019291, CN102448842,

Abstract:

Source: US5258191A Easily removable press-on, pry-off closures having movable insert disks in an outer shell are disclosed. Pressing the shell upward to remove it from a container first pries a protrusion inside the shell over a snap rib around the container, then moves the shell upward relative to the disk while the later remains seated on the container, until a disk-lifting projection inside the shell engages the edge of the disk and lifts the disk to break the seal. A tamper evidencing band, if included, is broken before either the shell is pried off or the disk is lifted. The invention can be used in both top load and bottom load embodiments. Also disclosed is a closure with a non-movable disk or integral top and a tamper-evidencing band which is broken by pry-off removal of the closure. Still further, food packages which automatically open when heated in microwave ovens are disclosed. Vacuum-packed food packages having effective head spaces for reducing the times required to retort such packages are also disclosed.

0) US2008067142A – SEALING MEANS FOR A CLOSURE, CLOSURE AND PROCES...

7) Family number: 33366293 (US2008067142A)

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Title: SEALING MEANS FOR A CLOSURE, CLOSURE AND PROCESS

Priority: EP20040051559 20050407 EP20050747178 20050408 EP20050792201 20050901
 EP20050857768 20050802 US20040606240 20040901 US20050574567 20050901
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Family:

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<u>TH41104 B</u>	20140814	TH20061000861	20060228
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<u>WO06117024 A1</u>	20061109	WO2005EP53777	20050802
<u>ZA200702221 A</u>	20080925	ZA20070002221	20070316

Probable Assignee: CREANOVA UNIVERSAL CLOSURES

Assignee(s):^(std): CREANOVA UNIVERSAL CLOSURES CO LTD ; CREANOVA UNIVERSAL CLOSURES LT ; DRUITT RODNEY ; LAGLER LOUIS ; DRUITT ROD ; DRUITT RODNEY M ; CREANOVA UNIVERSAL CLOSURES LTD ; CREANOVA UNIVERSAL CLOSURE LTD ; CREANOVA UNIVERSAL CLOSURES

Assignee(s): CREANOVA UNIVERSAL CLOSURES CO

Inventor(s):^(std): DRUITT ROD ; DRUITT RODNEY ; LAGLER LOUIS ; ROD DRUITT ; RODNEY DRUITT ; LOUIS LAGLER ; LOUIS DRUITT RODNEY LAGLER ; DRUITT RODNEY M

Inventor(s): DRUITT RODNEY LAGLER LOUIS

Agent(s): DAVIES COLLISON CAVE PTY LTD; DAVIES COLLISON CAVE; GOUDREAU GAGE DUBUC; RENTSCH AND PARTNER; REINHOLD COHN AND PARTNERS; OSTROLENK FABER GERB AND SOFFEN; OSTROLENK FABER LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B29C45/14 B65B7/28 B65D39/08 B65D41/00 B65D41/04 B65D41/14 B65D41/32 B65D41/34 B65D41/38 B65D43/16 B65D47/08 B65D47/10 B65D47/36 B65D51/18 B65D53/00 B65D53/02 B65D53/04 B65D55/02 (Advanced/Invention); B65D41/04 B65D41/34 (Advanced/Non-invention); B29C45/14 B65B7/28 B65D41/00 B65D41/04 B65D41/32 B65D41/34 B65D47/00 B65D47/06 B65D47/08 B65D51/18 B65D53/00 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B65D41/04

CPC: B65D41/045 B65D41/3447 B65D41/0428 B65D47/0809 B65D2101/0023 B65D2215/02 B65D2251/1016 B65D2251/1066 B65D47/243 B65D2251/105 B65D41/04

European class: B65D41/04 B65D41/04B2 B65D41/04D2 B65D41/34D1 B65D47/08B1 B65D47/24A2 L65D101/00A3 L65D215/02 L65D251/10D L65D251/10D4 L65D251/10F

US class: 215/235 215/235S 215/237 215/252 215/253 215/253S 215/254 215/254S 215/324 215/329 215/329S 215/341 215/341S 215/343 215/344 215/345 215/354 220/259.1 220/259.100S 220/326 220/835 222/153.06 222/153.060S 222/541.5 222/541.500S 222/556 264/250 264/263 493/114 493/84 53/490 53/490P

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AU1545676 A1, AU1545676, AU1418083 A1, AU1418083,

Forward Citations: WO15128091, WO14193211, WO13129940, WO13007826, WO12095501, WO09053693, WO08068416, WO08068416, USD778160, USD775950, USD756776, USD756234, USD755251, USD741713, USD634200, USD634199, USD633386, US9828146, US9758281, US9533803, US9511906, US9439523, US9428292, US9415909, US9382045, US9169048, US9096359, US9090386, US8763830, US8672158, US8646634, US8596493, US8403159, US8292101, US8276777, US8231020, US7861873, US2016145032, US2015251820, US2015108167, US2015034644, US2014346172, US2014312038, US2013248479, US2013082056, US2013043206, US2012091134, US2011006031, US2011000137, US2010170910, US2008110933, KR101660932, KR101594711, JP2008308181, GB2467057, GB2467057, EP1985549, DE102014204831, CN105059708, CN105008236, CN105008236, CN103596850, CN103596850, CN103402884, CN103342190, CN103342190, CN103342190, CN103342189, CN103342189, CN103318519, CN103298705, CN103298705, CN103287231, CN102514806, AU2012206593,

Abstract:

Source: US2008067142A The present invention is directed to a sealing means for sealing of a neck of a container, especially a container for carbonated beverages. The sealing means comprises a radially deformable outer sealing means suitable to be engaged with an outer free surface of a neck of the container. The outer sealing means comprises an annular base which blends by a blend into a vertical top surface and at least one annular sealing ring arranged at a free end of the annular base, protruding radially inwardly above the inner surface of the base and forming in engaged position with the neck a first contact area with the outer free surface.

0) US2007131641A – CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

8) Family number: 31517864 (US2007131641A)

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Title: CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

Priority:

AU20030900141	20030114	AU20030900678	20030217	AU20030904044	20030804
AU20040261315	20040804	AU20040900141	20040114	AU20030904359	20030815
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: RBC TRUSTEES CI LTD

Assignee(s):^(std): ABACUS ; ABACUS C I LTD ; ABACUS C I LTD TRUSTEE OF T AS ; ABACUS C I LTD COMO FIDEI COMI ; ABACUS C I LTD TRUSTEE FOR AS ; ABACUS C I LTD AS TRUSTEE FOR ; ABACUS C I LTD AS TRUSTEE OF T ; CTECH EQUIPMENT PTY LTD ; WOOLFORD L ; RBC TRUSTEES CI LTD AS TRUSTEE ; HIGGINS CHRISTOPHER

LYNDON ; CTECH CLOSURES PTY LTD ; ABACUS C I COMO FIDEI COMISSARIO DO FIDE LTD

Assignee(s): ABACUS C I LIMITED ; ABACUS TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVI ; ABACUS TRUSTEE FOR BAYVIEW TRUST AS LTD ; ABACUS C I TRUSTEE OF BAYVIEW TR AS LTD ; RBC TRUSTEES LTD ; RBC TRUSTEES CI LTD ; RBC TRUSTEES CI LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS CI TRUSTEE OF BAYVIEW TRUST LTD AS ; ABACUS CI LTD ; RBC TRUSTEES (CI) LTD ; ABACUS CI LIMITED TRUSTEE FOR BAYVIEW TRUST AS ; ABACUS C I TRUSTEE FOR BAYVIEW T AS LTD ; ABACUS C I LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS C I LIMITED COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVIEW TRUST ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST JERSEY ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST ; ABACUS LTD ; ABACUS C I TRUSTEE FOR BAYVIEW TR AS LTD ; ABACUS (C I) LIMITED AS TRUSTEE FOR THE... ; ABACUS (C I) LIMITED COMO FIDEI COMISSARIO DO... ; ABACUS (CI) LTD

Inventor(s):^(std): PETER WILLIAM BROWN ; LYNDON HIGGINS CHRISTOPHER ; HIGGINS CHRISTOPHER LYNDON ; CHRISTOPHER LYNDON HIGGINS ; BROWN PETER WILLIAM ; HIGGINS CHRISTOPHER L

Inventor(s): HIGGINS CHRISTOPHER

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; BROOKS KUSHMAN PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D41/04 B65D41/32 B65D41/34 B65D47/06 B65D47/08 B65D47/20 B65D51/00 B65D51/28 B65D81/32 B65D83/00 (Advanced/Invention);
B65D41/32 B65D41/34 (Advanced/Non-invention);
B65D41/04 B65D41/32 B65D41/34 B65D47/04 B65D47/06 B65D47/08 B65D51/00 B65D51/24 (Core/Invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D101/00 B65D41/34 B65D47/20 B65D51/28

CPC: B65D51/2835 B65D47/06 B65D47/08 B65D41/3409 B65D51/2828 B65D41/0421 B65D41/0428 B65D41/3428 B65D47/0857 B65D51/2807 B65D2101/00

European class: B65D41/04B1A B65D41/04B2 B65D41/34 B65D41/34A1 B65D41/34C1 B65D47/06 B65D47/08 B65D47/08D B65D51/28B1B B65D51/28B1B1 L65D101/00

US class: 215/252

[Classification Explorer](#)

Cited documents: WO9840289 A1, WO9838104 A1, WO9743190 A1, WO05012125 A1, WO03010061 A2, WO03004369 A1, WO02062675 A1, WO0168469 A1, US6230884 BA, US6148996 A, US5950850 A, US5660288 A, US5346082 A, US5038951 A, US5020682 A, US4903865 A, US4813561 A, US4738370 A, US4458821 A, US4457438 A, US2003102280 AA, US2003015490 AA, JP8091402 A2, JP2003519602 T2, JP2003165555 A2, JP11100093 A2, JP11059791 A2, GB2222812 A1, EP1332977 A1, EP1316507 A2,

Forward Citations: WO16009192, WO15004352, WO12130916, WO09154666, WO09154666, WO08061766, WO07082322, WO06013443, WO06013443, WO05077777, US9828146, US9731869, US9382044, US9061801, US8851310, US8807360, US8684225, US8684204, US8356711, US7775386, US2013313287, US2012292321, US2011024423, RU2507137, KR100951526, FR3008393, EP1778555,

Abstract:

Source: US2007131641A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102), a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamper-evident band (110) frangibly connected to said skirt; the neck (10) of the container including a plurality of discretely spaced projections (18) extending outwardly from said neck and adapted to engage with tabs (122) on said tamper-evident band to facilitate breaking of the band (110) from the skirt of the closure.

9) Family number: 8467917 (US5386918A)

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Title: Closure with tamper evidence structure**Priority:** CA19942121086 19940412 US19930052024 19930422

Family:	Publication number	Publication date	Application number	Application date
	AT172684 E	19981115	AT19940302854T	19940421
	AU199459315 A1	19941027	AU19940059315	19940406
	AU676007 B2	19970227	AU19940059315	19940406
	BRPI9401559 A	19941025	BR1994PI01559	19940420
	CA2121086 AA	19941023	CA19942121086	19940412
	CA2121086 C	20051004	CA19942121086	19940412
	CO4180571 A1	19950607	CO19940015910	19940420
	DE69414162 D1	19981203	DE19946014162	19940421
	DE69414162 T2	19990617	DE19946014162T	19940421
	DK0621199 T3	19990705	DK19940302854T	19940421
	EP0621199 A1	19941026	EP19940302854	19940421
	EP0621199 B1	19981028	EP19940302854	19940421
	NZ260261 A	19970324	NZ19940260261	19940407
	TH14096 B	20030110	TH19941000769	19940421
	TH21728 A	19961113	TH19941000769	19940421
	US5386918 A	19950207	US19930052024	19930422
	ZA9402476 A	19951011	ZA19940002476	19940411

Probable Assignee: COLGATE PALMOLIVE CO**Assignee(s):^(std):** COLGATE PALMOLIVE CO**Assignee(s):** COLGATE PALMOLIVE CO NEW YORK N Y US ; COLGATE PALMOLIVE COMPANY ; NEVERAS GEORGE J ; BLASIN CLAUDE**Inventor(s):^(std):** BLASIN CLAUDE ; NEVERAS GEORGE J**Inventor(s):** NEVERAS GEORGE J KENDALL NEW JERSEY US ; GEORGE J NEVERAS ; CLAUDE BLASIN ; BLASIN CLAUDE B 1020 BRUXELLES BE ; Claude ; George J.Blasin ; Neveras**Agent(s):** FB RICE; GRIFFITH HACK; SMART AND BIGGAR; RAMIRO CASTRO DUQUE**Designated states:** AT BE CH DE DK ES FR GB IE IT LI NL SE**International class**
(IPC 8-9): [B65D43/18](#) [B65D43/44](#) [B65D47/08](#) [B65D51/04](#) [B65D55/06](#) (Advanced/Invention);
[B65D47/08](#) [B65D51/00](#) (Core/Invention)**International class**
(IPC 1-7): [B65D](#) [B65D35/44](#) [B65D41/32](#) [B65D41/62](#) [B65D43/16](#) [B65D43/18](#) [B65D43/44](#) [B65D47/08](#) [B65D51/04](#) [B65D55/02](#) [B65D55/06](#)**CPC:** [B65D47/0838](#) [B65D2101/0038](#)**European class:** [B65D47/08B4C](#) [L65D101/00A3C](#)**US class:** [215/235](#) [215/237](#) [215/254](#) [220/254](#) [220/254.3](#) [220/266](#) [220/339](#) [222/556](#)[Classification Explorer](#)**Cited documents:** WO9300271 A1, WO9213774 A1, US5141138 A, US5094361 A, US5069367 A, US4911324 A, US4782964 A, US4759455 A, US4696408 A, US4638916 A, US4519517 A, US4487324 A, FR2565208 A1, EP0490792 A1, EP0309396 A1, EP0210138 B1, DE4127855 A1, DE2355818 A1, AU668695 B2,**Forward Citations:** WO9959886, WO15111017, WO11138137, WO11068487, WO07092866, WO05113365, WO03086891, WO03013971, WO0236454, USD739750, USD716142, USD714144, USD679181, USD440494, US9546027, US9475623, US9272824, US8955705, US8906187, US8899437, US8777030, US8733566, US8646633, US8383215,

US8292101, US8043269, US7861873, US7731042, US7717284, US7685676,
US7546931, US7510095, US7328820, US7303088, US7281638, US7134575,
US7128227, US7128227, US6971531, US6880736, US6848603, US6631820,
US6550626, US6405885, US6347716, US6321923, US6234334, US6116441,
US6063223, US6056142, US6045004, US6003728, US5996859, US5992668,
US5979706, US5927549, US5913435, US5853109, US5709318, US5702033,
US5489035, US2015217910, US2013087523, US2012080450, US2011220673,
US2010067969, US2010043910, US2009324864, US2009294457, US2009120899,
US2009101682, US2008257909, US2008169261, US2007221688, US2007199176,
US2007138123, US2006249474, US2006196909, US2006186079, US2006186078,
US2006071040, US2006024205, US2005067366, US2005061765, US2004200836,
US2004011829, US2003205549, JP4625077, JP2013151326, JP2007537943,
GB2406561, GB2406561, FR2870215, FR2733964, EP1799574, EP1789338,
EP1417136, DE102004045073, DE102004045073,

Abstract:

Source: US5386918A Disclosed is a closure for a container, the closure having a lid hinged to a base. The base of the closure has structure for locking the closure on a dispensing nozzle of the container. The closure has tamper evidence structure, to indicate whether the lid and base have been separated (that is, whether the closure has previously been opened). The tamper evidence structure includes a tear band; the closure cannot be opened without removal of the tear band. The closure is configured, and positioned relative to the dispensing nozzle, such that relatively little area of the closure contacts the material dispensed from the container as the material is dispensed, thereby reducing absorption of material components (e.g., flavors and/or oils of the material dispensed) by the closure. The top surface of the closure lid is configured such that the container and closure can be stably stood on end on the closure lid when the lid is in the closed position. The closure can be held at least two positions on the dispensing nozzle, a first position where the closure is locked on the dispensing nozzle and a second position where the closure is held on the dispensing nozzle but not locked thereon.

0) US4448317A – TAMPER EVIDENT CLOSURES AND PACKAGES

10) Family number: 28673962 (US4448317A)

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Title: TAMPER EVIDENT CLOSURES AND PACKAGES

Priority: CA19840447712 19840217 EP19840101269 19840208 US19880292661 19881230
WO1984US00206 19840213 US19830467791 19830218

Family:

Publication number	Publication date	Application number	Application date
<u>AT39459 E</u>	19890115	AT19840101269T	19840208
<u>AU198426538 A1</u>	19840910	AU19840026538	19840213
<u>AU561982 B2</u>	19870521	AU19840026538	19840213
<u>CA1253116 A1</u>	19890425	CA19840447712	19840217
<u>DE3475769 D1</u>	19890202	DE19843475769	19840208
<u>EP0116892 A2</u>	19840829	EP19840101269	19840208
<u>EP0116892 A3</u>	19850911	EP19840101269	19840208
<u>EP0116892 B1</u>	19881228	EP19840101269	19840208
<u>ES290070 U</u>	19861116	ES19840290070U	19840217
<u>ES290070 Y</u>	19870716	ES19840290070U	19840217
<u>ES290070 Y1</u>	19870814	ES19840290070U	19840217
<u>IE55522 B</u>	19901010	IE19840000379	19840217
<u>IE840379 L</u>	19840818	IE19840000379	19840217
<u>IL70843 A0</u>	19840531	IL19840070843	19840201
<u>IL70843 A1</u>	19870831	IL19840070843	19840201
<u>IN163531 A</u>	19881008	IN1984CA00091	19840206
<u>JP1772225 C3</u>	19930714	JP19840501094	19840213
<u>JP4064941 B4</u>	19921016	JP19840501094	19840213
<u>JP60500524 T2</u>	19850418	JP19840501094T	19840213
<u>KR840007701 A</u>	19841210	KR19840000742	19840216
<u>MX158578 A</u>	19890215	MX19840200380	19840217
<u>NZ207189 A</u>	19870630	NZ19840207189	19840217
<u>US4448317 A</u>	19840515	US19830467791	19830218
<u>US4489841 A</u>	19841225	US19830467794	19830218
<u>US4905851 A</u>	19900306	US19880292661	19881230
<u>WO8403270 A1</u>	19840830	WO1984US00206	19840213
<u>ZA8400458 A</u>	19850227	ZA19840000458	19840120

Probable Assignee: ZAPATA INNOVATIVE CLOSURES INC

Assignee(s):^(std): TRI TECH SYST ; TRI TECH SYSTEMS INT INC ; TRI TECH SYSTEMS INTERNATIONAL INC ; TRI TECH SYSTEMS INTERNAT INC

Assignee(s): TRI TECH SYSTEMS INT ; YODER J SCOTT ; ZAPATA INNOVATIVE CLOSURES INC ; TORAI TEKU SHISUTEMUZU INTERN INC ; TRI TECH SYSTEMS INTERNATIONAL INC ; FIRST FEDERAL SAVING AND LOAN ASSOCIATION OF TOLED ; FIRST FEDERAL SAVING AND LOAN ASSOCIATION OF TOLEDO 701 FIRST FEDERAL PLAZA TOLEDO OH 43624 ; INNOVATIVE CLOSURES INC ; MID AMERICAN BANK AND TRUST CO ; MID AMERICAN NATIONAL BANK AND TRUST CO ; SCHEICH RICHARD A ; MID AMERICAN NATIONAL BANK AND TRUST COMAPNY ; S D TECHNOLOGIES INC ; MID AMERICAN NATIONAL BANK AND TRUST CO 222 SOUTH ; S D TECHNOLOGIES INC FL CORP ; THOMPSON MORTIMER S ; MID AMERICAN NATIONAL BANK AND TRUST CO 222 SOUTH MAIN STREET BOWLING GREEN OHIO 43402

Inventor(s):^(std): ASHER ELI ; ELI ASHER ; MORTIMER S THOMPSON ; STAFFORD THOMPSON MORTIMER ; THOMPSON M S ; THOMPSON MORTIMER S ; THOMPSON MORTIMER STAFFORD ; THOMPSON MS

Inventor(s): TONPUSON MOOTEIMAA SUTATSUFUOODO

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SIM AND MCBURNEY; REINHOLD COHN AND PARTNERS

Designated states: AT AU BE BR CF CG CH CM DE DK FI FR GA GB HU IT JP LI LU MC MR NL NO RO SE SN SU TD TG

International class
(IPC 8-9): B65D41/18 B65D41/34 B65D55/02 (Advanced/Invention);
B65D41/34 (Advanced/Non-invention);
B65D41/02 B65D41/34 B65D55/02 (Core/Invention)

International class
(IPC 1-7): B65D41/04 B65D41/18 B65D41/28 B65D41/34 B65D55/02 B67B1/00 B67B3/00

CPC: Y10S206/807 B65D55/026

European class: B65D55/02G

US class: 206/459.1 206/807 215/203 215/230 215/365

[Classification Explorer](#)

Cited documents: US4678083 A, US4666052 A, US4603785 A, US4591063 A, US4579240 A, US4489841 A, US4461389 A, US4456139 A, US4436213 A, US4432462 A, US4424911 A, US4423822 A, US3984005 A, US3935960 A, US3923198 A, US3923198, US3899295 A, US3896965 A, US3887734 A, US3887734, US3468744 A, US3433152 A, US2939597 A, US2414420 A, US2201205 A, JP59209542,

Forward Citations: WO9205083, WO9106486, WO9106486, WO9128640, WO9128640, WO9047702, WO05021400, US9815593, US9708105, US9637271, US9409686, US9409682, US9334084, US8800471, US8322555, US8286812, US7913870, US7704589, US7682696, US6968968, US6929136, US6478175, US6108475, US6102224, US6029807, US5566846, US5477972, US5284694, US5257705, US5240131, US5236101, US5156720, US5152412, US5145079, US5104704, US5103979, US5064664, US5062928, US5055150, US5022545, US5015318, US4994314, US4927036, US4905851, US4837061, US4801028, US4793500, US4771923, US4736857, US4718553, US2016137381, US2016068311, US2015176818, US2011232560, US2010089922, US2009255897, US2007289935, US2006246802, US2006068168, US2006054526, US2005056645, KR100982879, GB2345067, GB2283735, EP1660383, EP0303400, EP0269317, EP0269317, EP0243545, EP0243545, EP0233077, EA007707, DE4002967, CN105189301, AU597572,

Abstract:

Source: US4448317A A tamper evident closure and package having a container (10), a resealable, substantially rigid closure (12) for closing, opening and reclosing the container (10), color changing means (32a in Figures 1-6) which effect a color change upon stretching, and coacting mechanical means (24, 36, 44 and 46 in Figures 1-6) for uncapping and recapping the closure 10 and for stretching the color changing means (32a) which clearly and unequivocally indicate the condition of the package, e.g., open or closed. Where legends, or other well defined indicia, indicating opening is desired, the color changes can be localized in the skirt by providing thin sections (32a) which stretch preferentially and adjacent thicker sections (38) which remain substantially unstretched. The thin sections (32a) for example can be a legend, or alternatively the thick sections (38) can be the legend while the thin sections (32a) provide a suitable background. The colour changes employed by the invention can be accomplished by such phenomena as stress whitening inherent in various plastic materials. Alternatively, the color changes can be accomplished by mechanisms such as the use of encapsulated staining or coloring agents incorporated in a suitable matrix.

11) Family number: 28688909 (US2003116522A)

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Title: SELF-DRAINING CONTAINER NECK AND CLOSURE**Priority:** US20010026161 20011221 US20020277072 20021021 WO2002US40993 20021220
US20030628599 20030728 US20070668211 20070129

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2002364200 AA</u>	20030715	AU20020364200	20021220
	<u>US2003116522 AA</u>	20030626	US20020277072	20021021
	<u>US2003116524 AA</u>	20030626	US20010026161	20011221
	<u>US2004055992 AA</u>	20040325	US20030628599	20030728
	<u>US2007125785 AA</u>	20070607	US20070668211	20070129
	<u>US6948630 BB</u>	20050927	US20020277072	20021021
	<u>US7168581 BB</u>	20070130	US20030628599	20030728
	<u>US7431168 BB</u>	20081007	US20010026161	20011221
	<u>US7766178 BB</u>	20100803	US20070668211	20070129
	<u>WO03055763 A1</u>	20030710	WO2002US40993	20021220

Probable Assignee: BERRY PLASTICS CORP**Assignee(s):^(std):** JULIAN RANDALL K ; MONTGOMERY GARY V ; REXAM MEDICAL PACKAGING INC ; ROBINSON CLAYTON L ; WILLIAMS DOUGLAS M**Assignee(s):** REXAM MEDICAL PACKAGING INC A DELAWARE CORP ; REXAM MEDICAL PACKAGING INC A CORP OF DELAWARE ; REXAM CLOSURES AND CONTAINERS INC ; REXAM CLOSURES LLC ; BERRY PLASTICS CORP**Inventor(s):^(std):** CLAYTON L ROBINSON ; DOUGLAS M WILLIAMS ; GARY V MONTGOMERY ; JULIAN RANDALL K ; MONTGOMERY GARY V ; RANDALL K JULIAN ; ROBINSON CLAYTON L ; WILLIAMS DOUGLAS M**Inventor(s):** ROBINSON CLAYTON ; MONTGOMERY GARY**Agent(s):** MIDDLETON AND REUTLINGER; MIDDLETON REUTLINGER; JAMES E; SALAZAR JOHN F; BRUGGEMAN CHAD D; JOHN F; CHAD D**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
(IPC 8-9): B65D1/02 B65D41/04 B65D41/34 B65D43/20 B65D51/00 B65D51/20 B65D53/00
B65D53/04 (Advanced/Invention);
B65D39/00 B65D41/34 B65D51/16 B65D77/20 (Advanced/Non-invention);
B65D1/02 B65D41/34 B65D51/18 (Core/Invention);
B65D77/10 (Core/Non-invention)**International class**
(IPC 1-7): B65D1/02 B65D23/00 B65D39/00 B65D41/00 B65D41/02 B65D41/34 B65D47/00
B65D51/00 B65D53/00**CPC:** B65D1/023 B65D1/0246 B65D41/3428 B65D51/20 B65D2251/0015 B65D2251/0093
B65D2577/205 B65D41/045**European class:** B65D1/02D1 B65D1/02D1B B65D41/04D2 B65D41/34C1 B65D51/20 L65D251/00Y2D
L65D251/00Y6M L65D577/20M1**US class:** 215/232 215/252 215/329 215/347 215/349 215/35 215/350 215/43 215/44 215/44S
220/351[Classification Explorer](#)**Cited documents:** WO9099335, WO9009935 A1, WO07042205, WO06002922, US7217454 BB, US7175039 BB, US7168581 BB, US7021478 BA, US7004340 BB, US6948630 BB, US6913157 BB, US6902075 BB, US6893672 BB, US6874647 BB, US6854614 BB, US6848590 BB, US6659297 BB, US6502710 BA, US6488165 BA, US6477823 BA, US6419101 BA, US6382445 BA, US6382443 BA, US6315140 BA, US6302321 BA, US6277478 BA,

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Forward Citations: WO16176672, WO14022229, WO12095191, WO10088940, WO10011624, WO10011624, WO05032964, WO05032964, USD795064, USD769713, USD758789, USD752234, USD750490, USD747649, USD747199, USD724233, USD691046, USD688129, USD688128, US9738409, US9693577, US9604769, US9522759, US9521859, US9505527, US9403310, US9386679, US9338872, US9315306, US9313871, US9242782, US9241508, US9233052, US9145251, US9139326, US9051098, US9033168, US8931243, US8916217, US8910811, US8857644, US8857637, US8851310, US8807360, US8796333, US8785496, US8785495, US8778994, US8778993, US8778992, US8770428, US8756902, US8746489, US8739991, US8708182, US8673242, US8671655, US8652423, US8650839, US8631977, US8609725, US8596477, US8584876, US8460771, US8413830, US8393484, US8308005, US8292102, US8251236, US8217077, US8113367, US8100277, US7960007, US7798359, US7780024, US7766178, US7694835, US7644902, US7637082, US7562510, US7163117, US7159374, US6948630, US2016376076, US2016123496, US2015353247, US2015034611, US2014203048, US2013058845, US2013058844, US2012292321, US2011253666, US2011225934, US2011214897, US2011204016, US2011132926, US2011127268, US2011120998, US2011089134, US2011024423, US2011017739, US2010176134, US2010140271, US2010140208, US2010102021, US2010009042, US2010006532, US2009291174, US2009255929,

US2009188888, US2009156998, US2009090721, US2009008392, US2008314856, US2008302756, US2008296198, US2008257850, US2008203051, US2008197099, US2007210026, US2007187352, US2007142469, US2007125785, US2007093553, US2007045312, US2006201967, US2005284837, US2005263476, US2005155325, US2003116522, JP5966260, JP2013001399, JP2012516817, FR2911584, EP3122645, EP3098175, EP2547597, EP2167385, EP2167385, EP1663355, CN106103295, CN104736248, CN104736248, CN102264604,

Abstract:

Source: US2003116522A A self-draining container neck and closure comprising a container neck having an upper sidewall portion and a lower sidewall portion, the upper sidewall portion being inset from the lower sidewall portion. The container neck also includes a tamper indicating bead having at least one draining notch therein. The instant invention also includes a closure having a plurality of drainage slots disposed in a spaced configuration. The closure is threadably connected to the container neck, the closure and container threads rotatably engage and provide a drainage path there between.

0) US6024255A – TAMPER EVIDENT CLOSURE WITH PUSH–PULL POUR SPOU...

12) Family number: 12867081 (US6024255A)

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Title: TAMPER EVIDENT CLOSURE WITH PUSH–PULL POUR SPOUT
Priority: US19960603148 19960215 US19960749488 19961115 WO1997US20837 19971117
US19980067583 19980428 US19970948342 19971009 US19970927311 19970911

Family:	Publication number	Publication date	Application number	Application date
	BRPI9712769 A	19991026	BR1997PI12769	19971117
	CA2271967 AA	19990514	CA19972271967	19971117
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	WO9821110 A2	19980522	WO1997US20837	19971117
	WO9821110 A3	19981029	WO1997US20837	19971117

Probable Assignee: INT PLASTICS AND EQUIPMENT CORP
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Assignee(s): INT PLASTICS AND EQUIPMENT CORP ; LONG CHARLES J JR ; SILGAN IPEC CORP
Inventor(s):^(std): LONG CHARLES J JR ; LONG JR CHARLES J
Inventor(s): CHARLES JLONG JR ; CHARLES J LONG JR ; LONG CHARLES J
Agent(s): BORDEN LADNER GERVAIS LLP
Designated states: AT BE BR CA CH CN DE DK ES FI FR GB GR IE IT LI LU MC MX NL PT SE
International class
(IPC 8–9): [B65D41/48 B65D47/24](#) (Advanced/Invention);
[B65D41/32 B65D47/04](#) (Core/Invention)
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(IPC 1–7): [B65D41/48 B65D47/24 B67D5/06 B67D5/32](#)
CPC: [Y02W30/807 B65D47/243 B65D41/48 B65D41/485](#)
European class: [B65D41/48 B65D41/48B B65D47/24A2](#)
US class: [215/216 215/256 222/153.06 222/153.07 222/182 222/525](#)

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Forward Citations: WO11039400, WO08048406, WO08034065, WO08034065, WO03062083, WO03026999, WO03004361, WO03004361, WO0230778, USD739500, USD537714, US9815598, US9428308, US9221578, US8464749, US8141578, US7743952, US7681587, US7228979, US7152760, US6874656, US6682678, US6439429, US6286733, US2014197126, US2008302836, US2008232927, US2008093396, US2007133909, US2004251228, US2004245260, US2004166208, FR2917070, EP3027525, EP2000416, EP1332859, CZ300734, AU2002312153, AU2002312153,

Abstract:

Source: US6024255A The present invention relates to a substantially leak proof tamper-evident container closure that combines a reusable, push-pull spout with a snap-on tamper evident closure which is substantially tamper proof. The closure has first and second locking members characterized by the first locking member having an inward flange with an upturned locking edge forming an annular groove in the flange. The push pull resealable pour spout with an opening therein which is partially closed by a second top having a secondary opening therein and a plug space thereabove with upwardly angled legs formed integral with the closure. Integrated into the periphery of the secondary opening is at least one and preferably two annular flanges. The annular flanges engage and create a sealing contact with the annular surface of the plug to provide a seal which is leak proof after many uses. The lower edge of the push-pull pour spout contains a tamper evident band to indicate if the push-pull pour spout has been "tampered" with even in situations where the container closure has not been disturbed. The present invention also optionally provides a dust cover which encloses the push-pull pour spout closure when inserted on the container. The dust cover may be optionally provided with a tamper-evident sealing band which remains intact upon initial installation of the dust cover onto the container and which is broken when the dust cover is initially disturbed. When the dust cover is provided with a tamper-evident sealing band, the use of a band on the lower edge of the pour spout closure for providing tamper-evidency may be eliminated.

0) US2012091134A – TAMPER-EVIDENT CLOSURE AND PACKAGE

13) Family number: 50933437 (US2012091134A)

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Title: TAMPER-EVIDENT CLOSURE AND PACKAGE

Priority: JP20130533864T 20110920 US20100393438P 20101015 US20110037061 20110228
US20110037087 20110228 US20120539692 20120702 WO2011US52320 20110920
WO2011US52326 20110920

Family:

Publication number	Publication date	Application number	Application date
<u>AU2011314171 AA</u>	20120419	AU20110314171	20110920
<u>AU2011314171 BB</u>	20151029	AU20110314171	20110920
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<u>WO12050759 A1</u>	20120419	WO2011US52320	20110920
<u>WO12050760 A1</u>	20120419	WO2011US52326	20110920

Probable Assignee: CLOSURE SYSTEMS INT INC

Assignee(s):^(std): BASHYAM NAVANEETH ; BHATT PRANAV ; CLOSURE SYSTEM INT INC ; CLOSURE SYSTEM INTERNATIONAL INC ; CLOSURE SYSTEMS INT INC ; CLOSURE SYSTEMS INTERNATIONAL INC ; MOLL WILLIAM ; EDIE JOHN ; GEVERS DAVID E ; SADIQ SOHAIL ; TARTOCK RUSS ; TARTOCK RUSSELL ; KLOUZHER SISTEMZ INTERNESHNL INK

Inventor(s):^(std): DAVID E GEVERS ; JOHN EDIE ; NAVANEETH BASHYAM ; PRANAV BHATT ; RUSS TARTOCK ; SOHAIL SADIQ ; WILLIAM MOLL ; TARTOK RASS ; TARTOCK RUSS ; SADIQ SOHAIL ; MOLL WILLIAM ; MOLL UILLYAM ; GEVERS DAVID E ; EDIE JOHN ; BKHATT PRANAV ; BHATT PRANAV ; BASHYAM NAVANEETH ; BASHIAM NAVANIT ; TARTOCK RUSSELL ; SADIK SOKHAIL ; MOLL UILLJAM ; IDAJ DZHON ; DZHEVERS DEVID E

Agent(s): SPRUSON AND FERGUSON; JOHANSSON AND LANGLOIS LTDA; ALGEMEEN OCTROOI EN MERKENBUREAU; BAETEN ERNEST; WOOD PHILLIPS KATZ CLARK AND MORTIMER; NIXON PEABODY LLP; GEIMER STEPHEN D ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
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CPC: B65D41/325 B65D41/3428 B65D2101/003 B65D41/04 B65D51/1661

European class: B65D41/32B B65D41/34C1 L65D101/00A3B

US class: 1/1 215/252 215/253 215/256 215/901 220/214 220/268 220/276 220/288 220/303

[Classification Explorer](#)

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Forward Citations: WO17055574, WO14015342, USD722689, US8471161, US2015027976, US2014021157, US2012193195, EP2874895, EP2874895, EP2784985, CN106255649, CN104797504, CN104470817,

Abstract:

Source: US2012091134A A tamper-indicating plastic closure, and tamper-evident package are disclosed,

wherein the closure includes a pilfer band having a substantially continuous tamper-ring. The tamper-ring extends generally angularly upwardly and inwardly of the closure in a tamper-indicating orientation of the tamper-ring for engagement with a relatively enlarged annular locking ring of the associated container. Notably, the tamper-ring includes a plurality of circumferentially spaced, projections, which preferably comprise relatively thick regions or shoulders, which desirably act to limit lateral movement of the pilfer band with respect to the container by engagement of at least one shoulder with the associated container generally beneath the container locking ring.

0) US4923073A – TAMPER-INDICATING PLASTIC CLOSURE

14) Family number: 3262000 (US4923073A)

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Title: Tamper-indicating plastic closure

Priority: CA19902008769 19900129 US19890303317 19890130 US19890343995 19890426
US19900465301 19900123

Family:

Publication number	Publication date	Application number	Application date
<u>AR246724 A1</u>	19940930	AR19900316049	19900130
<u>AU199048910 A1</u>	19900802	AU19900048910	19900130
<u>AU627270 B2</u>	19920820	AU19900048910	19900130
<u>BRPI9000381 A</u>	19901204	BR1990PI00381	19900130
<u>CA2008769 AA</u>	19900730	CA19902008769	19900129
<u>CA2008769 C</u>	20020319	CA19902008769	19900129
<u>DE69004820 D1</u>	19940113	DE19906004820	19900129
<u>DE69004820 T2</u>	19940616	DE19906004820T	19900129
<u>DK174625 B1</u>	20030728	DK19900000236	19900129
<u>DK23690 A</u>	19900731	DK19900000236	19900129
<u>DK23690 A0</u>	19900129	DK19900000236	19900129
<u>EP0381118 A1</u>	19900808	EP19900101729	19900129
<u>EP0381118 B1</u>	19931201	EP19900101729	19900129
<u>ES2048330 T3</u>	19940316	ES19900101729T	19900129
<u>JP2296666 A2</u>	19901207	JP19900020379	19900130
<u>JP2810936 B2</u>	19981015	JP19900020379	19900130
<u>NO178997 B</u>	19960409	NO19900000407	19900129
<u>NO178997 C</u>	19960717	NO19900000407	19900129
<u>NO900407 A</u>	19900731	NO19900000407	19900129
<u>NO900407 A0</u>	19900129	NO19900000407	19900129
<u>NZ232297 A</u>	19911223	NZ19900232297	19900130
<u>US4923073 A</u>	19900508	US19890303317	19890130
<u>US4938370 A</u>	19900703	US19890343995	19890426
<u>US4938370 B1</u>	20001017	US19890343995	19890426
<u>US4978017 A</u>	19901218	US19900465301	19900123
<u>ZA9000676 A</u>	19901031	ZA19900000676	19900130

Probable Assignee: HC IND

Assignee(s):^(std): HC IND ; ALCOA CLOSURE SYSTEMS INT INC

Assignee(s): ALCOA CLOSURE SYSTEMS INTERNATIONAL INC ; BANK OF NEW YORK MELLON ; CLOSURE SYSTEMS INT ; ALCOA CLOSURE SYSTEMS INT ; H C IND INC ; H C IND ; H C INDUSTRIES INC ; H C INDUSTRIES INC CRAWFORDSVILLE IND US ; H C INDUSTRIES INC CRAWFORDSVILLE IND ; CREDIT SUISSE SYDNEY BRANCH ; CLOSURE SYSTEMS INT INC ; H C IND INC A CORP OF IN ; H C IND INC AN IN CORP ; HC IND INC ; WILDE SHELDON L ; MCBRIDE STEPHEN W

Inventor(s):^(std): SHELDON L WILDE ; SHIERUDON ERU WAIRUDO ; SUCHIIBUN DABURIYU MATSUKUBURA ; SUCHIIBUN DABURYU MATSUKUBURAI ; WILDE SHELDON L ; WILDE SNELDON L ; STEPHEN W MCBRIDE ; MCBRIDE STEPHEN W

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Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; FETHERSTONHAUGH AND CO

Designated states: CH DE ES FR GB IT LI NL SE

International class B65D41/34 B65D55/02 B65D55/08 (Advanced/Invention);
(IPC 8-9); B65D55/02 (Advanced/Non-invention);
B65D41/34 B65D55/02 (Core/Invention)

International class B65D41/00 B65D41/34 B65D55/02 B65D55/06 B65D55/08 B65D55/12
(IPC 1-7);

CPC: B65D41/3428 B65D41/3447

European class: B65D41/34C1 B65D41/34D1

US class: 215/252 215/258

[Classification Explorer](#)

Cited documents: WO8803115 A1, US4923073 A, US4848614 A, US4807771 A, US4801030 A, US4784280 A, US4756438 A, US4751036 A, US4720018 A, US4694969 A, US4674643 A, US4666053 A, US4664279 A, US4635808 A, US4613052 A, US4597241 A, US4572388 A, US4550844 A, US4550843 A, US4511054 A, US4506795 A, US4497765 A, US4469234 A, US4436212 A, US4432461 A, US4418828 A, US4402418 A, US4401227 A, US4394918 A, US4378893 A, US4343754 A, US4278180 A, US4196818 A, US4156490 A, US4147268 A, JP56074445 A2, JP2059154 U, GB2033350 A1, EP0229206 A1, DE3144924 A1, DE2314864 A1, CH672109, AU598641 B2,

Forward Citations: WO9902417, WO9815465, WO9718139, WO9700209, WO9604180, WO9222464, WO9203350, WO9203349, WO14017893, WO09154666, WO0224542, WO0115988, US9181001, US8944292, US8807360, US8763830, US8544666, US7789254, US7575123, US7513377, US7481325, US7451885, US7344039, US7228979, US7198170, US7097061, US6769559, US6739466, US6673298, US6557714, US6394294, US6371317, US6328355, US6325227, US6306330, US6224802, US6213321, US6202872, US6123212, US6089390, US6073809, US5979682, US5950850, US5862953, US5860542, US5749484, US5711447, US5680965, US5660288, US5651299, US5609262, US5564582, US5557999, US5553727, US5542556, US5501349, US5478512, US5456374, US5450973, US5450972, US5413235, US5405032, US5356019, US5328044, US5320234, US5289931, US5273173, US5242068, US5205426, US5167335, US5137163, US5107998, US5074425, US5064084, US5050753, US5007545, US4978017, US2012223103, US2012091134, US2011174761, US2011024423, US2010230374, US2009045158, US2007131642, US2006249477, US2006169666, US2006091100, US2006043053, US2005189312, US2005145629, US2005035084, US2004211744, US2004155007, TR27602, TR25983, JP6255660, JP6024458, JP6016249, JP4121250, JP3422526, JP3382964, JP2591656, JP2012171647, JP2007191206, EP1683732, EP1243520, EP1092640, EP0931001, EP0916587, EP0879180, EP0861792, EP0752373, EP0593396, EP0508702, EP0508396, DE4214151, DE4201997, CN106494740, AU730107, AU649118,

Abstract:

Source: US4923073A A tamper-indicating plastic closure is shown which is configured for mechanical interference with the annular locking ring of an associated container. The closure includes a top wall portion and depending skirt portion, with a circular pilfer band at least partially detachably connected to the skirt portion by a plurality of circumferentially spaced fracturable bridges. Notably, the pilfer band includes an internal, annular interference lip which is skewed or arranged at an angle relative to the vertical axis of the closure. By this construction, the interference lip engages the container locking ring during closure application so as to deform the closure to a non-circular configuration, thus minimizing stressing of the fracturable bridges. During closure removal, the angular configuration of the interference lip creates localized stressing of the fracturable bridges, thus providing serial fracture of the bridges.

15) Family number: 32061506 (US2005145629A)

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Title: CLOSURE AND CONTAINER SYSTEM AND METHOD FOR SEALING A CLOSURE ON A CONTAINER**Priority:** US20040753850 20040107 WO2005US00362 20050107

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2551717 AA</u>	20060627	CA20052551717	20050107
	<u>CA2551717 C</u>	20100622	CA20052551717	20050107
	<u>US2005145629 AA</u>	20050707	US20040753850	20040107
	<u>US7198170 BB</u>	20070403	US20040753850	20040107
	<u>WO05067616 A2</u>	20050728	WO2005US00362	20050107
	<u>WO05067616 A3</u>	20060908	WO2005US00362	20050107

Probable Assignee: BERRY PLASTICS CORP**Assignee(s):^(std):** ENTIRE INTEREST ; KERR GROUP INC ; HERR JAMES E ; BERRY PLASTICS CORP

Assignee(s): BERRY STERLING CORP ; BANK OF AMERICA NA ; BANK OF AMERICA NA ABL COLLATERAL AGENT AS ; BANK OF AMERICA NA COLLATERAL AGENT AS ; WELLS FARGO BANK NA ; LANDIS PLASTICS LLC ; SETCO LLC ; TUBED PRODUCTS LLC ; GRAFCO IND PARTNERSHIP LTD ; WELLS FARGO BANK NA COLLATERAL AGENT AS ; DEUTSCHE BANK TRUST CO ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLAT AS ; CAPTIVE PLASTICS INC ; GRAFCO IND ; CREDIT SUISSE ADMINISTRATIVE AGENT AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERA ; DEUTSCHE BANK TRUST CO AMERICAS COLLATERAL AGENT A ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERAL AGENT AS ; DEUTSCHE BANK TRUST CO AMERICAS COLLATERAL AGENT AS ; CREDIT SUISSE AS ADMINISTRATIVE AGENT ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AS TERM COLLAT

Inventor(s):^(std): HERR JAMES E**Inventor(s):** HERR JAMES**Agent(s):** SMART AND BIGGAR; KENYON AND KENYON; BARNES AND THORNBURG LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class B65D41/06 B65D41/34 B65D41/36 B65D50/06 B65D55/02 (Advanced/Invention);
 (IPC 8-9): B65D41/06 (Advanced/Non-invention);
B65D41/04 B65D41/34 B65D50/00 B65D55/02 (Core/Invention)

International class B65D41/06
 (IPC 1-7):

CPC: B65D41/06 B65D2101/0038**European class:** B65D41/06 L65D101/00A3C**US class:** 215/222 215/252 215/330 215/331 215/332 220/293 220/298 220/300[Classification Explorer](#)

Cited documents: US801283 A, US6382444 BA, US6305579 BA, US6119883 A, US6085921 A, US6056136 A, US6015054 A, US5950850 A, US5927532 A, US5894124 A, US5829613 A, US5749484 A, US5685445 A, US5450972 A, US5449078 A, US5341947 A, US5320233 A, US5307946 A, US5307945 A, US5174465 A, US5009323 A, US4936475 A, US4923073 A, US4875594 A, US4828127 A, US4709830 A, US4700860 A, US4567991 A, US4560076 A, US4547332 A, US4534480 A, US4530438 A, US4448318 A, US4380299 A, US4378894 A, US4241842 A, US4190169 A, US3913772 A, US3692200 A, US3460703 A, US3197055 A, US3165220 A, US201283 A, US2003071007 AA, US2002062626 AA, US2002033374 AA, US2000407 A, US1683388 A, GB2148259 A1,

GB2096110 A1, EP0341949 A1, DE3842443 A1,

Forward Citations: WO12153540, USD671834, US9615725, US9056698, US8925755, US8720717, US8708176, US8701921, US8424695, US8267980, US8141793, US8132684, US8016862, US7755489, US7510094, US2015015035, US2014275781, US2013087573, US2012261378, US2011011947, US2010162900, US2009057260, US2008243185, US2008223807, US2008001741, US2007012645, US2006273061, JP5755020, JP2012236640, CN102781786,

Abstract:

Source: US2005145629A A system includes a container including projections equi-spaced around a neck region. Each of the projections includes a cam surface, a lock surface, a ramp, and a clamping surface. The system also include a closure including a closure plane and a circumferentially depending outer skirt extending from the closure plane, a tamper-evident arrangement frangibly connected to an edge of the outer skirt opposite the closure plane, and pairs of lugs equi-spaced around an inner sidewall formed by the outer skirt and the tamper-evident arrangement. A lock lug of each pair of lugs is arranged on the tamper-evident arrangement and a sealing lug of each pair of lugs is arranged on the outer skirt. In the system, each lock lug is adapted to engage the cam surface of a corresponding projection during an initial application operation. The lock lug is adapted to engage the lock surface of the corresponding projection after the initial application operation. In the system each sealing lug is adapted to engage the ramp of the corresponding projection during the initial application operation. The sealing lug is adapted to engage the clamping surface of the corresponding projection after the initial application operation. A number of pairs of lugs may be equal to a number of projections. A method is provided for sealing a closure on a container in a tamper-evident manner using the system. A method is provided for removing a closure from a container sealed with a tamper-evident device.

16) Family number: 49092905 (US2011139783A)

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Title: TAMPER-EVIDENT CLOSURE**Priority:** US20090286739P 20091215 US20100832809 20100708

Family:	Publication number	Publication date	Application number	Application date
	<u>US2011139783 AA</u>	20110616	US20100832809	20100708
	<u>US8464886 BB</u>	20130618	US20100832809	20100708

Probable Assignee: BERRY PLASTICS CORP**Assignee(s):^(std):** BERRY PLASTICS CORP ; FISHER SCOTT L**Assignee(s):** US BANK NATIONAL ASSOCIATION ; CREDIT SUISSE AG ; BANK OF AMERICA NA**Inventor(s):^(std):** FISHER SCOTT L**Agent(s):** BARNES AND THORNBURG LLP

International class B65D17/34 B65D55/16 (Advanced/Invention);
 (IPC 8-9): B65D51/18 (Advanced/Non-invention)

CPC: B65D43/161 B65D47/088 B65D51/246 B65D83/06 B65D2101/0038**European class:** B65D43/16A B65D47/08D4C B65D51/24H B65D83/06 L65D101/00A3C**US class:** 220/254.2 220/254.3 220/270 220/375 220/375S[Classification Explorer](#)

Cited documents: USD539647 S1, USD495256 S1, US8113377 BB, US7845519 BB, US7303088 BB, US7261217 BB, US7114627 BB, US7021482 BB, US6886708 BB, US6644491 BB, US6422411 BA, US5219087 A, US5052572 A, US4921744 A, US4658980 A, US4621744 A, US4610371 A, US4592480 A, US4463869 A, US3675812 A, US3187964 A, US2009101674 AA, US2009101647 AA, US2009101645 AA, US2008264961 AA, US2008047976 AA, US2007215619 AA, US2007056972 AA, US2006144874 AA, US2006118556 AA, US2005040168 AA, US2004226950 AA,

Forward Citations: USD734149, USD676739, USD675477, US9782326, US9371162, US2016166473, US2010140304, EP3114039, AT13647,

Abstract:

Source: US2011139783A A container closure includes a body that is adapted to mount on an underlying container to cover a mouth opening into an interior region formed in the container. The container closure further includes flip-top caps mounted for movement relative to the body to open and close dispensing apertures formed in the body. The container closure also includes a tamper band coupled to the flip-top caps and to the body until a consumer opens the flip-top caps for the first time.

0) US5782369A – LINERLESS CLOSURE FOR CONTAINER

17) Family number: 28849932 (US5782369A)

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Title: LINERLESS CLOSURE FOR CONTAINER

Priority: AU1993PM00705 19930819 AU19940074544 19940819 AU1994PM04717 19940325
WO1994AU00486 19940819

Family:

Publication number	Publication date	Application number	Application date
<u>AT186886 E</u>	19991215	AT19940924166T	19940819
<u>AU199474544 A1</u>	19950314	AU19940074544	19940819
<u>AU678044 B2</u>	19970515	AU19940074544	19940819
<u>BRPI9407354 A</u>	19961008	BR1994PI07354	19940819
<u>CA2169725 AA</u>	19960216	CA19942169725	19940819
<u>CN1041396 C</u>	19981230	CN19941008171	19940818
<u>CN1104167 A</u>	19950628	CN19941008171	19940818
<u>CN2250321 Y</u>	19970326	CN19942018126U	19940818
<u>DE69421818 D1</u>	19991230	DE19946021818	19940819
<u>DE69421818 T2</u>	20000309	DE19946021818T	19940819
<u>DK0714367 T3</u>	20000403	DK19940924166T	19940819
<u>EP0714367 A1</u>	19960605	EP19940924166	19940819
<u>EP0714367 A4</u>	19980121	EP19940924166	19940819
<u>EP0714367 B1</u>	19991124	EP19940924166	19940819
<u>ES2140549 T3</u>	20000301	ES19940924166T	19940819
<u>GR3032472 T3</u>	20000531	GR20000400166T	20000125
<u>HU74492 A2</u>	19970128	HU19960000284	19940819
<u>HU9600284 A0</u>	19960429	HU19960000284	19940819
<u>IL110654 A0</u>	19941111	IL19940110654	19940814
<u>IL110654 A1</u>	19971120	IL19940110654	19940814
<u>IN181348 A</u>	19980523	IN1994CA00663	19940818
<u>JP3521203 B2</u>	20040419	JP19950506653T	19940819
<u>JP9501636 T2</u>	19970218	JP19950506653T	19940819
<u>KR100305456 B1</u>	20020406	KR19960700839	19960217
<u>KR19960703774 A</u>	19960831	KR19960700839	19960217
<u>KR19967003774 A</u>	19960831	KR19967000839	19940819
<u>MY127856 A</u>	20061229	MY19940002184	19940819
<u>NZ271041 A</u>	19970526	NZ19940271041	19940819
<u>PL177645 B1</u>	19991231	PL19940313035	19940819
<u>PL313035 A1</u>	19960527	PL19940313035	19940819
<u>RU2125958 C1</u>	19990210	RU19960105413	19940819
<u>RU96105413 A</u>	19980627	RU19960105413	19960319
<u>SA498 B1</u>	20051206	SA19940150239	19941015
<u>SG43080 A1</u>	19971017	SG19960003373	19940819
<u>TH21442 A</u>	19961029	TH19941001736	19940818
<u>TW252082 B</u>	19950721	TW19940107539	19940817
<u>US5782369 A</u>	19980721	US19960602754	19960215
<u>WO9505321 A1</u>	19950223	WO1994AU00486	19940819
<u>ZA9406320 A</u>	19950317	ZA19940006320	19940819

Probable Assignee: BERRY PLASTICS CORP

Assignee(s):^(std):

CLOSURES AND PACKAGING SERV LTD ; PREC VALUE AUSTRALIA PTY LTD ;
PRECISION VALVE AUSTRALIA ; VALVE AUSTRALIA PTY LTD ; PRECISION VALVE
TRALIA CO LTD ; TANSEY CHARLES MARTIN ; PRESIZHN VEHLV AUSTREHLIA PTI
LIMITED ; PRECISION VALVE AUSTRALIA PTY LTD ; PREC VALVE AUSTRALIA PTY
LTD

Assignee(s): PRECISION VALVE TRALIA CO ; PRECISION VALUE AUSTRALIA PTY LTDAU ;
Precision Valve Australia Pty Limited. ; PRECISION VALUE AUSTRALIA PTY LTD ;
REXAM CLOSURE SYSTEMS LLC ; PRECISION VALVE CORP ; PRECISION VALVE
AUSTRALIA PTY LIMITED ; CLOSURES AND PACKAGING SERVICES LIMITED ;
CLOSURES AND PACKAGING SERVICES LTD ; CLOSURES AND PACKAGING
SERVICES LTD RT ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT ;
BERRY PLASTICS CORP

Inventor(s):(std): TANSEY C M ; TANSEY CHARLES ; TANSY C M ; TRANSEY CHARLES MARTIN ;
TANSEY CHARLES MARTIN ; TANSEY CHARLES M ; CHARLES MARTIN TANSEY ;
CHARLES MARTIN TANSEY ; CHARL Z MARTIN TEHNZI

Inventor(s): Charles Martin ; Tansey ; C M TANSEY ; C M TANSY ; CHARL'Z MARTIN TEHNZI

Agent(s): FB RICE; FB RICE PTY LTD; KIRBY EADES GALE BAKER; REINHOLD COHN AND
PARTNERS

Designated states: AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK ES FI FR GA
GB GE GN GR HU IE IT JP KE KG KP KR KZ LI LK LT LU LV MC MD MG ML MN MR
MW NE NL NO NZ PL PT RO RU SD SE SI SK SN TD TG TJ TT UA US UZ VN

International class
(IPC 8-9): A41B13/04 A61F13/15 A61F13/49 A61F13/56 A61F13/62 A61F5/44 B65D41/00
B65D41/04 B65D41/34 B65D53/02 (Advanced/Invention);
B65D41/04 B65D53/02 (Advanced/Non-invention);
A41B13/00 A61F13/15 A61F13/56 A61F5/44 B65D41/04 B65D41/34
B65D53/00 (Core/Invention);
B65D41/00 (Core/Non-invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D B65D41/00 B65D41/01 B65D41/02 B65D41/04 B65D41/34 B65D53/00 B65D53/02
B67B3/20

CPC: Y10S215/01 B65D41/3447 B65D41/0428 B65D41/3428

European class: B65D41/04B2 B65D41/34C1 B65D41/34D1

US class: 215/252 215/331 215/344 215/345 215/DIG.1

[Classification Explorer](#)

Cited documents: WO9402371 A1, US5197621 A, US5090788 A, US5050753 A, US5004112 A, US4739893
A, US4598835 A, US4540102 A, US3203571 A, US3067900 A, LU40729 A, GB2021530
A1, EP0460813 A2, EP0293901 A1, AU7417581 A1, AU711461 A1, AU649118 A1,
AU3773789 A1, AU257926 B2,

Forward Citations: WO9903746, WO11057111, WO11057111, WO09154666, WO09154666, WO06024550,
WO04007296, WO04007296, WO0200521, WO0064774, USD538654, USD508204,
USD507745, US8807360, US8490786, US7905820, US7703617, US7637384,
US7469795, US7451898, US7431877, US6991123, US6874648, US6805252,
US6802428, US6772894, US6527132, US6394294, US6382445, US6338414,
US6325228, US6126026, US6082569, US2011024423, US2008314000, US2006140745,
US2005184433, US2005072751, US2004256347, US2004200798, US2004168999,
US2004155006, US2004045925, US2003155323, US2003116523, US2003057175,
RU2507137, JP2011519330, JP2003276758, EP2065314, EP1799573, EP1354811,
EP1028900, DE10297200, CN102700823, CN102700822, AU2009260868,

Abstract:

Source: US5782369A PCT No. PCT/AU94/00486 Sec. 371 Date Feb. 15, 1996 Sec. 102(e) Date Feb. 15, 1996
PCT Filed Aug. 19, 1994 PCT Pub. No. WO95/05321 PCT Pub. Date Feb. 23, 1995A closure for a container
having a two portion sealing rib projecting downwardly from the underside of the top. The first portion of the rib
being contiguous with the top and the second portion being frusto-conical and contiguous with the end of the first
portion and extending radially inwardly to terminate in a circular free edge. The upper surface of the second
portion has an engagement means comprising a continuous annular ridge which engages with the underside of
the top of the closure which in turn has a continuous annular ridge positioned inwardly and adjacent the first
portion of the sealing rib. A closure for a carbonated liquid container having a sealing means which has attached
thereto an abutment which will firmly engage with the thread on a neck of container if the closure is over-torqued
thereby preventing missing of the closure off the container.

0) US2003141271A – COMPOSITE CLOSURE HAVING DISK TIGHTENING FEATUR...

18) Family number: 28878952 (US2003141271A)

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Title: COMPOSITE CLOSURE HAVING DISK TIGHTENING FEATURE

Priority: EP20030734665 20030110 US20020062115 20020131 US20030721029 20031124
US20070621463 20070109 US20030721029 20031125 WO2003EP00275 20030110

Family:

Publication number	Publication date	Application number	Application date
AT312023 E	20051215	AT20030734665T	20030110
AU200248928 A1	20030807	AU20020048928	20020625
AU200248928 A5	20030807	AU20020048928	20020625
AU2003239229 AA	20030902	AU20030239229	20030110
AU785454 B2	20070712	AU20020048928	20020625
BRPI0306977 A	20041214	BR2003PI06977	20030110
BRPI0306977 B1	20140128	BR2003PI06977	20030110
CA2469907 AA	20040610	CA20032469907	20030110
CA2469907 C	20110322	CA20032469907	20030110
DE60302650 D1	20060112	DE20036002650	20030110
DE60302650 T2	20060614	DE20036002650T	20030110
DK1470054 T3	20060306	DK20030734665T	20030110
EP1470054 A2	20041027	EP20030734665	20030110
EP1470054 B1	20051207	EP20030734665	20030110
ES2251690 T3	20060501	ES20030734665T	20030110
MXPA04007232 A1	20041029	MX2004PA07232	20040727
SI1470054 T1	20060630	SI20030030190T	20030110
US2003141271 AA	20030731	US20020062115	20020131
US2004149676 AA	20040805	US20030721029	20031125
US2007108155 AA	20070517	US20070621463	20070109
US6662958 BB	20031216	US20020062115	20020131
US7175039 BB	20070213	US20030721029	20031125
US7175039 BB	20070213	US20030721029	20031124
US7784629 BB	20100831	US20070621463	20070109
WO03064276 A2	20030807	WO2003EP00275	20030110
WO03064276 A3	20040205	WO2003EP00275	20030110

Probable Assignee: CROWN CORK AND SEAL TECH CORP

Assignee(s):^(std): CROWN CORK AND SEAL TECH CORP ; CROWN CORK AND SEAL TECHNOLOGI ;
CROWN CORK AND SEAL TECHNOLOGIES CORP ; METAL BOX PLC ; CROWN
PACKAGING TECHNOLOGY INC

Assignee(s): DEUTSCHE BANK NEW YORK BRANCH AGENT AG AS ; MARTIN JAMES L ; GERMAN
GALEN ; DEUTSCHE BANK NEW YORK BRANCH COLLATERAL AGENT AG AS ;
DEUTSCHE BANK AG ; CROWN CORK AND SEAL TECHNOLOGIES ;
CARNAUDMETALBOX PLC ; CITICORP NORTH AMERICA INC ; CITICORP NORTH
AMERICA INC COLLATERAL AGENT AS

Inventor(s):^(std): GERMAN GALEN ; GERMAN GALEN G ; JAMES L MARTIN ; MARTIN JAMES L ;
MARTIN L

Inventor(s): MARTIN JAMES ; GALEN G GERMAN ; GALEN GERMAN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FETHERSTONHAUGH
AND CO; WOODCOCK WASHBURN LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO
CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW
HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG

MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL
SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D41/04 B65D41/34 B65D45/00 B65D51/14 (Advanced/Invention);
B65D51/00 (Core/Invention)

International class
(IPC 1-7): B65D41/34 B65D45/30 B65D45/32 B65D51/14 G65D41/34

CPC: B65D41/3423 B65D51/145

European class: B65D41/34C B65D51/14B

US class: 215/252 215/274 215/276 215/350 220/319

[Classification Explorer](#)

Cited documents: WO9923007 A1, US7175039 BB, US6722513 BA, US6662958 BB, US6502710 BA, US6276543 BA, US6220466 BA, US6056136 A, US5839592 A, US5809860 A, US5685443 A, US5660290 A, US5443853 A, US5346082 A, US5341949 A, US5258191 A, US5078290 A, US5062538 A, US5031787 A, US5027964 A, US5009324 A, US4993572 A, US4989740 A, US4981230 A, US4880127 A, US4852753 A, US4813561 A, US4809858 A, US4801029 A, US4782968 A, US4748735 A, US4721219 A, US4705183 A, US4694970 A, US4694969 A, US4679696 A, US4676696 A, US4473163 A, US4408694 A, US4121729 A, US4093094 A, US4066181 A, US3930589 A, US3913772 A, US3913771 A, US2003127419 AA, EP0280024 A1,

Forward Citations: WO10136414, WO08053014, WO05019059, USD682107, USD682106, USD682105, USD682104, USD681459, USD656818, USD652297, USD651082, USD651081, USD650670, USD650669, USD650275, USD647799, USD645741, US9688451, US9387959, US9315306, US9278784, US9242782, US9051088, US8899091, US8733576, US8708182, US8650839, US8636161, US8596477, US8418870, US8251236, US8100277, US7798359, US7784629, US7780024, US7766178, US7644902, US7175039, US6974046, US6874647, US2015122769, US2013205718, US2011253666, US2011036134, US2011017739, US2011011866, US2011000912, US2010003109, US2009223986, US2009090721, US2008073310, US2007187352, US2007163988, US2007125785, US2007108155, US2005284837, US2004149676, US2004108294, US2003150833, EP2253396, EP2228152, EP1918041, CN104627504, CN102448842,

Abstract:

Source: US2003141271A A composite closure includes a band and an insert disk. A contact surface urges downwardly against the disk even while the band moves longitudinally relative to the disk or container. The closure has a fully tightened position in which the band's ring contacts the disk's annular channel, a loose position in which the ring is spaced apart from the annular channel, and an intermediate tightened position in which the ring is spaced apart from the disk and in which the contact surface urges against the curl. A retaining feature, which presses upwardly against the disk during the opening process, defines a gap in which the disk curl is disposed.

19) Family number: 3311202 (US4744480A)

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Title: TAMPER-EVIDENT CONTAINER-CLOSURE

Priority: CA19860525475 19861216 US19850810923 19851219 US19870139275 19871229
US19880236408 19880825 US19870139467 19871229

Family:	Publication number	Publication date	Application number	Application date
	CA1281001 A1	19910305	CA19860525475	19861216
	DE3674903 D1	19901115	DE19863674903	19861209
	EP0228618 A2	19870715	EP19860117121	19861209
	EP0228618 A3	19880420	EP19860117121	19861209
	EP0228618 B1	19901010	EP19860117121	19861209
	ES2018156 B3	19910401	ES19860117121T	19861209
	US4744480 A	19880517	US19850810923	19851219
	US4895265 A	19900123	US19880236408	19880825
	US4904435 A	19900227	US19870139275	19871229

Probable Assignee: WEST PHARMACEUTICAL SERVICES INC

Assignee(s):^(std): WIMMER PHARMA GUMMI GMBH ; LUCH DANIEL ; PHARMA GUMMI WIMMER WEST GMBH ; WEST CO

Assignee(s): WEST CO PHOENIXVILLE PA A CORP OF PA ; WEST CO INC THE ; PHARMA GUMMI WIMMER WEST GMBH 5180 ESCHWEILER DE ; WEST CO INC ; WEST PHARMACEUTICAL SERVICES INC ; THE WEST COMPANY ; THE WEST CO ; BABCOCK DAVID E

Inventor(s):^(std): BABCOCK DAVID E ; BABCOK DAVID E ; LUCH DANIEL

Inventor(s): LUCH DANIEL WILLIAMSPORT PA 17701 US

Agent(s): BORDEN LADNER GERVAIS LLP

Designated states: BE CH DE ES FR GB IT LI NL SE

International class [B26F1/18](#) [B26F1/20](#) [B65D41/34](#) (Advanced/Invention);
(IPC 8-9): [B26F1/00](#) [B65D41/34](#) (Core/Invention)

International class [B29C53/02](#) [B65D1/02](#) [B65D41/34](#)
(IPC 1-7):

CPC: [Y10S215/901](#) [Y10S425/809](#) [B65D41/3447](#) [B26F1/18](#) [B26F1/20](#) [B26F2210/04](#)

European class: [B26F1/18](#) [B26F1/20](#) [B65D41/34D1](#) [L26F210/04](#)

US class: [215/252](#) [215/258](#) [215/31](#) [215/43](#) [215/44](#) [215/901](#) [264/154](#) [264/268](#) [425/809](#)

[Classification Explorer](#)

Cited documents: US4669623 A, US4613052 A, US4595547 A, US4588100 A, US4567993 A, US4565295 A, US4497765 A, US4436212 A, US4398875 A, US4380299 A, US4299328 A, US3374913 A, US3348718 A, US3329295 A, US2134178 A, GB2177384 A1, FR2549806 A1, EP0096351 A1, EP0052804 A1, AU464605 B2,

Forward Citations: WO9631404, WO14193211, WO10029394, WO09099832, WO09099832, WO09060291, WO07089552, WO07089552, WO05070779, WO04004993, WO0216217, USD630093, US9511905, US9211979, US9187217, US9102448, US8528757, US8522991, US8490804, US8453856, US8413830, US8413829, US8308005, US8308002, US7673543, US7575123, US7121419, US7059232, US6877624, US6826994, US6817276, US5979682, US5971182, US5964363, US5964139, US5950849, US5809860, US5755346, US5557999, US5405032, US5402901, US5400913, US5307943, US5281385, US5257724, US5143235, US5005720, US4993571, US2015069007, US2014319093, US2009223963, US2009188888, US2009001042, US2008092369, US2006163189, US2005258128, US2005223867, US2005167879, US2005005757, RU2494026, JP6204621, JP4949161, JP2009524561, JP2009029483, FR2813288, FR2798363, FR2788254, FR2686574, EP2792610, EP1976779, EP1976778, EP1311439, EP0621114, EP0533633, EP0371920, BE1009511, AU710291,

Abstract:

Source: US4744480A A container and tamper evident closure. The container has a threaded neck, first and second beads spaced below the threads and a groove between the beads. A threaded closure has a tamper-evident band connected to the lower terminal edge of the closure by a series of spaced, facturable bridges and retaining means cooperating with one bead to fracture the bridges when the closure is unscrewed. The band has a series of angularly disposed tabs which cooperate with the lower edge of the closure to limit lateral displacement and telescoping of the band when initially applied to the container.

20) Family number: 42726276 (US2010200155A)

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Title: SECURITY SYSTEM FOR ARTICLES IN TRANSIT

Priority: AU20070903284 20070619 AU20070903284P 20070619 AU20070904211 20070806
 AU20080902339 20080513 AU20080265504 20080619 AU20070904211P 20070806
 WO2008AU00885 20080619 AU20080902339P 20080513 US20090665581 20091218
 US20130750448 20130125 CN200880104000 20080619

Family:

Publication number	Publication date	Application number	Application date
<u>AU2008265504 AA</u>	20081224	AU20080265504	20080619
<u>AU2008265504 BB</u>	20120913	AU20080265504	20080619
<u>CA2694031 AA</u>	20081224	CA20082694031	20080619
<u>CA2694031 C</u>	20151222	CA20082694031	20080619
<u>CN101808547 A</u>	20100818	CN200880104000	20080619
<u>CN101808547 B</u>	20121114	CN200880104000	20080619
<u>CN102860649 A</u>	20130109	CN201210229146	20080619
<u>CN102860649 B</u>	20140806	CN201210229146	20080619
<u>CN103924850 A</u>	20140716	CN201410073641	20080619
<u>CN103924850 B</u>	20170412	CN201410073641	20080619
<u>EP2162033 A1</u>	20100317	EP20080756965	20080619
<u>EP2162033 A4</u>	20150218	EP20080756965	20080619
<u>HK1147407 A1</u>	20130712	HK20110101558	20110217
<u>HK1180196 A1</u>	20150724	HK20130107667	20130702
<u>HK1200197 A1</u>	20150731	HK20150100519	20150116
<u>IN00104MN2010 A</u>	20100716	IN2010MN00104	20100118
<u>MY150417 A</u>	20140115	MY20090005433	20080619
<u>NZ582672 A</u>	20120727	NZ20080582672	20080619
<u>SG182217 A1</u>	20120730	SG20120045696	20080619
<u>TW200917991 A</u>	20090501	TW20080122850	20080619
<u>TWI486137 B</u>	20150601	TW20080122850	20080619
<u>US2010200155 AA</u>	20100812	US20080665581	20080619
<u>US2013133165 AA</u>	20130530	US20130750448	20130125
<u>US8388025 BB</u>	20130305	US20080665581	20080619
<u>US9157257 BB</u>	20151013	US20130750448	20130125
<u>WO08154686 A1</u>	20081224	WO2008AU00885	20080619
<u>ZA200909220 A</u>	20110525	ZA20090009220	20091223

Probable Assignee: SECUROSEAL HOLDINGS LLC**Assignee(s):^(std):** MROCKI DION ; SECUROSEAL PTY LTD ; TALINTYRE BEN ; WIEBENGA ROD ; WIEBENGA ROD ANTHONY ; SECUROSEAL PTY LTD**Assignee(s):** NEFFTEKX HOLDING V BV ; SECUROSEAL HOLDINGS LLC ; SECUROSEAL NETHERLANDS BV**Inventor(s):^(std):** BEN TALINTYRE ; DION MROCKI ; MROCKI DION ; ROD WIEBENGA ; TALINTYRE BEN ; WIEBENGA ROD ; WIEBENGA ROD ANTHONY**Inventor(s):** ROD ANTHONY WIEBENGA**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; BORDEN LADNER GERVAIS LLP; CABINET PLASSERAUD; AMICA LAW LLC; WESTMAN CHAMPLIN AND KELLY PA; DAVID D; WESTMAN CHAMPLIN AND KELLY P A; WESTMAN CHAMPLIN AND KOEHLER PA**Designated states:**

AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI
CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH
GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC
LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE
NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY
SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): A44B11/00 A45C A45C13/00 A45C13/18 A45C13/20 A45C13/30 A45C13/42 B29C51/16
B32B3/04 B32B3/10 B32B3/30 B32B33/00 B32B7/14 B42D15/00 B65D65/28 C09J7/02
E05B73/00 G09C3/00 G09F G09F3/00 G09F3/02 G09F3/03 G09F3/08 G09F3/14
G09F3/20 (Advanced/Invention);
B65D33/34 (Advanced/Non-invention);
A44B11/00 A45C13/00 A45C13/30 B29C51/00 B32B3/04 B32B3/10 B32B3/30 B32B33/00
B32B7/14 B65D65/22 C09J7/02 G09F3/03 (Core/Invention);
A45C E05B G09F (Subclass/Invention)

International class
(IPC 1-7): A45C13/00 A45C13/18 A45C13/20

CPC: E05B73/0029 A45C13/20 A45C13/30 A45C13/42 G09F3/0292 G09F3/0335 G09F3/037
Y10T24/45225 Y10T24/50 Y10T29/49826 Y10T156/1028 Y10T428/1476 Y10T428/15
Y10T428/24231 Y10T428/24314 Y10T428/24331 Y10T428/24612 Y10T428/24826
Y10T428/28 Y10T428/2848

European class: A45C13/20 G09F3/02D2 G09F3/03A4B G09F3/03A8

US class: 1/1 156/212 24/591.1 24/591.100S 24/704.1 283/70 283/80 29/428 40/6 40/663 40/664
40/665 428/126 428/126S 428/136 428/136S 428/138 428/138S 428/172 428/172S
428/198 428/198S 428/343 428/343S 428/354 428/354S 428/41.8 428/41.800S 428/43
428/43S

[Classification Explorer](#)

Cited documents: WO9701495 A1, WO9312513 A1, WO8802903 A1, WO07041798 A1, WO06123952 A1,
WO06096908 A1, WO06086759 A2, WO02070368 A2, US902965 A, US8373566 BB,
US7861835 BB, US675318 A, US6695364 BB, US6694655 BB, US6430974 BA,
US6372341 BA, US6364365 BA, US6304183 BA, US6267505 BA, US6196716 BA,
US6189249 BA, US6050622 A, US6003208 A, US5915629 A, US5890345 A, US5882320
A, US5881435 A, US5683774 A, US5560657 A, US5551729 A, US5510768 A,
US5451282 A, US5399021 A, US5318817 A, US5224244 A, US4965115 A, US4501049
A, US4393548 A, US4379538 A, US4081882 A, US4065343 A, US343849 A, US3257694
A, US3231992 A, US2009194210 AA, US2009031594 AA, US2008257673 AA,
US2007221461 AA, US2006225332 AA, US2005204515 AA, US2005179548 AA,
US2004206431 AA, US2004164564 AA, US2004101664 AA, US2003168868 AA,
US2002038744 AA, US1617556 A, US1551914 A, US1419592 A, US1353814 A,
US1093096 A, RU2225644 C2, RU1795627 C, NZ514919 A, GB2415678 A1, GB2403207
A1, GB2388812 A1, GB2150108 A1, EP1347429 A1, EP1037191 B1, EP1037191 A2,
EP1028065 A1, EP1026095 A2, DE3340692 A1, CN2861057, CN2674923, CA2015183
AA, AU2005100766 AD,

Forward Citations: WO14008060, USD747112, US9607462, US2014270467, NL1036135, ITNA20110027,

Abstract:

Source: US2010200155A A strip for tamper evidencing has a first layer and one or more reinforcing layers. An adhesive is provided on a first portion of the strip to selectively adhere the first portion of the strip onto the first layer of a second portion of the strip, wherein the first layer is such that removal or attempted removal of the first portion of the strip from the second portion of the strip will be evidenced by the first layer. The reinforcing material may be arranged such that portions of it are bonded to each other at a plurality of locations spaced along the length of the strip. A security system may include a tamper evidencing device and a receipt portion having corresponding unique identifiers, wherein the receipt portion includes a zip tab securing portion for securing zip tabs or luggage locking points and the evidencing device includes a trackable identifier.

21) Family number: 42071209 (US2010032402A)

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Title: TAMPER EVIDENT CLOSURE CAP, CONTAINER AND COMBINATION THEREOF
Priority: EP20070101504 20070131 EP20080701348 20080109 WO2008EP50184 20080109
Family:

Publication number	Publication date	Application number	Application date
AU2008209882 AA	20080807	AU20080209882	20080109
AU2008209882 BB	20130912	AU20080209882	20080109
BRPI0807067 A2	20140408	BR2008PI07067	20080109
DE602008020386 D1	20130124	DE200860020386T	20080109
EP1953091 A1	20080806	EP20070101504	20070131
EP2114786 A2	20091111	EP20080701348	20080109
EP2114786 B1	20121128	EP20080701348	20080109
IL199816 A0	20100415	IL20080199816	20080109
IL199816 A1	20150924	IL20080199816	20080109
KR20090106607 A	20091009	KR20097016811	20080109
MA31181 B1	20100201	MA20090032163	20090812
MX2009008074 A1	20090812	MX20090008074	20080109
NZ578501 A	20111222	NZ20080578501	20080109
US2010032402 AA	20100211	US20080524308	20080109
WO08092716 A2	20080807	WO2008EP50184	20080109
WO08092716 A3	20081030	WO2008EP50184	20080109

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH

Assignee(s):^(std): DREYER LINO ; OBRIST CLOSURES SWITZERLAND ; ODET PHILIPPE GERARD ; WIDMER SEBASTEN CEDRIC

Assignee(s): OBRIST CLOSURES SWITZERLAND GMBH

Inventor(s):^(std): WIDMER SEBASTEN CEDRIC ; WIDMER SEBASTIEN CEDRIC ; WIDMER SEBASTIAN CEDRIC ; ODET PHILIPPE GERARD ; DREYER LINO

Inventor(s): LINO DREYER ; PHILIPPE GERARD ODET ; SEBASTEN CEDRIC WIDMER ; SEBASTIEN CEDRIC WIDMER

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; MITSCHERLICH PATENT U RECHTSANWAELTE PARTMBB; HEPP DIETER ET AL; MUELLER CHRISTOPH EMANUEL; GREENWOOD MATTHEW DAVID; REINHOLD COHN AND PARTNERS; SHOEMAKER AND MATTARE LTD; MULLER CHRISTOPH ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
 (IPC 8-9): [B65D](#) [B65D41/04](#) [B65D41/34](#) [B65D49/12](#) (Advanced/Invention);
[B65D41/00](#) [B65D41/04](#) [B65D41/34](#) [B65D49/00](#) (Core/Invention);
[B65D](#) (Subclass/Invention)

International class
 (IPC 1-7): [B65D41/34](#)

CPC: [B65D41/3409](#) [B65D41/3428](#) [B65D41/3447](#)

European class: [B65D41/34A1](#) [B65D41/34C1](#) [B65D41/34D1](#)

US class: [215/252](#) [215/329](#) [215/329S](#)

[Classification Explorer](#)

Cited documents:

US7878351 BB, US7775386 BB, US7344039 BB, US6766917 BA, US5950850 A, US5801030 A, US5695083 A, US5320233 A, US5111949 A, US4957211 A, US4875594 A, US4801030 A, US4785963 A, US4732289 A, US4629082 A, US4560076 A, US4546892 A, US4402418 A, US4153174 A, US2006283828 AA, US2006060555 AA, US2006021959 AA, US2005189312 AA, US2005072751 AA, GB2385321 A1, GB2116155 A1, EP0697343 A1, DE29502309 U1, CH599004,

Forward Citations: WO17068151, USD723919, USD701460, US2015129534,

Abstract:

Source: US2010032402A The invention relates to a tamper evident closure cap (101). A tamper evident band is provided with an extension (107) having an upper edge (113) extending above an engagement surface (110) of a projection (109). The extension (107) and the projections (109) are arranged on an annular, circumferentially running band (105). When the closure is applied to a container, the extension (107) is clamped between the inner surface (114) of the tamper evident band or the closure and a retaining structure on a container finish.

22) Family number: 32395617 (US2005252916A)

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Title: TAMPER EVIDENT CLOSURE WITH RECLOSE FEATURE
Priority: CA20052506900 20050506 EP20050252815 20050507 US20040842873 20040511
Family:

Publication number	Publication date	Application number	Application date
BRPI0501929 A	20060110	BR2005PI01929	20050510
CA2506900 AA	20051111	CA20052506900	20050506
DE602005033125 D1	20120510	DE200560033125T	20050507
EP1595812 A2	20051116	EP20050252815	20050507
EP1595812 A3	20081008	EP20050252815	20050507
EP1595812 B1	20120314	EP20050252815	20050507
MXPA05005041 A1	20051116	MX2005PA05041	20050510
US2005252916 AA	20051117	US20040842873	20040511
US7311218 BB	20071225	US20040842873	20040511

Probable Assignee: SONOCO DEVELOPMENT INC

Assignee(s):^(std): SONOCO DEV INC

Assignee(s): SONOCO DEVELOPMENT INC ; SONOCO DEVELOPMENT INC HARTSVILLE ; VARADARAJAN KRISHNARAJU

Inventor(s):^(std): VARADARAJAN KRISHNARAJU

Inventor(s): KRISHNARAJU VARADARAJAN

Agent(s): SIM AND MCBURNEY; MARKS AND CLERK LUXEMBOURG LLP; KINSLER MAUREEN CATHERINE ET AL; KINSLER MAUREEN CATHERINE; ALSTON AND BIRD LLP, BANK OF AMERICA PLAZA; ALSTON AND BIRD LLP BANK OF AMERICA PLAZA; ALSTON AND BIRD LLP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR YU

International class
 (IPC 8-9): [B65D17/40](#) [B65D21/02](#) [B65D21/036](#) [B65D43/02](#) [B65D43/03](#) [B65D51/20](#) [B65D55/02](#)
[B65D6/30](#) (Advanced/Invention);
[B65D17/28](#) [B65D21/032](#) [B65D43/02](#) [B65D51/18](#) [B65D6/00](#) (Core/Invention)

International class
 (IPC 1-7): [B65B0/0](#) [B65D17/40](#) [B65D41/32](#) [B65D43/02](#) [B65D51/20](#) [B65D55/2](#)

CPC: [B65D21/022](#) [B65D43/021](#) [B65D43/0256](#) [B65D51/20](#) [B65D2251/0018](#) [B65D2251/0093](#)
[B65D2543/00092](#) [B65D2543/00296](#) [B65D2543/00518](#) [B65D2543/00527](#) [B65D2543/00537](#)
[B65D2543/00546](#) [B65D2543/00638](#) [B65D2543/00685](#) [B65D2543/0074](#) [B65D2543/00796](#)
[B65D2543/00842](#)

European class: [B65D21/02E7B](#) [B65D43/02S3D](#) [B65D43/02T3E](#) [B65D51/20](#) [L65D251/00Y2F](#)
[L65D251/00Y6M](#) [L65D543/00Y10B2](#) [L65D543/00Y1F2C](#) [L65D543/00Y1M6](#)
[L65D543/00Y8D1E](#) [L65D543/00Y8D1N](#) [L65D543/00Y8D3](#) [L65D543/00Y8D3N](#)
[L65D543/00Y8S1B6](#) [L65D543/00Y8S1D2](#) [L65D543/00Y8S3B4](#) [L65D543/00Y8S3D2](#)

US class: [206/508](#) [220/257.1](#) [220/266](#) [220/270](#) [220/276](#) [220/380](#) [220/619](#)

[Classification Explorer](#)

Cited documents: US6360908 BA, US6220471 BA, US5979690 A, US5758793 A, US5692635 A, US5511679 A, US5395003 A, US5348183 A, US5273176 A, US5069355 A, US5042680 A, US5020686 A, US4856674 A, US4724979 A, US4682706 A, US4328905 A, US4154360 A, US4111329 A, US3624789 A, US2887244 A, FR2734248 A1, EP1101707 A1, CH453927 A,

Forward Citations: WO12058771, US9809360, US9676504, US9650184, US9630762, US9617048, US9493266, US9487349, US9475620, US9474397, US9469445, US9340332, US9334082, US9051095, US9032698, US8998030, US8991632, US8851315, US8833589, US8827097, US8827096, US8397366, US8387822, US8360262, US8251249, US8251242, US8146766, US8127961, US8123064, US8083089,

US8028851, US7992743, US7909204, US7712626, US2013248533, US2013015094,
US2012199599, US2011186572, US2011168708, US2011031246, US2010276437,
US2010018965, US2009321463, US2009223619, US2009218351, US2009071927,
US2007062949,

Abstract:

Source: US2005252916A There is provided a re-closable closure for a container, wherein the re-closable closure includes a tamper-evident band that provides a stacking surface and stacking step for the stacking of another container and that provides clearance for a membrane lid to seal the opening of the container. The tamper-evident band is connected to a central portion of the closure by a frangible connecting member. The tamper-evident band engages a top edge of the container to connect the closure to the container. After the band has been removed from the central portion and the membrane lid has been removed from the container, the central portion may be connected to the container to re-close the opening of the container. The central portion includes a plug portion that fits into the opening to reseal the container after the initial opening of the container.

23) Family number: 28926684 (US2003150833A)

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Title: TAMPER EVIDENT CLOSURE WITH INTEGRATED VENTING AND METHOD OF MANUFACTURING**Priority:** US20020076722 20020214 WO2003US03024 20030131

Family:	Publication number	Publication date	Application number	Application date
	<u>AT296235 E</u>	20050615	AT20030739690T	20030131
	<u>AU2003210784 AA</u>	20030904	AU20030210784	20030131
	<u>CA2472918 AA</u>	20040715	CA20032472918	20030131
	<u>DE60300717 D1</u>	20050630	DE20036000717	20030131
	<u>DE60300717 T2</u>	20051013	DE20036000717T	20030131
	<u>EP1474340 A1</u>	20041110	EP20030739690	20030131
	<u>EP1474340 B1</u>	20050525	EP20030739690	20030131
	<u>US2003150833 AA</u>	20030814	US20020076722	20020214
	<u>US6974046 BB</u>	20051213	US20020076722	20020214
	<u>WO03068621 A1</u>	20030821	WO2003US03024	20030131

Probable Assignee: CROWN CORK AND SEAL TECHNOLOGIES**Assignee(s):^(std):** CROWN CORK AND SEAL TECH CORP ; CROWN CORK AND SEAL TECHNOLOGI ; SHENKAR EMANUEL ; CROWN PACKAGING TECHNOLOGY INC**Assignee(s):** CROWN CORK AND SEAL TECHNOLOGIES CORP ; DEUTSCHE BANK AG ; DEUTSCHE BANK NEW YORK BRANCH AGENT AG AS ; CROWN CORK AND SEAL TECHNOLOGIES ; CITICORP NORTH AMERICA INC ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS**Inventor(s):^(std):** SHENKAR EMANUEL**Inventor(s):** EMANUEL SHENKAR**Agent(s):** GOWLING LAFLEUR HENDERSON LLP; KNOBLE YOSHIDA AND DUNLEAVY LLC**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZM ZW**International class**
(IPC 8-9): B65D41/34 B65D51/14 B65D51/16 (Advanced/Invention);
B65D41/34 B65D51/00 (Core/Invention)**International class**
(IPC 1-7): B65D41/34 B65D45/30 B65D51/16**CPC:** B65D41/3423 B65D51/145**European class:** B65D41/34C B65D51/14B**US class:** 215/252 215/258 215/276[Classification Explorer](#)**Cited documents:** US6766916 BB, US6673298 BB, US6662958 BB, US6659297 BB, US6491175 BA, US6464093 BA, US6405886 BA, US6328175 BB, US6325227 BA, US6276543 BA, US6253940 BA, US6253939 BA, US6220466 BA, US6152316 A, US6119883 A, US6116442 A, US6109464 A, US6085921 A, US6056136 A, US5967351 A, US5893474 A, US5884790 A, US5839592 A, US5775527 A, US5755347 A, US5727705 A, US5685443 A, US5660290 A, US5570798 A, US5462184 A, US5443853 A, US5400913 A, US5346082 A, US5341949 A, US5258191 A, US5107998 A, US5078290 A, US5062538 A, US5058755 A, US5031787 A, US5027964 A, US5009324 A, US5007545 A, US4993572 A, US4989740 A, US4981230 A, US4978016 A, US4880127 A, US4856665 A, US4852753 A, US4813561 A, US4801031 A, US4782968 A, US4705183 A, US4694970 A, US4694969 A, US4679696 A, US4657153 A, US4478343 A, US4473163 A, US4470513 A, US2003127419 AA, US2002066713 AA, US2002062626 AA, GB2318574 A1,

Forward Citations: WO09049965, US9242782, US8991634, US8701887, US8650839, US8517176, US8353413, US8251236, US8215508, US8100277, US7798359, US7780024, US7766178, US7644902, US6948630, US2011204546, US2010025281, US2010025279, US2009090721, US2009054221, US2008173611, US2008164235, US2008073310, US2003116522, EP2050686, EA018673,

Abstract:

Source: US2003150833A A method of manufacturing a vented tamper evident closure of the J-hook type to a container involves a closure of the type including a base, a downwardly depending sidewall portion and a tamper evident band. The tamper evident band is frangibly connected to the sidewall portion and includes a main band portion and a J-hook retention member that includes a plurality of retaining elements and a corresponding plurality of flexible web elements. Advantageously, the retention member is originally molded in a first position wherein it is positioned substantially beneath and in alignment with the main band portion of the tamper evident band. This molding position creates substantial manufacturing advantages. When the closure is installed onto the container, the retention member is circumferentially compressed and folds inwardly as it is moved to a second, engaged position wherein it is bent upwardly and inwardly to engage the container. The substantial circumferential compression of the retention member is enabled by the provision of the flexible web elements. In addition, ventilation openings are preferably defined within the flexible web elements. The ventilation openings provide a dual benefit in that they further promote efficient moldability of the closure and that they permit the entire container assembly, including the closure, to be washed after packaging to remove any food material that may be left after filling permit the closure.

24) Family number: 28041747 (US2003062369A)

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Title: Snap–hinge closure with tamper–evident lid and method of making
Priority: US20010911052 20010724 US20020290727 20021108 WO2002EP08213 20020722
Family:

Publication number	Publication date	Application number	Application date
EP1427645 A2	20040616	EP20020754931	20020722
US2003062369 AA	20030403	US20020290727	20021108
US2004200836 AA	20041014	US20010911052	20010724
US6821239 BB	20041123	US20020290727	20021108
US7281638 BB	20071016	US20010911052	20010724
WO03010061 A2	20030206	WO2002EP08213	20020722
WO03010061 A3	20040325	WO2002EP08213	20020722

Probable Assignee: CROWN PACKAGING TECHNOLOGY INC

Assignee(s):^(std): CROWN CORK AND SEAL TECH CORP ; METAL BOX PLC ; OBRIST CLOSURES SWITZERLAND

Assignee(s): GAISER RICK ; HIERZER VALENTIN ; CROWN PACKAGING TECHNOLOGY INC ; CROWN OBRIST GMBH ; OBRIST CLOSURES SWITZERLAND GMBH ; CROWN CORK AND SEAL TECHNOLOGIES ; CROWN CORK AND SEAL TECHNOLOGIES CORP ; BETH GORDON ; CARNAUDMETALBOX PLC ; CITICORP NORTH AMERICA INC ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS

Inventor(s):^(std): BETH GORDON ; BURG RAY ; GAISER RICK ; GAISER RICKY ; HIERZER VALENTIN

Agent(s): NIXON PEABODY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

International class
 (IPC 8–9): [B65D39/08](#) [B65D41/34](#) [B65D43/14](#) [B65D43/18](#) [B65D47/08](#) [B65D51/20](#) [B67D47/10](#) [B67D5/00](#) [B67D99/00](#) (Advanced/Invention);
[B65D39/00](#) [B65D41/34](#) [B65D43/14](#) [B65D47/08](#) [B65D51/18](#) [B67D99/00](#) (Core/Invention)

International class
 (IPC 1–7): [A47G19/22](#) [B31B1/60](#) [B65D47/08](#) [B65D47/10](#)

CPC: [B65D47/0804](#) [B65D2101/0023](#)

European class: [B65D47/08B](#) [L65D101/00A3](#)

US class: [215/235](#) [215/237](#) [215/253](#) [220/257.1](#) [220/259.1](#) [220/268](#) [220/717](#) [220/835](#) [220/839](#) [222/153.06](#) [222/541.5](#) [222/541.6](#) [493/344](#) [493/377](#) [493/383](#) [493/394](#)

[Classification Explorer](#)

Cited documents: WO9857864 A1, WO9733802 A1, WO9702190 A1, WO9402373 A1, WO0076875 A1, US6644487 BB, US6631820 BB, US6405885 BA, US6347716 BA, US6269986 BA, US6234334 BA, US6231491 BA, US6216905 BA, US6152320 A, US6116441 A, US6003712 A, US5913435 A, US5799840 A, US5662245 A, US5632417 A, US5489035 A, US5392938 A, US5386918 A, US5330083 A, US5201440 A, US5147054 A, US5141138 A, US5110040 A, US5085333 A, US4941592 A, US4941580 A, US4602718 A, US4592480 A, US3651992 A, US3255928 A, US2002079282 AA, EP0547466 A1, EP0541466 A1, EP0507706 A1, EP0486408 A1, EP0345403 A1,

Forward Citations: WO10004486, WO05113365, USD738732, USD720622, USD615862, USD604161, USD599203, USD592057, USD529380, US9650185, US9546027, US8851315, US8733566, US8646633, US8490804, US8403159, US8286817, US8251242, US8083089, US8056749, US8043269, US8028851, US7913867, US7731042, US7644843, US7611027, US7556162, US7510095, US2013087523, US2011220673, US2011006031, US2010264145, US2010108674, US2010102074, US2009206082, US2009152269, US2008277369, US2008169261, US2008110933, US2007138123, US2007131642, US2007007230, US2006289552, US2006226147, US2006213934,

Abstract:

Source: US2003062369A A tamper evident hinge type closure includes, as is conventional in such closures, a body portion, a lid portion and a hinge portion. Advantageously, at least one tamper evident band is provided so as to mechanically secure the lid portion to the body portion at a position that is distal from the hinge. The tamper evident band, which is designed to break upon initial opening of the closure by a consumer, is preferably integral with both the body portion and the lid portion, so as to ensure more reliably than was possible with interlocking mechanical tamper evident structures that the closure may not be opened without defeating the tamper evident band. A process for making the improved closures is also disclosed.

25) Family number: 52599956 (US2012325769A)

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Title: SCREW CAP AND A SPORT CLOSURE CAP WITH INTEGRAL SEAL OPENING MEANS**Priority:** US20110167598 20110623

Family:	Publication number	Publication date	Application number	Application date
	<u>US2012325769 AA</u>	20121227	US20110167598	20110623
	<u>US8646634 BB</u>	20140211	US20110167598	20110623
	<u>WO12176124 A1</u>	20121227	WO2012IB53097	20120619
	<u>WO12176124 A4</u>	20130411	WO2012IB53097	20120619

Probable Assignee: ESSEBAGGERS JAN**Assignee(s):^(std):** DAVYDOVA KATERYNA ; DAVYDOVA KATERYNA O ; ESSEBAGGERS JAN**Inventor(s):^(std):** DAVYDOVA KATERYNA ; DAVYDOVA KATERYNA O ; ESSEBAGGERS JAN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D39/00 B65D41/00 B65D47/24 B65D5/74 B65D51/22 (Advanced/Invention)
 (IPC 8-9):

CPC: B65D5/748 B65D47/248 B65D51/222 B65D51/225**European class:** B65D47/24E B65D51/22A1 B65D51/22A1F**US class:** 215/256 215/297 220/278 222/541.2[Classification Explorer](#)

Cited documents: WO09131457 A1, US8298103 BB, US8157115 BB, US8051997 BB, US7942284 BB, US7832580 BB, US7661565 BB, US7410071 BA, US7350666 BB, US6974045 BA, US6386385 BA, US6357628 BA, US6039198 A, US5797506 A, US5709311 A, US5702015 A, US5477972 A, US5090582 A, US4793503 A, US4709822 A, US4634013 A, US3581605 A, US2011210149 AA, US2009212061 AA, US2009101618 AA, US2008169261 AA, US2008041809 AA, US2007205229 AA, US2007102390 AA, US2007029353 AA, US2005263479 AA, US2005184076 AA, US2003230546 AA, NL2001524 C2, NL2001524 A1, LU88845 A, EP1364886 A1, DE202009017321 U1

Forward Citations: WO15123209, USD791591, USD790344, USD760081, USD756777, US9604765, US9533802, US9357798, US9309032, US8733161, US2015223511,

Abstract:

Source: US2012325769A An integral seal opening means within a sport closure cap for containers, in which a tamper evident seal with a reinforced rim secures the mouth opening. The closure cap holds a minimum of three protrusions, extending towards the seal, each having cutting edges of which the lower one is at a smaller radius. These protrusions engage with the tamper evident seal, when the cap is rotated clockwise, thereby cutting off part of of the seal rim and at the same time cutting three banana shape slots in the seal. For single serve beverage bottles with tamper evident seal and a sport closure, there is no need to unscrew the cap for opening the seal and getting access to the beverage. Initially the reinforced rim is used to prevent protrusions from accidentally opening the bottle seal. The opened seal remains in place while the sport closure is held onto the bottle.

0) US5676269A – TAMPER-EVIDENT CLOSURE WITH CAPTIVE BAND

26) Family number: 15221983 (US5676269A)

© PatBase

Title: Tamper-evident closure with captive band

Priority: US19950408078 19950322 US19960665063 19960515 WO1996US03927 19960320

Family:

Publication number	Publication date	Application number	Application date
AR001409 AA	19971022	AR19960335883	19960322
AT253506 E	20031115	AT19960908890T	19960320
AU199652584 A1	19961008	AU19960052584	19960320
AU701983 B2	19990211	AU19960052584	19960320
BG101889 A	19980731	BG19970101889	19970915
BG62607 B1	20000331	BG19970101889	19970915
BRPI9607940 A	19980602	BR1996PI07940	19960320
CA2215927 AA	19970919	CA19962215927	19960320
CN1070143 C	20010829	CN19951019906	19951103
CN1131635 A	19960925	CN19951019906	19951103
CO4410224 A1	19970109	CO19950014561	19950407
CR5360 A	19980427	CR19960005360	19960718
DE69630596 D1	20031211	DE19966030596	19960320
DE69630596 T2	20040923	DE19966030596T	19960320
DK0815028 T3	20031201	DK19960908890T	19960320
EG22031 A	20020630	EG19960000249	19960321
EP0815028 A1	19980107	EP19960908890	19960320
EP0815028 A4	20010516	EP19960908890	19960320
EP0815028 B1	20031105	EP19960908890	19960320
ES2208734 T3	20040616	ES19960908890T	19960320
HU223327 B1	20040628	HU19980000768	19960320
HU9800768 AB	19980728	HU19980000768	19960320
HU9800768 AC	20000328	HU19980000768	19960320
JP11502491 T2	19990302	JP19960528636T	19960320
KR100436168 B1	20040727	KR19970706602	19970922
KR19980703199 A	19981015	KR19970706602	19960320
MX9707176 A1	19980331	MX19970007176	19960320
NO311340 B1	20011119	NO19970004201	19970912
NO974201 A	19970912	NO19970004201	19970912
NO974201 A0	19970912	NO19970004201	19970912
NZ304709 A	19990128	NZ19960304709	19960320
PL180383 B1	20010131	PL19960322173	19960320
PL322173 A1	19980119	PL19960322173	19960320
PT815028 T	20040331	PT19960908890T	19960320
RO118745 B	20031030	RO19970001765	19960320
RU2139230 C1	19991010	RU19970117448	19960320
RU97117448 A	19990720	RU19970117448	19971022
TH25344 B	20090128	TH19951000720	19950403
TH25376 A	19970529	TH19951000720	19950403
TW279835 B	19960701	TW19950103276	19950401
US5676269 A	19971014	US19960665063	19960515
WO9629257 A1	19960926	WO1996US03927	19960320

ZA9602254 A	19960926	ZA19960002254	19960320	

Probable Assignee: BERRY PLASTICS CORP

Assignee(s):^(std): CLOSURE AND PACKAGING SERVICES ; CLOSURE AND PACKAGING SERVICES LTD ; CLOSURES AND PACKAGING SERVICE ; KLOZHURES EHND PEHKEHDZHING SE ; CLOSURES AND PACKAGING SERV LTD ; KLOZHURES EHND PEHKEHDZHING SERVISIS LTD ; CLOSURES AND PACKAGING SERVICES LTD ; CLOSURES AND PACKAGING SERVICES SUBSTITUT LTD ; PRECISION VALVE CORP

Assignee(s): TANSEY M CHARLES ; TANSEY CHARLES M ; REXAM CLOSURE SYSTEMS LLC ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT GUERNSEY ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT GUERNSEY CSATORNA SZIGETEK ; CLOSURES AND PACKAGING SERVICES SUBSTITUTED UNDER SECTION 24 1 FROM PRECISION VALVE CORP LTD ; CLOSURES AND PACKAGING SERVICES A CORP OF GUERNSEY LTD ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT ; 3I GROUP PLC ; BERRY PLASTICS CORP ; BLAKE R ROBERT ; BLAKE ROBERT R

Inventor(s):^(std): TANSEY CHALRES M ; TANSEY M ; TANSEY M CHARLES ; TANSEY CHARLES MARTIN ; TANSEY CHARLES M ; ROBERT R BLAKE ; ROBERT R BLEJK ; ROBERT R BLEJK ; ROBERT R BLAKE ; CHARLES M TANSEY ; CHARLES M TANSEY ; CHARL Z MTEHNSI ; CHARL Z M TEHNSI ; CHALRES M TANSEY ; BLAKE ROBERT R ; BLAKE R ; BLAKE R ROBERT

Inventor(s): CHARL'Z M.TEHNSI

Agent(s): FB RICE; FB RICE PTY LTD; KIRBY EADES GALE BAKER; XIMENA BONILLA PEREIRA

Designated states: AT AU BE BG BR CA CH DE DK ES FI FR GB GR HU IE IT JP KP KR LI LU MC MX NL NO NZ PL PT RO RU SE SG UA

International class
(IPC 8-9): [B65B51/00 B65D41/00 B65D41/04 B65D41/34 B65D41/38 B65D51/16 B65D55/08 G01B11/02 G03F7/26 H01L21/00](#) (Advanced/Invention);
[B65D41/00 B65D41/04 B65D41/34 B65D51/16 G01B11/02 G03F7/26 H01L21/00](#) (Core/Invention)

International class
(IPC 1-7): [B65B B65B51/00 B65D41/00 B65D41/34 B65D41/38 B65D55/08 B67B E05F](#)

CPC: [B65D41/0428 B65D41/3447 B65D51/1688 B65D2101/0046](#)

European class: [B65D41/04B2 B65D41/34D1 B65D51/16E3 L65D101/00A3D](#)

US class: [215/252](#)

[Classification Explorer](#)

Cited documents: WO9402371 A1, US5248050 A, US5246125 A, US5215204 A, US5080246 A, US4805792 A, US4557393 A, US4530436 A, US4206851 A, US3904062 A, EP0552958 B1, EP0552958, DE4206123 A1, DE3230779 A1,

Forward Citations: WO9903746, WO12021084, WO0064774, USD634200, USD634199, USD633386, US9617045, US8844770, US8672158, US8668097, US8584876, US8231020, US7975864, US7735666, US7645414, US7575123, US7344039, US7235207, US7228979, US6991123, US6874648, US6793082, US6772894, US6673298, US6659297, US6640988, US6626310, US6581793, US6527132, US6491175, US6371317, US5979682, US2010213159, US2009159555, US2009008392, US2008197135, US2007181525, US2007108154, US2006163189, US2005189312, US2004124169, US2004069738, US2003057175, JP2006213360, ES2292317, EP2383197, EP1263657, EP1263657, DE10297200, DE102009044896, CN103619719, CN103619719, AU731374,

Abstract:

Source: US5676269A A container closure 10 for screw top containers such as beverage container, the closure 10 having a generally cylindrical tamper-evident band 11 joined by a plurality of frangible bridges 13b, 13c and at least one extended non-frangible bridge 13a to the free edge of a skirt 16 of the closure 10. The band 11 has a segmented internal rib 18 which engages an external retaining flange 30 of the container 29 when the closure is applied to the container. An L-shaped slot 17 extends through the side wall of the tamper-evident band 11, the horizontal leg 61 of which terminates directly adjacent to or under the extended non-frangible bridge 13a. A weakened frangible region 63 of the band extends from the terminating end 62 of the horizontal leg 61 axially downward to the bottom of the band 11. On removal of the closure 10 from the container 29, the frangible bridges 13b, 13c and frangible region 63 rupture and the band 11 remains captive at the extended bridge 13a to the skirt. Longitudinal internal projections 25 and 28 circle the band 11, except in the region of the L-shaped slot 17 to allow stretching of the band adjacent the slot. Thickenings 26 circle the band except in the region of the slot 17

and except at approximate quarter-turns 71, 72 around the band from the slot, allowing stretching of the band where absent for application to the container.

27) Family number: 31517866 (US2007181578A)

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Title: TAMPER EVIDENT FITMENT ASSEMBLY**Priority:** US20030491702P 20030801 US20040566537 20040730 WO2004CA01436 20040730
US20060566537 20060911 US20100981858 20101230

Publication number	Publication date	Application number	Application date
CA2534786 AA	20060131	CA20042534786	20040730
CA2534786 C	20120320	CA20042534786	20040730
US2007181578 AA	20070809	US20040566537	20040730
US2011155758 AA	20110630	US20100981858	20101230
US7882977 BB	20110208	US20040566537	20040730
US8231025 BB	20120731	US20100981858	20101230
WO05012129 A1	20050210	WO2004CA01436	20040730

Probable Assignee: LIQUI BOX CORP**Assignee(s):**^(std) JOHNSON JAMES ; JOHNSON JAMES W ; LIQUI BOX CANADA INC ; LIQUI BOX CORP**Assignee(s):** ANTARES CAPITAL LP AGENT AS ; BNP PARIBAS**Inventor(s):**^(std) JOHNSON JAMES ; JOHNSON JAMES W**Agent(s):** TORYS LLP; POTTER ANDERSON AND CORROON LLP ATTN KATHLEEN W GEIGER ESQ; POTTER ANDERSON CORROON LLP; RAKESH H**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
^(IPC 8-9): [B65D17/28](#) [B65D17/32](#) [B65D17/34](#) [B65D17/40](#) [B65D39/00](#) [B65D39/08](#) [B65D41/00](#) [B65D41/04](#) [B65D41/32](#) [B65D41/34](#) [B65D51/20](#) [B65D55/02](#) [B65D75/58](#) [B67B3/02](#) [B67B3/20](#) (Advanced/Invention)**International class**
^(IPC 1-7): [B65D55/02](#)**CPC:** [B65D41/0471](#) [B65D41/3442](#) [B65D41/3447](#) [B65D55/02](#) [B65D75/5877](#)**European class:** [B65D41/04E](#) [B65D41/34D](#) [B65D41/34D1](#) [B65D55/02](#) [B65D75/58G3A](#)**US class:** [215/214](#) [215/232](#) [215/232S](#) [215/253](#) [215/253S](#) [215/256](#) [215/318](#) [215/344](#) [215/356](#) [215/356S](#) [220/258.3](#) [220/258.300P](#) [220/265](#) [220/265S](#) [220/268](#) [220/270](#) [220/270S](#) [220/276](#) [220/290](#) [220/790](#) [220/802](#) [222/1](#) [222/1P](#) [53/485](#)[Classification Explorer](#)**Cited documents:** WO3066467, WO05075311 A1, WO04085283 A1, WO03066467 A1, US7487951 BB, US7114625 BB, US7014055 BB, US6991123 BB, US6820764 BB, US6793082 BA, US6702134 BB, US6637725 BB, US6464093 BA, US6439412 BB, US6398075 BA, US6347785 BA, US6338414 BA, US6279779 BA, US6105802 A, US6102227 A, US6085921 A, US6041953 A, US6039196 A, US6029834 A, US5975321 A, US5960992 A, US5954215 A, US5857580 A, US5829613 A, US5749484 A, US5740933 A, US5738231 A, US5730309 A, US5720402 A, US5711443 A, US5711441 A, US5692628 A, US5690243 A, US5680970 A, US5678714 A, US5597082 A, US5593055 A, US5564582 A, US5465876 A, US5456375 A, US5348183 A, US5303837 A, US5299702 A, US5285912 A, US5257705 A, US5207783 A, US5143235 A, US5076453 A, US5074425 A, US5036991 A, US5009323 A, US4936475 A, US4934546 A, US4919286 A, US4899897 A, US4813578 A, US4771904 A, US4708259 A, US4657153 A, US4625875 A, US4613052 A, US4598833 A, US4589561 A, US4566601 A, US4562931 A, US4546892 A, US4531650 A, US4506795 A, US4445550 A, US4444340 A, US4421146 A, US4380304 A, US4371089 A, US4362255 A, US4305517 A, US4299330 A, US4291813 A, US4231486 A, US4172533 A, US4166552 A, US4147268 A, US3991904 A, US3927784 A, US3592349 A, US3441161 A, US3438529 A, US3223269

A, US2007289937 AA, US2006213935 AA, US2005184105 AA, US2005161425 AA, US2005035322 AA, US2004256424 AA, US2003155361 AA, US2003026508 AA, US2002190021 AA, US2002179875 AA, US2002179605 AA, US2001027957 AA,

Forward Citations: WO15022686, WO08067574, USD791591, USD790344, USD760081, USD756777, USD751876, USD713223, USD653511, US9796265, US9738409, US9714124, US9592944, US9533802, US9522759, US9434516, US9334097, US9309032, US8578979, US8517061, US8511639, US8479785, US8393501, US8196621, US2016264319, US2015343565, US2015001261, US2014246455, US2012305590, US2012222775, US2011088505, US2008053568, EP2751466, EP1961669, CN103765073,

Abstract:

Source: US2007181578A A tamper evident fitment assembly for use with a container for flowable material, the closure comprising a cap and a spout secured to the container, the cap having a frangible tamper evident band, the cap having an annular recess for frictionally engaging a top portion of the spout, the cap and spout having cooperating detent and locking elements so that the assembly in a first position where the cap is removably sealed to the spout and the tamper evident band is not broken when the cap is removed for filling may move to a second position when the cap is removably sealed to the spout and the tamper evident band is broken upon removal of the cap. An important feature of the present invention is that the cap frictionally engages a top portion of the spout. No screw threads or similar securing means are required to retain the cap on the spout

28) Family number: 60160932 (US2017043921A)

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Title: IMPROVED TAMPER-EVIDENT CLOSURE

Priority: EP20150748589 20150217 US20140939852P 20140214 WO2015US16136 20150217
US20150118753 20150217

Family:	Publication number	Publication date	Application number	Application date
	<u>CL2016002025 A1</u>	20170106	CL20160002025	20160810
	<u>CN106103297 A</u>	20161109	CN201580008525	20150217
	<u>EP3105137 A1</u>	20161221	EP20150748589	20150217
	<u>EP3105137 A4</u>	20171101	EP20150748589	20150217
	<u>EP3219637 A1</u>	20170920	EP20170159175	20150217
	<u>IN201647027142 A</u>	20160831	IN201647027142	20160809
	<u>JP2017508679 T2</u>	20170330	JP20160551286T	20150217
	<u>MX2016010338 A1</u>	20161130	MX20160010338	20150217
	<u>PE00052017 A1</u>	20170304	PE20160001448	20150217
	<u>US2017043921 AA</u>	20170216	US20150118753	20150217
	<u>WO15123666 A1</u>	20150820	WO2015US16136	20150217

Probable Assignee: CLOSURE SYSTEMS INT INC

Assignee(s):^(std) CLOSURE SYSTEMS INT INC

Inventor(s):^(std) DANIEL ELLIOTT ; ELLIOTT DANIEL

Agent(s): JOHANSSON AND LANGLOIS; ALGEMEEN OCTROOI EN MERKENBUREAU BV;
GEIMER STEPHEN D ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE
GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ
LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ
NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG
SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA
ZM ZW

International class B65D39/08 B65D41/34 B65D50/06 B65D51/18 B65D55/08 (Advanced/Invention)
(IPC 8-9):

CPC: B65D39/08 B65D55/0863 B65D51/18 B65D2251/0028 B65D2251/0078 B65D41/3414
B65D41/3423 B65D2101/0023 B65D2101/003 B65D2101/0046 B65D2101/0076
B65D2251/0015 B65D2251/0087

US class: 220/270

[Classification Explorer](#)

Cited documents: WO13132384 A1, WO09154666 A2, US6758359 BB, US6050436 A, US5052574 A,
US4807770 A, US2124873 A, US2010038337 AA, US2004020943 AA, FR2778643 A1,
DE29706672 U1, DE19708909 A1, CN102015472 A,

Forward Citations: WO17037271,

Abstract:

Source: US2017043921A Embodiments of a tamper-evident closure are disclosed which prevent unauthorized access to a container and its contents, deterring adulteration or introduction of counterfeit product. In one embodiment the tamper-evident closure can be fitted to an associated container and closure, and includes a portion which is removed by fracture of the tamper-evident closure to gain access to the container closure. In another embodiment, an arrangement of wedge-like tongues permit fitment of the tamper-evident closure to associated container for tamper-evidence. In another embodiment, the tamper-evident closure is joined by frangible bridges to the container closure to provide the desired tamper-evidence. In another embodiment, the tamper-evident closure is movable axially of the associated container closure to thereby provide evidence of removal.

29) Family number: 28086989 (US2003034347A)

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Title: TAMPER–EVIDENT CAP**Priority:** US20010933367 20010820

Family:	Publication number	Publication date	Application number	Application date
	<u>US2003034347 AA</u>	20030220	US20010933367	20010820
	<u>US6644491 BB</u>	20031111	US20010933367	20010820

Probable Assignee: BERRY PLASTICS CORP**Assignee(s):^(std):** BERRY PLASTICS CORP

Assignee(s): BERRY STERLING CORP ; CAPTIVE PLASTICS INC ; FLEET NATIONAL BANK ; DEUTSCHE BANK TRUST CO ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLAT AS ; GRAFCO IND ; LANDIS PLASTICS LLC ; CREDIT SUISSE ADMINISTRATIVE AGENT AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERA ; GRAFCO IND PARTNERSHIP LTD ; DEUTSCHE BANK TRUST CO AMERICAS ; NALLY WILLIAM T ; DEWIG CHRIS A ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERAL AGENT AS ; CREDIT SUISSE AS ADMINISTRATIVE AGENT ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AS TERM COLLAT ; WELLS FARGO BANK NA ; SETCO LLC ; TUBED PRODUCTS LLC ; WELLS FARGO BANK NA COLLATERAL AGENT AS ; BANK OF AMERICA NA ; BANK OF AMERICA NA ABL COLLATERAL AGENT AS ; BANK OF AMERICA NA COLLATERAL AGENT AS

Inventor(s):^(std): DEWIG CHRIS A ; NALLY WILLIAM T

International class [B65D17/40 B65D41/48 B65D83/14](#) (Advanced/Invention) ;
^{(IPC 8–9):} [B65D17/28 B65D41/32 B65D83/14](#) (Core/Invention)

International class [B65D17/40 B65D41/48 B65D41/62 B65D47/10](#)
^{(IPC 1–7):}

CPC: [Y10S220/915 B65D83/40 B65D41/48 B65D2101/0023](#)**European class:** [B65D41/48 B65D83/40 L65D101/00A3](#)

US class: [215/256 220/276 220/915 222/153.07 222/153.070S 222/541.6 222/541.600S 222/541.9 222/541.900S](#)

[Classification Explorer](#)

Cited documents: US5248050 A, US5238135 A, US5105960 A, US5100011 A, US5085333 A, US5042680 A, US4962864 A, US4930656 A, US4738375 A, US4735337 A, US4625876 A, US4029231 A, US3870187 A, US3831798 A, US3684124 A, US3672528 A, US3396866 A, US3266676 A, US3170602 A, US3162329 A, US3037672 A, US2973881 A, GB977312 A, GB1205541 A, CH472321 A, CH472321,

Forward Citations: USD738216, USD550078, USD534799, US9527655, US9440780, US9387291, US9260236, US8925755, US8464886, US7303088, US7090088, US7086551, US7011221, US6886708, US2014339263, US2013261555, US2011139783, US2009055149, US2008078736, US2007181522, US2006249474, US2004149756, US2004112906, US2004045966, US2004016757,

Abstract:

Source: US2003034347A A tamper–resistant closure includes a cap provided with several cap retainers adapted to engage an annular ridge surrounding a discharge valve mounted on a can and a removable tamper band coupled to a lower edge of the cap to define an undulated frangible tear line between the cap and the tamper band. Several band retainers are provided on the tamper band and adapted to engage the annular ridge. The band retainers cooperate with the cap retainers to help retain the closure on the can while the tamper band remains coupled to the cap. Once the tamper band is removed, the cap retainers engage the annular ridge on the can and cooperate to retain the remaining cap on the can.

30) Family number: 40762903 (US2007251911A)

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Title: TAMPER-EVIDENT CLOSURE WITH DIRECTIONAL MOLDED RETENTION TABS
Priority: US20060556974 20061106 US20060745924P 20060428 US20120571449 20120810
Family:

Publication number	Publication date	Application number	Application date
US2007251911 AA	20071101	US20060556974	20061106
US2012305517 AA	20121206	US20120571449	20120810
US8302794 BB	20121106	US20060556974	20061106
US8584874 BB	20131119	US20120571449	20120810
WO07127634 A2	20071108	WO2007US66692	20070416
WO07127634 A3	20081120	WO2007US66692	20070416

Probable Assignee: BERRY PLASTICS CORP

Assignee(s):^(std) RUSSELL MARK N ; BERRY PLASTICS CORP

Assignee(s): BERRY STERLING CORP ; BANK OF AMERICA NA ; BANK OF AMERICA NA ABL COLLATERAL AGENT AS ; BANK OF AMERICA NA COLLATERAL AGENT AS ; CAPTIVE PLASTICS INC ; GRAFCO IND ; LANDIS PLASTICS LLC ; SETCO LLC ; TUBED PRODUCTS LLC ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERA ; GRAFCO IND PARTNERSHIP LTD ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERAL AGENT AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AG ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AS TERM COLLAT ; WELLS FARGO BANK NA ; US BANK NATIONAL ASSOCIATION

Inventor(s):^(std) RUSSELL MARK N

Agent(s): BARNES AND THORNBURG LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A47G19/22](#) [B65D41/34](#) [B65D51/00](#) [B65D53/00](#) ^(Advanced/Invention);
^(IPC 8-9) [A47G19/22](#) [B65D51/00](#) [B65D53/00](#) ^(Core/Invention)

CPC: [B65D41/0414](#) [B65D41/3423](#)

European class: [B65D41/04B1](#) [B65D41/34C](#)

US class: [215/252](#) [215/258](#) [215/344](#) [215/344S](#)

[Classification Explorer](#)

Cited documents: US8302794 BB, US7802690 BB, US7344039 BB, US6729488 BB, US6726042 BB, US6673298 BB, US6371317 BA, US6116442 A, US5618857 A, US5616418 A, US5098939 A, US5086938 A, US4984718 A, US4916184 A, US4863300 A, US4722969 A, US4710539 A, US4546892 A, US4532270 A, US4497916 A, US4314924 A, US3547851 A, US2006070973 AA, US2005189312 AA,

Forward Citations: WO17070452, WO13017810, USD747201, US9782326, US8925755, US8584874, US8231018, US2015129534, US2011100947, US2010308050, CN106494740, CN103717498,

Abstract:

Source: US2007251911A A closure is provided for connection to a container. The closure includes a cap and a tamper band. The tamper hand includes retention tabs that retain the tamper band to the container.

31) Family number: 49250759 (US2013087523A)

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Title: CLOSURE

Priority: GB20110007758 20110510 GB20110007760 20110510 US20120467961 20120509
 US20110565877P 20111201 US20120689960 20121130 US20120724733P 20121109
 WO2012US37173 20120509 WO2012US37168 20120509 US20120724773P 20121109
 US20140477332 20140904

Family:

Publication number	Publication date	Application number	Application date
CA2832428 AA	20140509	CA20132832428	20131106
CA2835855 AA	20121115	CA20122835855	20120509
CA2835861 AA	20121115	CA20122835861	20120509
GB201107758 A0	20110622	GB20110007758	20110510
GB201107760 A0	20110622	GB20110007760	20110510
GB2490687 A1	20121114	GB20110007758	20110510
GB2490687 B2	20141001	GB20110007758	20110510
GB2490689 A1	20121114	GB20110007760	20110510
ID201700695 A	20170203	ID2015P0003286	20131108
US2013087523 AA	20130411	US20120689960	20121130
US2013119062 AA	20130516	US20120467977	20120509
US2013119079 AA	20130516	US20120467961	20120509
US2014367352 AA	20141218	US20140477332	20140904
US8777030 BB	20140715	US20120467977	20120509
US9546027 BB	20170117	US20120689960	20121130
US9630753 BB	20170425	US20140477332	20140904
WO12154887 A1	20121115	WO2012US37168	20120509
WO12154891 A2	20121115	WO2012US37173	20120509
WO12154891 A3	20140501	WO2012US37173	20120509

Probable Assignee: CLOROX CO

Assignee(s):^(std): ALVAREZ STACIE M ; AZELTON KERRY D ; CLOROX CO ; CLOROX CO ; HINKLE JAY ; ZIEGENHORN DAVID ; SHOWERS GREG ; OBRIST CLOSURES SWITZERLAND

Assignee(s): THE CLOROX COMPANY ; ZELLER PLASTIK US INC ; ZELLER PLASTIK USA INC ; IRWIN BRYAN ; SHOWER GREG ; OBRIST CLOSURES SWITZERLAND GMBH ; CALYSTA INC

Inventor(s):^(std): ALVAREAZ STACIE ; AZELTON KERRY ; HINKLE JAY ; SHOWERS GREGORY ; ZIEGENHORN DAVID ; SHOWERS GREG ; SHOWER GREG ; IRWIN BRYAN ; AZELTON KERRY D ; ALVAREZ STACIE M ; ALVAREZ STACIE M

Inventor(s): DAVID ZIEGENHORN ; JAY HINKLE ; STACIE ALVAREAZ ; SILVERMAN JOSHUA ; KERRY AZELTON ; GREGORY SHOWERS

Agent(s): RICHES MCKENZIE AND HERBERT LLP; ACHMAD FATCHY; ANN; PETERSON DAVID ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
 (IPC 8-9): [B65D41/00](#) [B65D41/04](#) [B65D41/08](#) [B65D41/32](#) [B65D41/34](#) [B65D41/38](#) [B65D43/02](#) [B65D43/22](#) [B65D45/00](#) [B65D47/00](#) [B65D47/02](#) [B65D47/08](#) [B65D49/00](#) [B65D49/12](#) [B65D55/02](#) [B65F1/16](#) [C12N1/20](#) [C12P7/64](#) (Advanced/Invention)

CPC: [B65D55/022](#) [B65D41/0442](#) [B65D2101/0038](#) [B65D2251/105](#) [B65D41/08](#) [B65D41/38](#) [B65D55/02](#) [B65D47/02](#) [B65F1/16](#) [B65D49/00](#) [B65D43/22](#) [B65D47/0804](#) [B65D49/12](#)

B65D55/024 B65D2101/0023 B65D41/34 B65D55/026 B65D41/32 B65D43/0235
Y02W30/807 B65D47/0838 B65D2101/003

European class: B65D41/34 B65D49/12 B65D55/02F B65D55/02G

US class: 215/235 215/237 215/253 215/30 220/255.1 220/259.1 220/266 220/810 220/833 220/834
222/541.1 222/541.6 222/556

[Classification Explorer](#)

Cited documents: WO09055409 A1, WO09002717 A1, WO08139196 A1, WO0130663 A1, US8608006 BB, US8490804 BB, US8360256 BB, US8276773 BB, US8028848 BB, US7735665 BB, US7731049 BB, US7703642 BB, US7644843 BA, US7611025 BB, US7374053 BB, US7156247 BB, US7044317 BB, US6976607 BB, US6877631 BA, US6848603 BB, US6821239 BB, US6772914 BB, US6766926 BA, US6672487 BA, US6644487 BB, US6631820 BB, US6405885 BA, US6318585 BA, US6269986 BA, US6053375 A, US5979681 A, US5947315 A, US5875942 A, US5875907 A, US5749484 A, US5685445 A, US5632420 A, US5547091 A, US5497906 A, US5411157 A, US5398836 A, US5392938 A, US5390805 A, US5386918 A, US5249694 A, US5221017 A, US5174460 A, US5169033 A, US5145080 A, US5129531 A, US5096077 A, US5085333 A, US5067624 A, US5000332 A, US4941592 A, US4852751 A, US4759455 A, US4726483 A, US4718567 A, US4598833 A, US4555038 A, US4487324 A, US4471878 A, US4281778 A, US3977557 A, US3905509 A, US3795338 A, US2423582 A, US2013119079 AA, US2013119062 AA, US2012261380 AA, US2011024381 AA, US2010282705 AA, US2010264145 AA, US2009212002 AA, US2009107948 AA, US2009101620 AA, US2009057260 AA, US2008314860 AA, US2008296251 AA, US2007284331 AA, US2007181526 AA, US2007144996 AA, US2007102389 AA, US2007090080 AA, US2007029352 AA, US2007023462 AA, US2006186079 AA, US2006186078 AA, US2006186077 AA, US2006151418 AA, US2006043052 AA, US2006011573 AA, US2005279727 AA, US2005173368 AA, US2005035158 AA, US2004188374 AA, US2004089627 AA, US2004069806 AA, US2004011829 AA, US2003062369 AA, US2003034323 AA, US2002079282 AA, JP491856 U, JP4091856 U, JP2010013113 A2, JP2009220848 A2, JP2005289389 A2, JP2003246338 A2, JP2003160162 A2, JP11011508 A2, GB2430667 A1, GB156935 A, FR2505784 A1, FR2501166 A1, EP2144821 A1, EP1892194 A1, EP1503942 B1, EP1503942, DE3605963 A1,

Forward Citations: WO17001855, WO17001854, WO15023829, US9701451, US9546027, US2015175318, US2013087523, EP2966002, CN105636875,

Abstract:

Source: US2013087523A Described is a closure adapted to be fit on top of containers such as bottles. In various embodiments, the closure may include an outer skirt and an inner skirt. The closure may be engageable with a container neck. In some embodiments, a region of weakness may be adapted to break and/or deform upon an attempt to remove the closure from the container neck. In some embodiments, after the break and/or deformation, the closure may no longer be engageable with the container neck.

32) Family number: 30716931 (US2006151418A)

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Title: TAMPER EVIDENT CLOSURE ASSEMBLIES**Priority:** AU20030291786 20031219 AU20100202106 20100525 NZ20020523373 20021220
WO2003NZ00291 20031219**Family:**

Publication number	Publication date	Application number	Application date
AU2003291786 AA	20040714	AU20030291786	20031219
AU2003291786 BB	20100617	AU20030291786	20031219
AU2010202106 AA	20100617	AU20100202106	20100525
CA2510805 AA	20050617	CA20032510805	20031219
CA2510805 C	20111129	CA20032510805	20031219
EP1594757 A1	20051116	EP20030768409	20031219
EP1594757 A4	20090624	EP20030768409	20031219
HK1082238 A3	20060602	HK20060101102	20060124
NZ523373 A	20050826	NZ20020523373	20021220
US2006151418 AA	20060713	US20030539776	20031219
US7703642 BB	20100427	US20030539776	20031219
WO04056670 A1	20040708	WO2003NZ00291	20031219
ZA200504881 A	20070425	ZA20050004881	20050614

Probable Assignee: ALTO HOLDINGS LTD**Assignee(s):**^(std): ALTO HOLDINGS LTD ; ALTO PACKAGING LTD ; ALTO PLASTICS LTD ; SCOTT EDWARD S ; SCOTT EDWARD SEAN**Assignee(s):** ALTO HOLDINGS LIMITED ; ALTO PLASTICS LIMITED ; ALTO PACKAGING LIMITED**Inventor(s):**^(std): SEAN SCOTT EDWARD ; SCOTT EDWARD SEAN ; SCOTT EDWARD S**Inventor(s):** EDWARD SEAN SCOTT ; SCOTT EDWARD**Agent(s):** WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; A J PARK; AJ PARK; RICHES MCKENZIE AND HERBERT LLP; JACOBSON HOLMAN PLLC**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
^{(IPC 8-9):} [A47G19/22](#) [B65D39/00](#) [B65D41/50](#) [B65D47/12](#) [B65D47/24](#) [B65D47/26](#) [B65D47/36](#)
[B65D51/18](#) [B65D51/22](#) [B65D83/00](#) [B67D3/00](#) ^{(Advanced/Invention);}
[A47G19/22](#) [B65D39/00](#) [B65D47/04](#) [B65D47/12](#) [B65D51/18](#) [B65D83/00](#) ^{(Core/Invention);}
[B65D](#) ^(Subclass/Invention)**International class**
^{(IPC 1-7):} [B65D41/50](#) [B65D47/24](#) [B65D47/26](#) [B65D47/36](#)**CPC:** [B65D47/127](#) [B65D47/24](#) [B65D51/226](#) [B65D2101/0038](#) [B65D2251/0015](#) [B65D2251/0056](#)
[B65D2251/0093](#)**European class:** [B65D47/12D](#) [B65D47/24](#) [B65D51/22](#) [B65D51/22A3](#) [L65D101/00A3C](#) [L65D251/00Y2D](#)
[L65D251/00Y4J](#) [L65D251/00Y6M](#)**US class:** [215/254](#) [215/257](#) [215/387](#) [220/254.7](#) [220/254.700](#) [220/714](#) [220/717](#) [222/522](#)[Classification Explorer](#)**Cited documents:** WO03051734 A1, WO0136289 A1, USD419447 S1, US6772910 BA, US6659308 BA, US6477743 BA, US6321924 BA, US6257463 BA, US6257436 BA, US6116445 A, US5927549 A, US5680965 A, US5456374 A, US4610374 A, US3738545 A, AU2002359098 AA, AU2002259098,

Forward Citations: WO16137782, WO14173952, WO10145714, WO09106509, WO07015649, WO06116248, US9714124, US9546027, US9452919, US9434516, US9033169, US8763830, US8490786, US8356711, US2015232318, US2015001261, US2014048537, US2013087523, US2013074448, US2012091134, US2011198309, US2011011824, US2011000800, US2010163509, US2010155401, US2010102021, US2009212061, US2008041809, EP2792612, DE102005012412, CN104443719, CN104326152,

Abstract:

Source: US2006151418A A sipper type capping assembly engageable with a necked container so as not to pool condensation on the disc seal. It has a unitary moulding (1) adapted to define a detachable overcap (4) and at least the container engaging skirt (9). An insert (2) and a disc seal member (17) located within moulding (1), and a nozzle component (3) above the seal member is carried through the insert yet moveable relative thereto. In a non-dispensing condition, the nozzle component (3) and the insert (2) provide closure. In the dispensing condition of the nozzle component (3) relative to the insert (2) there is defined a liquid egress passageway. The insert and the nozzle component, when in or notionally considered in the non-dispensing condition, define together with the moulding a fully enclosed space about part of the nozzle component. When in or notionally considered in at least the dispensing condition, the moulding and the disc seal member fully enclose the nozzle component.

33) Family number: 11426324 (US5456375A)

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Title: Tamper evident cap and container

Priority: AU19930043854 19930520 US19920886075 19920520 WO1993US04815 19930520
US19950475527 19950607

Family:	Publication number	Publication date	Application number	Application date
	<u>AT174567 E</u>	19990115	AT19930914039T	19930520
	<u>AU199343854 A1</u>	19931213	AU19930043854	19930520
	<u>AU199856349 A1</u>	19980507	AU19980056349	19980226
	<u>AU686562 B2</u>	19980212	AU19930043854	19930520
	<u>AU710761 B2</u>	19990930	AU19980056349	19980226
	<u>CA2136320 AA</u>	19941121	CA19932136320	19930520
	<u>DE69322637 D1</u>	19990128	DE19936022637	19930520
	<u>DE69322637 T2</u>	19990722	DE19936022637T	19930520
	<u>EP0640054 A1</u>	19950301	EP19930914039	19930520
	<u>EP0640054 A4</u>	19961002	EP19930914039	19930520
	<u>EP0640054 B1</u>	19981216	EP19930914039	19930520
	<u>JP8504151 T2</u>	19960507	JP19940503849T	19930520
	<u>US5456375 A</u>	19951010	US19920886075	19920520
	<u>US5720402 A</u>	19980224	US19950475527	19950607
	<u>WO9323304 A1</u>	19931125	WO1993US04815	19930520

Probable Assignee: SPECIALISED PACKAGING CONCEPTS

Assignee(s):^(std): SPECIALISED PURCHASING CONCEPT ; ZOLNOWSKI ROBERT ; JOHN PAUL MAY ; MAY JOHN P ; MAY JOHN PAUL ; ROBERT ZOLNOWSKI ; SPECIALISED PACKAGING CONCEPTS

Assignee(s): SPECIALISED PACKAGING CONCEPTS PTY LTD ; SPECIALISED PURCHASING CONCEPTS UNIT TRUST ; SPECIALISED PACKAGING CONCEPTS UNIT TRUST SPECIALI ; SPECIALISED PACKAGING CONCEPTS PTY LTD MELBOURNE A ; SPECIALISED PACKAGING CONCEPTS PTY LTD MELBOURNE AU ; SPECIALISED PACKAGING CONCEPTS UNIT TRUST SPECIALISED PACKAGING CONCEPTS PTY LTD TRUSTEE ; SPECIALISED PACKAGING CONCEPTS PTY LTD TRUSTEES FOR SPECIALISED PACKAGING CONCEPTS UNIT TRUST AS

Inventor(s):^(std): ZOLNOWSKI ROBERT ; MAY JOHN PAUL ; MAY JOHN P

Inventor(s): JOHN PAUL MAY ; MAY JOHN PAUL MELBOURNE VIC 3044 AU ; ROBERT ZOLNOWSKI ; ZOLNOWSKI ROBERT FRANKSTON VIC 3200 AU

Agent(s): PHILLIPS ORMONDE FITZPATRICK; BERESKIN AND PARR

Designated states: AT AU BE CA CH DE DK ES FR GB GR IE IT JP LI LU MC NL PT SE

International class
(IPC 8-9): B65D41/34 B65D55/06 B65D55/08 (Advanced/Invention);
B65D41/34 B65D55/02 (Core/Invention)

International class
(IPC 1-7): B65D41/34 B65D55/06 B65D55/08

CPC: B65D41/3409

European class: B65D41/34A1

US class: 215/252 215/256 215/258 215/321 220/276

[Classification Explorer](#)

Cited documents: US5456375 A, US5131550 A, US5131549 A, US5105961 A, US5078290 A, US5076453 A, US5050754 A, US5012941 A, US5009323 A, US4974735 A, US4936475 A, US4936474 A, US4934546 A, US4909404 A, US4886175 A, US4805792 A, US4729488 A, US4458820 A, US4436212 A, US4401227 A, US4380299 A, US4346811 A,

US4322912 A, US3955716 A, NL7601306 A, AU650056 A1, AU5896990 A1,

Forward Citations: WO9958337, WO9941156, WO9741042, WO08067574, WO06090137, WO05012129, USD641832, USD617880, USD531903, USD506253, USD441650, USD427068, USD426159, USD421389, USD421223, USD419451, USD418419, US9611079, US8763830, US8511639, US8459486, US8231025, US8210391, US7882977, US7857154, US7753233, US7293396, US7228979, US6968965, US6793082, US6702134, US6694596, US6394293, US6381928, US6325227, US6196408, US6065623, US5738231, US5720402, US5699924, US2012091134, US2011155758, US2008135513, US2008093363, US2007278256, US2007181578, US2007084870, US2005045495, EP1930248, EP0914280,

Abstract:

Source: US5456375A A cap and container combination wherein the cap fits about the container in at least two closure positions. Two circumferential bands are provided around the skirt of the cap and there is an internal thread which engages an external thread about the container neck. In the first position, one band of the cap engages a circumferential slot about the container. The internal thread seals with the top of the container. The first band is removed and the container opened by removing the cap. In the second position, the second band engages the slot and the threads engage each other. In the second position, the second band is located about the container. It remains in position when and after the cap is removed. Tampering of the container and cap can be visually detected with this configuration. A bead about the container is formed of a reduced cross-section in portions circumferentially around the cap. This facilitates assembly and disassembly of cap and container.

- **search:** SS7 (6) and FT=(sleeve) (Results 27)
- **List:** SS7 1–50 ((6) and FT=(sleeve)) (Results 27)

0) US2002033374A – TAMPER EVIDENCING CLOSURE

1) Family number: 28185285 (US2002033374A)

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Title: Tamper evidencing closure

Priority: EP20030770468 20030924 KR20007000005U 20000522 US19970904878 19970801
 US19990323571 19990601 US20000653679 20000901 US20050250249 20051011
 US20080203992 20080904 WO2000US12283 20000505 WO1998US15527 19980723
 WO2003US30350 20030924 US20020266091 20021004 US20010955844 20010918
 US20010900505 20010705

Family:

Publication number	Publication date	Application number	Application date
AT361239 E	20070515	AT19980937158T	19980723
AU199885938 A1	19990222	AU19980085938	19980723
AU200048219 A1	20001218	AU20000048219	20000505
AU200048219 A5	20001218	AU20000048219	20000505
AU200191356 A1	20030123	AU20010091356	20011115
AU200191356 A5	20030123	AU20010091356	20011115
AU2003278956 AA	20040504	AU20030278956	20030924
AU2003278956 AH	20040504	AU20030278956	20030924
AU785404 B2	20070419	AU20010091356	20011115
CA2298700 AA	20000131	CA19982298700	19980723
CA2298700 C	20070522	CA19982298700	19980723
CA2501327 AA	20050404	CA20032501327	20030924
CA2501327 C	20110823	CA20032501327	20030924
CN1089711 C	20020828	CN19988007824	19980723
CN1275114 A	20001129	CN19988007824	19980723
CN1701028 A	20051123	CN20038025129	20030924
DE69837713 D1	20070614	DE19986037713	19980723
DE69837713 T2	20080110	DE19986037713T	19980723
EP1025015 A1	20000809	EP19980937158	19980723
EP1025015 A4	20050727	EP19980937158	19980723
EP1025015 B1	20070502	EP19980937158	19980723
EP1556280 A2	20050727	EP20030770468	20030924
EP1556280 A4	20090624	EP20030770468	20030924
EP2123569 A1	20091125	EP20090010762	20030924
KR200227370 Y1	20010615	KR20000014667U	20000524
MXPA04000110 A1	20040521	MX2004PA00110	20040107
MXPA05003566 A1	20050603	MX2005PA03566	20030924
US2002033374 AA	20020321	US20010900505	20010705
US2002066713 AA	20020606	US20010955844	20010918
US2003071007 AA	20030417	US20020266091	20021004
US2006060555 AA	20060323	US20050250249	20051011
US2009057261 AA	20090305	US20080203992	20080904
US5913437 A	19990622	US19970904878	19970801
US6112923 A	20000905	US19990323571	19990601
US6484896 BB	20021126	US20010900505	20010705
US6766916 BB	20040727	US20010955844	20010918
US6981602 BB	20060103	US20020266091	20021004
WO0073164 A1	20001207	WO2000US12283	20000505
WO03004369 A1	20030116	WO2002US19318	20020617

WO04033312 A2	20040422	WO2003US30350	20030924	
WO04033312 A3	20040826	WO2003US30350	20030924	
WO9906295 A1	19990211	WO1998US15527	19980723	
ZA200109159 A	20021106	ZA20010009159	20011106	
ZA200205290 A	20030410	ZA20020005290	20020702	

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; ADAMS BRIAN M ; MA MIKE X ; MA MIKE XIAOLI

Assignee(s): MA XIAOLI ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL CORP ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; WAYZATA INVESTMENT PARTNERS LLC ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AS AGENT ; WELLS FARGO FOOTHILL LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS

Inventor(s):^(std): MIKE X MA ; MA XIAOLI ; MA MIKE XIAOLI ADAMS BRIAN M ; MA MIKE X ; ADAMS BRIAN M ; XIAOLI MA ; MA MIKE XIAOLI ; BRIAN M ADAMS

Inventor(s): THE DESIGNATION OF THE INVENTOR HAS NOT YET BEEN FILED ; MA MIKE ; ADAMS BRIAN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL; DAVID J BREZNER DORSEY AND WHITNEY LLP; ADAM K SACHAROFF MUCH SHELST FREED DENENBERG AMENT AND RUBENSTEIN PC; DORSEY AND WHITNEY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): [B28B13/06](#) [B28B7/10](#) [B29C41/42](#) [B29C45/44](#) [B65D1/00](#) [B65D39/00](#) [B65D41/00](#) [B65D41/32](#) [B65D41/34](#) [B65D49/12](#) [B65D50/00](#) [B65D51/00](#) [B65D51/16](#) [B65D55/02](#) (Advanced/Invention); [B65D41/34](#) (Advanced/Non-invention); [B65D39/00](#) [B65D41/34](#) [B65D50/00](#) [B65D55/02](#) (Core/Invention); [B65D](#) (Subclass/Invention)

International class
(IPC 1-7): [B28B13/06](#) [B28B7/10](#) [B29C41/42](#) [B65D0/0000](#) [B65D1/00](#) [B65D39/00](#) [B65D41/00](#) [B65D41/34](#) [B65D50/00](#) [B65D55/02](#)

CPC: [B65D41/3428](#) [B29C43/42](#) [B29C43/50](#) [B29C45/4407](#) [B29L2031/565](#) [B65D41/3409](#) [B65D2101/0046](#)

European class: [B29C43/42](#) [B29C43/50](#) [B29C45/44B](#) [B65D41/34A1](#) [B65D41/34C1](#) [L29C43/50](#) [L29L31/56B](#) [L65D101/00A3D](#)

US class: [215/252](#) [215/254](#) [215/256](#) [215/258](#) [215/258S](#) [215/307](#) [215/307S](#) [215/329](#) [215/344](#) [215/344S](#) [215/43](#) [215/44](#) [264/328.1](#) [264/328.100S](#) [264/334](#) [264/334S](#)

[Classification Explorer](#)

Cited documents: WO0012402 A1, US7228979 BB, US6736280 BA, US6474491 BA, US6276543 BA, US6224802 BA, US6177041 BA, US6177041 B1, US6173853 BA, US6152316 A, US6119883 A, US6116442 A, US6112923 A, US6109464 A, US6105802 A, US6102226 A, US6053344 A, US6015054 A, US5913437 A, US5893474 A, US5868281 A, US5853095 A, US5779075 A, US5775527 A, US5749484 A, US5727705 A, US5715959 A, US5692628 A, US5685443 A, US5660288 A, US5657889 A, US5609262 A, US5570798 A, US5533633 A, US5480045 A, US5465876 A, US5456376 A, US5415306 A, US5400913 A, US5346082 A, US5307946 A, US5307945 A, US5295600 A, US5285912 A, US5246125 A, US5232125 A, US5190178 A, US5105961 A, US5105960 A, US5080246 A, US5078290 A, US5076453 A, US4981230 A, US4978016 A, US4875594 A, US4813561 A, US4801031 A, US4732289 A, US4664278 A, US4526282 A, US4511053 A, US4196818 A, US3338446 A, US3329296 A, US3329295 A, US2007108154 AA, US2005199573 AA, US2002001637 AA, US2001027957 AA, FR2421812 A1, EP0635434 A1, EP0489865 A1, EP0341992 A1, EP0049876 A1, DE3912137 A1,

Forward Citations:

WO15046889, WO13001454, WO13001454, WO11070326, WO09095297, WO08092716, WO08092716, WO07081656, WO07033722, WO04048220, WO03050033, WO03016161, WO03004369, USD763691, USD756776, USD756234, USD747201, USD746685, USD723919, USD664852, USD654362, USD619003, USD613162, USD606401, USD584619, USD584149, USD564879, USD553987, USD550084, USD538654, USD534802, USD531505, USD530205, USD529804, USD527631, USD525523, USD525125, USD518716, USD508204, USD507745, USD457433, USD449991, US9821934, US9738409, US9676129, US9617045, US9522759, US9409680, US9403310, US9290306, US9205946, US8931243, US8926590, US8845256, US8807360, US8650839, US8567619, US8544666, US8529501, US8517194, US8499950, US8443999, US8413830, US8408208, US8348576, US8251236, US8231018, US8206377, US8100277, US8066139, US8061543, US8016142, US7891511, US7875000, US7798359, US7780024, US7766178, US7735664, US7721510, US7644902, US7637384, US7451898, US7445130, US7422169, US7413097, US7293396, US7261226, US7198170, US7059553, US7032772, US6974046, US6968966, US6968965, US6948630, US6877624, US6702161, US6659297, US6622460, US6571994, US6557714, US6382443, US2017057139, US2015166225, US2014263475, US2014190968, US2013206718, US2013038992, US2012111822, US2012067892, US2012018401, US2011309048, US2011151980, US2011100947, US2011024423, US2010314391, US2010308050, US2010230374, US2010215548, US2010102021, US2010089863, US2010084364, US2010032402, US2009302037, US2009200259, US2009200258, US2009020530, US2009013642, US2008218362, US2008210745, US2008173612, US2007257002, US2007251950, US2007232893, US2007173756, US2007158295, US2007125785, US2007125783, US2007034590, US2007000932, US2006266727, US2006208115, US2006163192, US2006151423, US2006070972, US2005252878, US2005199574, US2005167879, US2005167389, US2005145629, US2005092750, US2005072751, US2005040176, US2005000931, US2004251276, US2004168999, US2004159727, US2004155006, US2004094501, US2004045925, US2003192854, US2003150833, US2003116522, TWI498258, KR200462672, JP4932710, JP2008508151, JP2007501169, ITMI20111912, GB2476089, FR2911584, ES2321471, EP2586721, EP2223656, EP2123569, EP2088090, EP1953091, EP1660379, EP1445207, EP1288133, DE102010039036, CN103857599, CN103857599, AU2003302391, AU2002333387,

Abstract:

Source: US2002033374A A container including a neck and an opening, in combination with a tamper-evidencing closure including a top, a depending annular skirt and a tamper-evidencing band frangibly connected to the annular skirt. The container includes a first securing structure on the neck spaced from the opening. The tamper-evidencing band includes an inwardly turned retaining rim that extends at least partially upwardly. The retaining rim has a free edge for engagement with the locking surface as the closure is removed from the neck. The retaining rim includes a plurality of outwardly directed flutes spaced circumferentially thereon and a second securing structure located on the retaining rim between the flutes.

0) US4448317A – TAMPER EVIDENT CLOSURES AND PACKAGES

2) Family number: 28673962 (US4448317A)

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Title: TAMPER EVIDENT CLOSURES AND PACKAGES

Priority: CA19840447712 19840217 EP19840101269 19840208 US19880292661 19881230
WO1984US00206 19840213 US19830467791 19830218

Family:

Publication number	Publication date	Application number	Application date
<u>AT39459 E</u>	19890115	AT19840101269T	19840208
<u>AU198426538 A1</u>	19840910	AU19840026538	19840213
<u>AU561982 B2</u>	19870521	AU19840026538	19840213
<u>CA1253116 A1</u>	19890425	CA19840447712	19840217
<u>DE3475769 D1</u>	19890202	DE19843475769	19840208
<u>EP0116892 A2</u>	19840829	EP19840101269	19840208
<u>EP0116892 A3</u>	19850911	EP19840101269	19840208
<u>EP0116892 B1</u>	19881228	EP19840101269	19840208
<u>ES290070 U</u>	19861116	ES19840290070U	19840217
<u>ES290070 Y</u>	19870716	ES19840290070U	19840217
<u>ES290070 Y1</u>	19870814	ES19840290070U	19840217
<u>IE55522 B</u>	19901010	IE19840000379	19840217
<u>IE840379 L</u>	19840818	IE19840000379	19840217
<u>IL70843 A0</u>	19840531	IL19840070843	19840201
<u>IL70843 A1</u>	19870831	IL19840070843	19840201
<u>IN163531 A</u>	19881008	IN1984CA00091	19840206
<u>JP1772225 C3</u>	19930714	JP19840501094	19840213
<u>JP4064941 B4</u>	19921016	JP19840501094	19840213
<u>JP60500524 T2</u>	19850418	JP19840501094T	19840213
<u>KR840007701 A</u>	19841210	KR19840000742	19840216
<u>MX158578 A</u>	19890215	MX19840200380	19840217
<u>NZ207189 A</u>	19870630	NZ19840207189	19840217
<u>US4448317 A</u>	19840515	US19830467791	19830218
<u>US4489841 A</u>	19841225	US19830467794	19830218
<u>US4905851 A</u>	19900306	US19880292661	19881230
<u>WO8403270 A1</u>	19840830	WO1984US00206	19840213
<u>ZA8400458 A</u>	19850227	ZA19840000458	19840120

Probable Assignee: ZAPATA INNOVATIVE CLOSURES INC

Assignee(s):^(std): TRI TECH SYST ; TRI TECH SYSTEMS INT INC ; TRI TECH SYSTEMS INTERNATIONAL INC ; TRI TECH SYSTEMS INTERNAT INC

Assignee(s): TRI TECH SYSTEMS INT ; YODER J SCOTT ; ZAPATA INNOVATIVE CLOSURES INC ; TORAI TEKU SHISUTEMUZU INTERN INC ; TRI TECH SYSTEMS INTERNATIONAL INC ; FIRST FEDERAL SAVING AND LOAN ASSOCIATION OF TOLED ; FIRST FEDERAL SAVING AND LOAN ASSOCIATION OF TOLEDO 701 FIRST FEDERAL PLAZA TOLEDO OH 43624 ; INNOVATIVE CLOSURES INC ; MID AMERICAN BANK AND TRUST CO ; MID AMERICAN NATIONAL BANK AND TRUST CO ; SCHEICH RICHARD A ; MID AMERICAN NATIONAL BANK AND TRUST COMAPNY ; S D TECHNOLOGIES INC ; MID AMERICAN NATIONAL BANK AND TRUST CO 222 SOUTH ; S D TECHNOLOGIES INC FL CORP ; THOMPSON MORTIMER S ; MID AMERICAN NATIONAL BANK AND TRUST CO 222 SOUTH MAIN STREET BOWLING GREEN OHIO 43402

Inventor(s):^(std): ASHER ELI ; ELI ASHER ; MORTIMER S THOMPSON ; STAFFORD THOMPSON MORTIMER ; THOMPSON M S ; THOMPSON MORTIMER S ; THOMPSON MORTIMER STAFFORD ; THOMPSON MS

Inventor(s): TONPUSON MOOTEIMAA SUTATSUFUOODO

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SIM AND MCBURNEY; REINHOLD COHN AND PARTNERS

Designated states: AT AU BE BR CF CG CH CM DE DK FI FR GA GB HU IT JP LI LU MC MR NL NO RO SE SN SU TD TG

International class
(IPC 8-9): B65D41/18 B65D41/34 B65D55/02 (Advanced/Invention);
B65D41/34 (Advanced/Non-invention);
B65D41/02 B65D41/34 B65D55/02 (Core/Invention)

International class
(IPC 1-7): B65D41/04 B65D41/18 B65D41/28 B65D41/34 B65D55/02 B67B1/00 B67B3/00

CPC: Y10S206/807 B65D55/026

European class: B65D55/02G

US class: 206/459.1 206/807 215/203 215/230 215/365

[Classification Explorer](#)

Cited documents: US4678083 A, US4666052 A, US4603785 A, US4591063 A, US4579240 A, US4489841 A, US4461389 A, US4456139 A, US4436213 A, US4432462 A, US4424911 A, US4423822 A, US3984005 A, US3935960 A, US3923198 A, US3923198, US3899295 A, US3896965 A, US3887734 A, US3887734, US3468744 A, US3433152 A, US2939597 A, US2414420 A, US2201205 A, JP59209542,

Forward Citations: WO9205083, WO9106486, WO9106486, WO9128640, WO9128640, WO9047702, WO05021400, US9815593, US9708105, US9637271, US9409686, US9409682, US9334084, US8800471, US8322555, US8286812, US7913870, US7704589, US7682696, US6968968, US6929136, US6478175, US6108475, US6102224, US6029807, US5566846, US5477972, US5284694, US5257705, US5240131, US5236101, US5156720, US5152412, US5145079, US5104704, US5103979, US5064664, US5062928, US5055150, US5022545, US5015318, US4994314, US4927036, US4905851, US4837061, US4801028, US4793500, US4771923, US4736857, US4718553, US2016137381, US2016068311, US2015176818, US2011232560, US2010089922, US2009255897, US2007289935, US2006246802, US2006068168, US2006054526, US2005056645, KR100982879, GB2345067, GB2283735, EP1660383, EP0303400, EP0269317, EP0269317, EP0243545, EP0243545, EP0233077, EA007707, DE4002967, CN105189301, AU597572,

Abstract:

Source: US4448317A A tamper evident closure and package having a container (10), a resealable, substantially rigid closure (12) for closing, opening and reclosing the container (10), color changing means (32a in Figures 1-6) which effect a color change upon stretching, and coacting mechanical means (24, 36, 44 and 46 in Figures 1-6) for uncapping and recapping the closure 10 and for stretching the color changing means (32a) which clearly and unequivocally indicate the condition of the package, e.g., open or closed. Where legends, or other well defined indicia, indicating opening is desired, the color changes can be localized in the skirt by providing thin sections (32a) which stretch preferentially and adjacent thicker sections (38) which remain substantially unstretched. The thin sections (32a) for example can be a legend, or alternatively the thick sections (38) can be the legend while the thin sections (32a) provide a suitable background. The colour changes employed by the invention can be accomplished by such phenomena as stress whitening inherent in various plastic materials. Alternatively, the color changes can be accomplished by mechanisms such as the use of encapsulated staining or coloring agents incorporated in a suitable matrix.

0) US2007131641A – CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

3) Family number: 31517864 (US2007131641A)

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Title: CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

Priority:

AU20030900141	20030114	AU20030900678	20030217	AU20030904044	20030804
AU20040261315	20040804	AU20040900141	20040114	AU20030904359	20030815
AU20030904196	20030808	AU20030904527	20030822	AU20040200617	20040217
AU20040902799	20040526	AU20040902799	20040526	AU20040902722	20040521
AU20040900744	20040216	AU20040900450	20040203	AU20040902794	20040526
AU20040900814	20040218	AU20040900245	20040121	AU20040902721	20040521
AU20040900657	20040212	AU20040902799	20040527	AU20040900879	20040223
AU20060203297	20060801	GB20070009820	20040804	GB20060004470	20040804
WO2004AU01035	20040804	AU20040903406	20040622	AU20040903775	20040709
AU20040903477	20040624	AU20040903434	20040624	AU20040903507	20040629
AU20040902928	20040601	AU20040903041	20040607	AU20040902931	20040602
AU20040903153	20040610				

Family:

Publication number	Publication date	Application number	Application date
<u>AU2003900141 A0</u>	20030130	AU20030900141	20030114
<u>AU2003900678 A0</u>	20030227	AU20030900678	20030217
<u>AU2003904044 A0</u>	20030814	AU20030904044	20030804
<u>AU2003904196 A0</u>	20030821	AU20030904196	20030808
<u>AU2003904359 A0</u>	20030828	AU20030904359	20030815
<u>AU2004200617 AA</u>	20040902	AU20040200617	20040217
<u>AU2004261315 AA</u>	20050210	AU20040261315	20040804
<u>AU2004261315 BB</u>	20060504	AU20040261315	20040804
<u>AU2004261315 CA</u>	20070802	AU20040261315	20040804
<u>AU2006203297 AA</u>	20060824	AU20060203297	20060801
<u>BRPI0412963 A</u>	20060926	BR2004PI12963	20040804
<u>CA2534758 AA</u>	20060203	CA20042534758	20040804
<u>CN1863710 A</u>	20061115	CN200480028971	20040804
<u>DE112004001435 T5</u>	20060727	DE200411001435	20040804
<u>EP1660379 A1</u>	20060531	EP20040737650	20040804
<u>EP1660379 A4</u>	20091230	EP20040737650	20040804
<u>GB200604470 A0</u>	20060412	GB20060004470	20040804
<u>GB200709820 A0</u>	20070704	GB20070009820	20040804
<u>GB2420114 A1</u>	20060517	GB20060004470	20040804
<u>GB2420114 B2</u>	20070718	GB20060004470	20040804
<u>GB2435038 A1</u>	20070815	GB20070009820	20040804
<u>GB2435038 B2</u>	20080521	GB20070009820	20040804
<u>JP2007501169 T2</u>	20070125	JP20060522180T	20040804
<u>KR20060042422 A</u>	20060512	KR20067002437	20040804
<u>KR20070033052 A</u>	20070323	KR20077005410	20040804
<u>NZ544867 A</u>	20080926	NZ20040544867	20040804
<u>US2007131641 AA</u>	20070614	US20040567195	20040804
<u>WO05012125 A1</u>	20050210	WO2004AU01035	20040804
<u>WO05077777 A1</u>	20050825	WO2005AU00222	20050218
<u>ZA200601839 A</u>	20070627	ZA20060001839	20060101

Probable Assignee: RBC TRUSTEES CI LTD

Assignee(s):^(std): ABACUS ; ABACUS C I LTD ; ABACUS C I LTD TRUSTEE OF T AS ; ABACUS C I LTD COMO FIDEI COMI ; ABACUS C I LTD TRUSTEE FOR AS ; ABACUS C I LTD AS TRUSTEE FOR ; ABACUS C I LTD AS TRUSTEE OF T ; CTECH EQUIPMENT PTY LTD ; WOOLFORD L ; RBC TRUSTEES CI LTD AS TRUSTEE ; HIGGINS CHRISTOPHER

LYNDON ; CTECH CLOSURES PTY LTD ; ABACUS C I COMO FIDEI COMISSARIO DO FIDE LTD

Assignee(s): ABACUS C I LIMITED ; ABACUS TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVI ; ABACUS TRUSTEE FOR BAYVIEW TRUST AS LTD ; ABACUS C I TRUSTEE OF BAYVIEW TR AS LTD ; RBC TRUSTEES LTD ; RBC TRUSTEES CI LTD ; RBC TRUSTEES CI LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS CI TRUSTEE OF BAYVIEW TRUST LTD AS ; ABACUS CI LTD ; RBC TRUSTEES (CI) LTD ; ABACUS CI LIMITED TRUSTEE FOR BAYVIEW TRUST AS ; ABACUS C I TRUSTEE FOR BAYVIEW T AS LTD ; ABACUS C I LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS C I LIMITED COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVIEW TRUST ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST JERSEY ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST ; ABACUS LTD ; ABACUS C I TRUSTEE FOR BAYVIEW TR AS LTD ; ABACUS (C I) LIMITED AS TRUSTEE FOR THE... ; ABACUS (C I) LIMITED COMO FIDEI COMISSARIO DO... ; ABACUS (CI) LTD

Inventor(s):^(std): PETER WILLIAM BROWN ; LYNDON HIGGINS CHRISTOPHER ; HIGGINS CHRISTOPHER LYNDON ; CHRISTOPHER LYNDON HIGGINS ; BROWN PETER WILLIAM ; HIGGINS CHRISTOPHER L

Inventor(s): HIGGINS CHRISTOPHER

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; BROOKS KUSHMAN PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D41/04 B65D41/32 B65D41/34 B65D47/06 B65D47/08 B65D47/20 B65D51/00 B65D51/28 B65D81/32 B65D83/00 (Advanced/Invention);
B65D41/32 B65D41/34 (Advanced/Non-invention);
B65D41/04 B65D41/32 B65D41/34 B65D47/04 B65D47/06 B65D47/08 B65D51/00 B65D51/24 (Core/Invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D101/00 B65D41/34 B65D47/20 B65D51/28

CPC: B65D51/2835 B65D47/06 B65D47/08 B65D41/3409 B65D51/2828 B65D41/0421 B65D41/0428 B65D41/3428 B65D47/0857 B65D51/2807 B65D2101/00

European class: B65D41/04B1A B65D41/04B2 B65D41/34 B65D41/34A1 B65D41/34C1 B65D47/06 B65D47/08 B65D47/08D B65D51/28B1B B65D51/28B1B1 L65D101/00

US class: 215/252

[Classification Explorer](#)

Cited documents: WO9840289 A1, WO9838104 A1, WO9743190 A1, WO05012125 A1, WO03010061 A2, WO03004369 A1, WO02062675 A1, WO0168469 A1, US6230884 BA, US6148996 A, US5950850 A, US5660288 A, US5346082 A, US5038951 A, US5020682 A, US4903865 A, US4813561 A, US4738370 A, US4458821 A, US4457438 A, US2003102280 AA, US2003015490 AA, JP8091402 A2, JP2003519602 T2, JP2003165555 A2, JP11100093 A2, JP11059791 A2, GB2222812 A1, EP1332977 A1, EP1316507 A2,

Forward Citations: WO16009192, WO15004352, WO12130916, WO09154666, WO09154666, WO08061766, WO07082322, WO06013443, WO06013443, WO05077777, US9828146, US9731869, US9382044, US9061801, US8851310, US8807360, US8684225, US8684204, US8356711, US7775386, US2013313287, US2012292321, US2011024423, RU2507137, KR100951526, FR3008393, EP1778555,

Abstract:

Source: US2007131641A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102), a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamper-evident band (110) frangibly connected to said skirt; the neck (10) of the container including a plurality of discretely spaced projections (18) extending outwardly from said neck and adapted to engage with tabs (122) on said tamper-evident band to facilitate breaking of the band (110) from the skirt of the closure.

4) Family number: 28688909 (US2003116522A)

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Title: SELF-DRAINING CONTAINER NECK AND CLOSURE**Priority:** US20010026161 20011221 US20020277072 20021021 WO2002US40993 20021220
US20030628599 20030728 US20070668211 20070129

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2002364200 AA</u>	20030715	AU20020364200	20021220
	<u>US2003116522 AA</u>	20030626	US20020277072	20021021
	<u>US2003116524 AA</u>	20030626	US20010026161	20011221
	<u>US2004055992 AA</u>	20040325	US20030628599	20030728
	<u>US2007125785 AA</u>	20070607	US20070668211	20070129
	<u>US6948630 BB</u>	20050927	US20020277072	20021021
	<u>US7168581 BB</u>	20070130	US20030628599	20030728
	<u>US7431168 BB</u>	20081007	US20010026161	20011221
	<u>US7766178 BB</u>	20100803	US20070668211	20070129
	<u>WO03055763 A1</u>	20030710	WO2002US40993	20021220

Probable Assignee: BERRY PLASTICS CORP**Assignee(s):^(std):** JULIAN RANDALL K ; MONTGOMERY GARY V ; REXAM MEDICAL PACKAGING INC ; ROBINSON CLAYTON L ; WILLIAMS DOUGLAS M**Assignee(s):** REXAM MEDICAL PACKAGING INC A DELAWARE CORP ; REXAM MEDICAL PACKAGING INC A CORP OF DELAWARE ; REXAM CLOSURES AND CONTAINERS INC ; REXAM CLOSURES LLC ; BERRY PLASTICS CORP**Inventor(s):^(std):** CLAYTON L ROBINSON ; DOUGLAS M WILLIAMS ; GARY V MONTGOMERY ; JULIAN RANDALL K ; MONTGOMERY GARY V ; RANDALL K JULIAN ; ROBINSON CLAYTON L ; WILLIAMS DOUGLAS M**Inventor(s):** ROBINSON CLAYTON ; MONTGOMERY GARY**Agent(s):** MIDDLETON AND REUTLINGER; MIDDLETON REUTLINGER; JAMES E; SALAZAR JOHN F; BRUGGEMAN CHAD D; JOHN F; CHAD D**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
(IPC 8-9): B65D1/02 B65D41/04 B65D41/34 B65D43/20 B65D51/00 B65D51/20 B65D53/00 B65D53/04 (Advanced/Invention);
B65D39/00 B65D41/34 B65D51/16 B65D77/20 (Advanced/Non-invention);
B65D1/02 B65D41/34 B65D51/18 (Core/Invention);
B65D77/10 (Core/Non-invention)**International class**
(IPC 1-7): B65D1/02 B65D23/00 B65D39/00 B65D41/00 B65D41/02 B65D41/34 B65D47/00 B65D51/00 B65D53/00**CPC:** B65D1/023 B65D1/0246 B65D41/3428 B65D51/20 B65D2251/0015 B65D2251/0093 B65D2577/205 B65D41/045**European class:** B65D1/02D1 B65D1/02D1B B65D41/04D2 B65D41/34C1 B65D51/20 L65D251/00Y2D L65D251/00Y6M L65D577/20M1**US class:** 215/232 215/252 215/329 215/347 215/349 215/35 215/350 215/43 215/44 215/44S 220/351[Classification Explorer](#)**Cited documents:** WO9099335, WO9009935 A1, WO07042205, WO06002922, US7217454 BB, US7175039 BB, US7168581 BB, US7021478 BA, US7004340 BB, US6948630 BB, US6913157 BB, US6902075 BB, US6893672 BB, US6874647 BB, US6854614 BB, US6848590 BB, US6659297 BB, US6502710 BA, US6488165 BA, US6477823 BA, US6419101 BA, US6382445 BA, US6382443 BA, US6315140 BA, US6302321 BA, US6277478 BA,

US6276643 BA, US6276543 BA, US6265083 BA, US6257430 BA, US6253940 BA, US6253939 BA, US6239210 BA, US6237789 BA, US6235822 BA, US6234338 BA, US6231975 BA, US6220466 BA, US6206871 BA, US6202871 BA, US6179139 BA, US6179139 B1, US6165576 A, US6158604 A, US6152319 A, US6152316 A, US6123212 A, US6119883 A, US6119422 A, US6105800 A, US6089390 A, US6082568 A, US6082566 A, US6068933 A, US6056141 A, US6056136 A, US6044994 A, US6006930 A, US5997968 A, US5992661 A, US5973077 A, US5947311 A, US5929128 A, US5927530 A, US5925430 A, US5915577 A, US5902075 A, US5884788 A, US5882789 A, US5875909 A, US5862928 A, US5860544 A, US5851640 A, US5850951 A, US5837369 A, US5788101 A, US5785195 A, US5773136 A, US5756178 A, US5738231 A, US5723507 A, US5720401 A, US5702015 A, US5685443 A, US5664694 A, US5654694 A, US5626929 A, US5615789 A, US5551608 A, US5533622 A, US5523136 A, US5513781 A, US5500265 A, US5492757 A, US5469968 A, US5447792 A, US5433992 A, US5421470 A, US5415306 A, US5407751 A, US5381913 A, US5346082 A, US5342684 A, US5302442 A, US5265745 A, US5259522 A, US5258191 A, US5255813 A, US5197621 A, US5197620 A, US5197618 A, US5178293 A, US5176271 A, US5175035 A, US5160767 A, US5151317 A, US5135125 A, US5120787 A, US5110642 A, US5093164 A, US5092469 A, US5078290 A, US5071686 A, US5069355 A, US5061532 A, US5058755 A, US5031787 A, US5023121 A, US5012946 A, US5011719 A, US5009324 A, US5009323 A, US5007546 A, US5006384 A, US5002811 A, US4997097 A, US4991731 A, US4981230 A, US4981229 A, US4981219 A, US4935273 A, US4896783 A, US4894266 A, US4893718 A, US4892911 A, US4881649 A, US4879147 A, US4875594 A, US4846359 A, US4842951 A, US4818577 A, US4815617 A, US4810541 A, US4809858 A, US4807770 A, US4807745 A, US4801037 A, US4782968 A, US4779750 A, US4778698 A, US4764403 A, US4757914 A, US4754892 A, US4754890 A, US4747502 A, US4747500 A, US4738370 A, US4730748 A, US4723685 A, US4722447 A, US4721215 A, US4709815 A, US4706835 A, US4705188 A, US4704180 A, US4683016 A, US4682463 A, US4674643 A, US4674642 A, US4668458 A, US4662529 A, US4651886 A, US4648520 A, US4643330 A, US4638913 A, US4637519 A, US4625875 A, US4588099 A, US4583665 A, US4576297 A, US4564117 A, US4527705 A, US4526279 A, US4501371 A, US4496674 A, US4493427 A, US4473163 A, US4457440 A, US4434904 A, US4430288 A, US4427126 A, US4423821 A, US4392579 A, US4382521 A, US4381840 A, US4378894 A, US4369889 A, US4364485 A, US4358919 A, US4280653 A, US4276989 A, US4275817 A, US4266687 A, US4209126 A, US4207990 A, US4204604 A, US4181232 A, US4151924 A, US4128184 A, US4109815 A, US4093093 A, US4091949 A, US4076152 A, US4066181 A, US4013188 A, US4009793 A, US4007848 A, US3980194 A, US3944103 A, US3923185 A, US3923184 A, US3923183 A, US3923182 A, US3923179 A, US3917100 A, US3910410 A, US3879492 A, US3845525 A, US3823182 A, US3815314 A, US3788510 A, US3632004 A, US3612325 A, US3547294 A, US3530917 A, US3527372 A, US3501042 A, US3360149 A, US3331523 A, US3266658 A, US3255907 A, US3245857 A, US3224617 A, US3189209 A, US3186209 A, US3169656 A, US3143364 A, US2929525 A, US2904837 A, US2748969 A, US2686607 A, US2686606 A, US2681742 A, US2670869 A, US2643021 A, US2620939 A, US2312513 A, US2242256 A, US2188946 A, US2085934 A, US2039757 A, US2007187352 AA, US2007138125 AA, US2007125785 AA, US2005284837 AA, US2005211657 AA, US2005003125 AA, US2004173944 AA, US2004055992 AA, US2003150833 AA, US2003116524 AA, US2003098285 AA, US2003071007 AA, US2002162818 AA, US2002066713 AA, US2002027123 AA, US2001012868 AA, US1995350 A, US1961033 A, US1937492 A, US1916977 A, US1910913 A, US1556020 A, US1346112 A, JP2219769, JP2205574, JP2001261054 A2, JP2000052982, GB2034288, EP0659655 A1, EP0589033, EP0421821, EP0405365, EP0275102, EP0269920, DE4206244, DE3237634, CA2572379,

Forward Citations: WO16176672, WO14022229, WO12095191, WO10088940, WO10011624, WO10011624, WO05032964, WO05032964, USD795064, USD769713, USD758789, USD752234, USD750490, USD747649, USD747199, USD724233, USD691046, USD688129, USD688128, US9738409, US9693577, US9604769, US9522759, US9521859, US9505527, US9403310, US9386679, US9338872, US9315306, US9313871, US9242782, US9241508, US9233052, US9145251, US9139326, US9051098, US9033168, US8931243, US8916217, US8910811, US8857644, US8857637, US8851310, US8807360, US8796333, US8785496, US8785495, US8778994, US8778993, US8778992, US8770428, US8756902, US8746489, US8739991, US8708182, US8673242, US8671655, US8652423, US8650839, US8631977, US8609725, US8596477, US8584876, US8460771, US8413830, US8393484, US8308005, US8292102, US8251236, US8217077, US8113367, US8100277, US7960007, US7798359, US7780024, US7766178, US7694835, US7644902, US7637082, US7562510, US7163117, US7159374, US6948630, US2016376076, US2016123496, US2015353247, US2015034611, US2014203048, US2013058845, US2013058844, US2012292321, US2011253666, US2011225934, US2011214897, US2011204016, US2011132926, US2011127268, US2011120998, US2011089134, US2011024423, US2011017739, US2010176134, US2010140271, US2010140208, US2010102021, US2010009042, US2010006532, US2009291174, US2009255929,

US2009188888, US2009156998, US2009090721, US2009008392, US2008314856, US2008302756, US2008296198, US2008257850, US2008203051, US2008197099, US2007210026, US2007187352, US2007142469, US2007125785, US2007093553, US2007045312, US2006201967, US2005284837, US2005263476, US2005155325, US2003116522, JP5966260, JP2013001399, JP2012516817, FR2911584, EP3122645, EP3098175, EP2547597, EP2167385, EP2167385, EP1663355, CN106103295, CN104736248, CN104736248, CN102264604,

Abstract:

Source: US2003116522A A self-draining container neck and closure comprising a container neck having an upper sidewall portion and a lower sidewall portion, the upper sidewall portion being inset from the lower sidewall portion. The container neck also includes a tamper indicating bead having at least one draining notch therein. The instant invention also includes a closure having a plurality of drainage slots disposed in a spaced configuration. The closure is threadably connected to the container neck, the closure and container threads rotatably engage and provide a drainage path there between.

0) US2017043921A – IMPROVED TAMPER-EVIDENT CLOSURE

5) Family number: 60160932 (US2017043921A)

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Title: IMPROVED TAMPER-EVIDENT CLOSURE
Priority: EP20150748589 20150217 US20140939852P 20140214 WO2015US16136 20150217
US20150118753 20150217

Family:	Publication number	Publication date	Application number	Application date
	CL2016002025 A1	20170106	CL20160002025	20160810
	CN106103297 A	20161109	CN201580008525	20150217
	EP3105137 A1	20161221	EP20150748589	20150217
	EP3105137 A4	20171101	EP20150748589	20150217
	EP3219637 A1	20170920	EP20170159175	20150217
	IN201647027142 A	20160831	IN201647027142	20160809
	JP2017508679 T2	20170330	JP20160551286T	20150217
	MX2016010338 A1	20161130	MX20160010338	20150217
	PE00052017 A1	20170304	PE20160001448	20150217
	US2017043921 AA	20170216	US20150118753	20150217
	WO15123666 A1	20150820	WO2015US16136	20150217

Probable Assignee: CLOSURE SYSTEMS INT INC

Assignee(s):^(std) CLOSURE SYSTEMS INT INC

Inventor(s):^(std) DANIEL ELLIOTT ; ELLIOTT DANIEL

Agent(s): JOHANSSON AND LANGLOIS; ALGEMEEN OCTROOI EN MERKENBUREAU BV;
GEIMER STEPHEN D ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE
GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ
LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ
NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG
SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA
ZM ZW

International class [B65D39/08](#) [B65D41/34](#) [B65D50/06](#) [B65D51/18](#) [B65D55/08](#) (Advanced/Invention)
(IPC 8-9):

CPC: [B65D39/08](#) [B65D55/0863](#) [B65D51/18](#) [B65D2251/0028](#) [B65D2251/0078](#) [B65D41/3414](#)
[B65D41/3423](#) [B65D2101/0023](#) [B65D2101/003](#) [B65D2101/0046](#) [B65D2101/0076](#)
[B65D2251/0015](#) [B65D2251/0087](#)

US class: [220/270](#)

[Classification Explorer](#)

Cited documents: WO13132384 A1, WO09154666 A2, US6758359 BB, US6050436 A, US5052574 A,
US4807770 A, US2124873 A, US2010038337 AA, US2004020943 AA, FR2778643 A1,
DE29706672 U1, DE19708909 A1, CN102015472 A,

Forward Citations: WO17037271,

Abstract:

Source: US2017043921A Embodiments of a tamper-evident closure are disclosed which prevent unauthorized access to a container and its contents, deterring adulteration or introduction of counterfeit product. In one embodiment the tamper-evident closure can be fitted to an associated container and closure, and includes a portion which is removed by fracture of the tamper-evident closure to gain access to the container closure. In another embodiment, an arrangement of wedge-like tongues permit fitment of the tamper-evident closure to associated container for tamper-evidence. In another embodiment, the tamper-evident closure is joined by frangible bridges to the container closure to provide the desired tamper-evidence. In another embodiment, the tamper-evident closure is movable axially of the associated container closure to thereby provide evidence of removal.

6) Family number: 63739 (US2003230546A)

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Title: SPORTS BEVERAGE SNAP CLOSURE**Priority:** US19970869501 19970605 US19990415444 19991008 WO1998US11750 19980604
US20010975081 20011011**Family:**

Publication number	Publication date	Application number	Application date
<u>AR013348 AA</u>	20001227	AR1998P102669	19980605
<u>AU199878228 A1</u>	19981221	AU19980078228	19980604
<u>BRPI9815539 A</u>	20011211	BR1998PI15539	19980604
<u>CA2293535 AA</u>	19991203	CA19982293535	19980604
<u>CA2293535 C</u>	20090811	CA19982293535	19980604
<u>CL1998001237 A1</u>	19990212	CL19980001237	19980604
<u>CL43051 B</u>	20070514	CL19980001237	19980604
<u>CO4840529 A1</u>	19990927	CO19980031423	19980603
<u>EP1025014 A1</u>	20000809	EP19980926378	19980604
<u>EP1025014 A4</u>	20020605	EP19980926378	19980604
<u>EP1025014 B1</u>	20040908	EP19980926378	19980604
<u>ES2229503 T3</u>	20050416	ES19980926378T	19980604
<u>HU0202935 AB</u>	20021228	HU20020002935	19980604
<u>HU0202935 AC</u>	20030228	HU20020002935	19980604
<u>HU225384 B1</u>	20061128	HU20020002935	19980604
<u>PL190365 B1</u>	20051230	PL19980337774	19980604
<u>PL337774 A1</u>	20000911	PL19980337774	19980604
<u>US2003230546 AA</u>	20031218	US20010975081	20011011
<u>US5975369 A</u>	19991102	US19970869501	19970605
<u>US6321924 BA</u>	20011127	US19990415444	19991008
<u>US6758359 BB</u>	20040706	US20010975081	20011011
<u>WO9855368 A2</u>	19981210	WO1998US11750	19980604

Probable Assignee: CLOSURE SYSTEMS INT INC**Assignee(s):^(std):** ERIE COUNTY PLASTICS CORP ; ALUMINUM CO OF AMERICA AL ; ALUMINUM CO OF AMERICA ; ALUMINUM CO OF AMERICA ; ALUMINUM CO AMERICA ALCOA CT ; ALCOA INC**Assignee(s):** ALUMINIUM CO OF AMERICA ; ALUMINUM CO ; ALBRECHT LEE ; ALUMINUM CO OF AMERICA ALCOA CENTER ; ALUMINUM CO OF AMERICA ALCOA CENTER PENNSYLVANIA ; ALUMINUM CO OF AMERICA ALCOA ; BANK OF NEW YORK MELLON ; BABCOCK DAVID E ; ALUMINUM CO OF AMERICA (ALCOA) ; ALUMINUM CO OF AMERICA ; ERIE COUNTY PLASTICS CORRY CORP ; CREDIT SUISSE SYDNEY BRANCH ; CLOSURES SYSTEMS INT ; BERRY PLASTICS CORP ; BANK ONE NA ; JPMORGAN CHASE BANK NA ; CLOSURE SYSTEMS INT ; MONTGOMERY GREGG S ; SMITH ROBERT J ; PALMA MIKE G ; YURKEWICZ MICHAEL A ; ROBBINS PAUL W ; GETSY STEPHEN ; CLOSURE SYSTEMS INT INC ; CLOSURES SYSTEMS INT INC ; JPMORGAN CHASE BANK NA (SUCCESSOR IN INTEREST TO BANK ONE NA) ; JPMORGAN CHASE BANK NA SUCCESSOR IN INTEREST TO BANK ONE NA ; ERIE COUNTY PLASTICS Y CLOSURE SYSTEMS INT INC CORP**Inventor(s):^(std):** BABCOCK DAVDI E ; PALMA MIKE G ; PALMA ; MONTGOMERY GREGG S ; MONTGOMERY ; YURKEWICZ MICHAEL A ; YURKEWICZ ; SMITH ROBERT J ; SMITH ; GETSY TEPHEN ; GETSY STEPHEN ; GETSY ; BABCOCK DAVID E ; BABCOCK ; ALBRECHT LEE ; ALBRECHT ; YURKEWICZ MICHAEL ; ROBBINS PAUL W ; ROBBINS**Inventor(s):** PAUL W ROBBINS ; DAVID E BABCOCK ; ROBERT J SMITH ; STEPHEN GETSY ; MIKE G PALMA ; MICHAEL A YURKEWICZ ; LEE ALBRECHT ; GREGG S MONTGOMERY ; DAVDI E BABCOCK ; DAVID BABCOCK ; GREGG MONTGOMERY ; MICHAEL YURKEWICZ ; MIKE PALMA ; PAUL ROBBINS ; ROBERT JOHN SMITH ;

ROBERT SMITH ; TEPHEN GETSY

Agent(s): OYEN WIGGS GREEN AND MUTALA LLP; RAMIRO CASTRO DUQUE

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HU ID IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

International class B65D41/00 B65D41/32 B65D41/62 B65D47/24 B65D47/26 B65D51/18 (Advanced/Invention)
(IPC 8-9):

International class B65D41/00 B65D41/32 B65D41/62 B65D47/24 B65D47/26 B65D51/18 B65D55/02
(IPC 1-7): B67D5/32 B67D5/33

CPC: B65D41/32 B65D47/243 B65D51/18 B65D2101/0023 B65D2101/0038 B65D2251/0015
B65D2251/0087

European class: B65D41/32 B65D47/24A2 B65D51/18 L65D101/00A3 L65D101/00A3C L65D251/00Y2D
L65D251/00Y6J

US class: 215/251 220/257 220/257.1 220/257.100S 222/153.06 222/153.060S 222/525 222/541.5
222/541.500S

[Classification Explorer](#)

Cited documents: WO9620889 A1, US6321924 BA, US6095375 A, US5975369 A, US5890633 A, US5862953 A, US5829611 A, US5813575 A, US5810185 A, US5662247 A, US5657906 A, US5655685 A, US5562219 A, US5507416 A, US5472120 A, US5465876 A, US5456374 A, US5429255 A, US5328063 A, US5265777 A, US5259522 A, US5197634 A, US5105960 A, US5104008 A, US5096077 A, US5072863 A, US5022562 A, US4993570 A, US4967941 A, US4946080 A, US4927065 A, US4817831 A, US4746035 A, US4726483 A, US4640427 A, US4497765 A, US4418828 A, US4383623 A, US4314656 A, US4179052 A, US3989152 A, US3981421 A, US3743127 A, US3599845 A, US3216630 A, JP9030554 A2,

Forward Citations: WO17064594, WO15123666, WO14169979, WO12062146, WO11137957, WO10063372, WO10046567, WO06115424, WO06036085, WO05044685, WO05030607, WO03057584, WO03050033, WO03049583, WO0216220, WO02092452, WO02092452, WO0208081, WO02076846, WO0064774, USD796325, USD784812, USD763073, USD747201, USD715146, USD590658, USD584151, USD582276, USD580264, USD576877, USD517864, USD492901, USD490315, US9428308, US9359115, US9322481, US9290308, US9033169, US9010560, US8844770, US8783483, US8770428, US8746515, US8668097, US8663170, US8662360, US8646634, US8631977, US8474665, US8459512, US8434651, US8292111, US8292103, US8109396, US7988004, US7882976, US7874308, US7819276, US7815061, US7703642, US7665637, US7648038, US7611025, US7607592, US7588142, US7543920, US7537133, US7530469, US7431437, US7337921, US7261226, US7246695, US7228979, US7207970, US7143911, US7143911, US7140519, US7107783, US7066360, US7044317, US7011221, US6871764, US6854595, US6772910, US6758359, US6702161, US6695170, US6669054, US6655553, US6644487, US6540114, US6341721, US6338425, US6321924, US6305579, US2017001770, US2014197126, US2014048537, US2012325769, US2012267336, US2011233210, US2011132926, US2011120998, US2010213159, US2010207046, US2010206915, US2010122254, US2010084436, US2010021089, US2009101647, US2009081332, US2009032533, US2008302754, US2008296309, US2008277371, US2008031679, US2008017676, US2007257005, US2007215627, US2007193302, US2007108153, US2007102390, US2007102389, US2007090131, US2007076064, US2007056828, US2007007231, US2006151418, US2006057257, US2005263480, US2005263479, US2005231568, US2005173368, US2005151803, US2005092785, US2005075613, US2005061822, US2005040190, US2004251276, US2004216340, US2004173556, US2004129741, US2004108342, US2004007553, US2004007481, US2003230546, US2003218026, US2003000907, JP4743674, JP4173448, JP2005511182, JP2002544070, GB2398560, GB2398560, FR2937622, FR2859983, FR2813284, ES2291145, EP3156347, EP1873077, EP1737743, EP1673292, EP1585676, EP1132335, DE202009015434, DE202006020653, DE112006001087, DE102010019691, DE102008060773, CN105392710, AU770103, AU2002366627, AU2002360572, AT410781,

Abstract:

Source: US2003230546A A container closure is disclosed which includes a shell attachable to a container around a container opening thereof. The shell has a shell opening in fluid communication with the container opening when the shell is attached to the container. A tip is received on the shell movable between a closed position sealing the shell opening and an open position. A cover is releasably attached to the shell in a manner indicative of the tip being positioned in the closed position when the cover is attached to the shell. Both the shell and the cover may

be provided with tamper-evident bands. The present invention is particularly well adapted to be formed as a push-pull container closure for sports bottles and the like.

7) Family number: 40762903 (US2007251911A)

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Title: TAMPER-EVIDENT CLOSURE WITH DIRECTIONAL MOLDED RETENTION TABS
Priority: US20060556974 20061106 US20060745924P 20060428 US20120571449 20120810
Family:

Publication number	Publication date	Application number	Application date
US2007251911 AA	20071101	US20060556974	20061106
US2012305517 AA	20121206	US20120571449	20120810
US8302794 BB	20121106	US20060556974	20061106
US8584874 BB	20131119	US20120571449	20120810
WO07127634 A2	20071108	WO2007US66692	20070416
WO07127634 A3	20081120	WO2007US66692	20070416

Probable Assignee: BERRY PLASTICS CORP

Assignee(s):^(std): RUSSELL MARK N ; BERRY PLASTICS CORP

Assignee(s): BERRY STERLING CORP ; BANK OF AMERICA NA ; BANK OF AMERICA NA ABL COLLATERAL AGENT AS ; BANK OF AMERICA NA COLLATERAL AGENT AS ; CAPTIVE PLASTICS INC ; GRAFCO IND ; LANDIS PLASTICS LLC ; SETCO LLC ; TUBED PRODUCTS LLC ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERA ; GRAFCO IND PARTNERSHIP LTD ; CREDIT SUISSE CAYMAN ISLANDS BRANCH TERM COLLATERAL AGENT AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AG ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AS TERM COLLAT ; WELLS FARGO BANK NA ; US BANK NATIONAL ASSOCIATION

Inventor(s):^(std): RUSSELL MARK N

Agent(s): BARNES AND THORNBURG LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [A47G19/22](#) [B65D41/34](#) [B65D51/00](#) [B65D53/00](#) ^(Advanced/Invention);
^(IPC 8-9) [A47G19/22](#) [B65D51/00](#) [B65D53/00](#) ^(Core/Invention)

CPC: [B65D41/0414](#) [B65D41/3423](#)

European class: [B65D41/04B1](#) [B65D41/34C](#)

US class: [215/252](#) [215/258](#) [215/344](#) [215/344S](#)

[Classification Explorer](#)

Cited documents: US8302794 BB, US7802690 BB, US7344039 BB, US6729488 BB, US6726042 BB, US6673298 BB, US6371317 BA, US6116442 A, US5618857 A, US5616418 A, US5098939 A, US5086938 A, US4984718 A, US4916184 A, US4863300 A, US4722969 A, US4710539 A, US4546892 A, US4532270 A, US4497916 A, US4314924 A, US3547851 A, US2006070973 AA, US2005189312 AA,

Forward Citations: WO17070452, WO13017810, USD747201, US9782326, US8925755, US8584874, US8231018, US2015129534, US2011100947, US2010308050, CN106494740, CN103717498,

Abstract:

Source: US2007251911A A closure is provided for connection to a container. The closure includes a cap and a tamper band. The tamper hand includes retention tabs that retain the tamper band to the container.

8) Family number: 10334264 (US5875906A)

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Title: Tamper evident sleeves and method of forming them

Priority: US19960653454 19960524 WO1997US08878 19970522

Family:

Publication number	Publication date	Application number	Application date
<u>AU199732134 A1</u>	19971209	AU19970032134	19970522
<u>US5875906 A</u>	19990302	US19960653454	19960524
<u>WO9744262 A1</u>	19971127	WO1997US08878	19970522

Probable Assignee: ZAPATA INNOVATIVE CLOSURES INC

Assignee(s):^(std): ZAPATA INNOVATIVE CLOSURES INC

Inventor(s):^(std): GOMEZ CLAUDIO ZAPATA ; KROPKE JAMES ; PRICE MICHAEL L ; ZAPATA GOMEZ CLAUDIO

Inventor(s): CLAUDIO ZAPATA GOMEZ ; MICHAEL L PRICE ; JAMES KROPKE

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CH CN CU CZ DE DK EE ES FI FR GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG UZ VN

International class
(IPC 8-9): B29C57/12 B65D55/08 (Advanced/Invention) ;
B29C57/00 B65D55/02 (Core/Invention)

International class
(IPC 1-7): B29C57/12 B65D41/34

CPC: B29C57/12 B29L2031/56 B65D55/0863 B65D2101/00

European class: B29C57/12 B65D55/08C L29L31/56 L65D101/00

US class: 215/252 215/276

[Classification Explorer](#)

Cited documents: US5579934 A, US5341949 A, US5263600 A, US4813561 A, US4709824 A, US3968894 A,

Forward Citations: WO9958418, WO08122078, WO02062675, WO0112537, US8308005, US7004341, US6772893, US6655553, US6631820, US6405885, US6116443, US2017081088, US2009188888, US2008011706, US2007272647, US2003205549, US2003102282, FR2778643,

Abstract:

Source: US5875906A A tamper evident sleeve and method of forming the sleeve. The tamper evident sleeve is used in conjunction with a closure or cap, such as a twist-off metal crown seal, for a container or bottle. The sleeve has a skirt made from plastic material which engages the crown seal and rotates with the crown seal in opening and closing the container without discomfort or injury which can be encountered in-directly gripping a metal crown seal. The sleeve also includes a tamper evident feature depending from the skirt of the sleeve which indicates the condition of the container upon the initial removal of the sleeve and crown seal.

9) Family number: 56197623 (US2017137189A)

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Title: A TAMPER-EVIDENT CLOSURE**Priority:** GB20140001682 20140131 WO2015EP50894 20150119**Family:**

Publication number	Publication date	Application number	Application date
CN105939941 A	20160914	CN201580006669	20150119
CO20160001431 A2	20170209	CO20160001431	20160830
EP3099596 A1	20161207	EP20150701946	20150119
GB201401682 A0	20140319	GB20140001682	20140131
JP2017507086 T2	20170316	JP20160547177T	20150119
KR20160115950 A	20161006	KR20167023290	20150119
MX2016009649 A1	20170919	MX20160009649	20150119
PH2016501501 A	20170206	PH20160501501	20160728
TH165254 A	20170720	TH20161004418	20150119
US2017137189 AA	20170518	US20150115665	20150119
WO15113851 A1	20150806	WO2015EP50894	20150119

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND ; OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** ALEXANDER DONALD MEIKLEM MCPHERSON ; MCPHERSON ALEXANDER DONALD MEIKLEM**Agent(s):** JAIME EDUARDO DELGADO VILLEGAS; BRYERS LLP; TOMITA HIROYUKI; HIROTA MASANORI; OZAWA SEIJI**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [B65D41/34](#) [B65D55/02](#) [B65D55/06](#) (Advanced/Invention);
(IPC 8-9): [B65D55/02](#) (Core/Invention)**CPC:** [B65D2101/0053](#) [B65D41/34](#) [B65D55/024](#) [B65D55/06](#)[Classification Explorer](#)**Cited documents:** WO14016391 A1, WO13113435 A1, WO13079545 A1, US5740932 A, GB2302867 A1, FR546991 A, EP0711711 A1, DE4441435 A1, CN1150106 A, CN103958361 A,**Forward Citations:** WO17001533,**Abstract:**

Source: US2017137189A A tamper-evident closure (1) for a container, the closure comprising: a shell comprising a first shell part (3A) and a second shell part (3B); and a tamper-evident overcap, the overcap comprising a cap (4A) which is fixed to the exterior of the first shell part and a tamper-evident member (4B) which is releasably connected to the cap (4A) and releasably located around the exterior of at least part of the second shell part (3B), such that the first and second shell parts (3A, 3B) cannot be separated unless the member (4B) is released, and thereafter the cap (4A) is removable together with the first shell part (3A).

10) Family number: 20605057 (WO9804474A2)

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Title: LIQUID CONTAINER CLOSURE ASSEMBLY
Priority: GB19960015966 19960730 GB19970006883 19970404 WO1997GB02018 19970728
Family:

Publication number	Publication date	Application number	Application date
AU199737008 A1	19980220	AU19970037008	19970728
BRPI9710788 A	19990817	BR1997PI10788	19970728
CN1226217 A	19990818	CN19971096858	19970728
EP0918700 A2	19990602	EP19970933763	19970728
GB2323839 A1	19981007	GB19980007015	19980402
GB2323839 B2	20010808	GB19980007015	19980402
GB9615966 A0	19960911	GB19960015966	19960730
GB9706883 A0	19970521	GB19970006883	19970404
GB9807015 A0	19980603	GB19980007015	19980402
RU99104146 A	20010120	RU19990104146	19970728
WO9804474 A2	19980205	WO1997GB02018	19970728
WO9804474 A3	19980319	WO1997GB02018	19970728

Probable Assignee: MONTGOMERY DANIEL AND SON LTD

Assignee(s):^(std): FAULKNER ALAN ; MONTGOMERY DANIEL AND SON LTD ; SLOANE CRAIG MARTIN ; THOMSON DAVID WILLIAM

Assignee(s): DANIEL MONTGOMERY AND SON LTD

Inventor(s):^(std): FAUKNER ALAN ; FAULKNER ALAN ; SLOANE CRAIG MARTIN ; THOMSON DAVID WILLIAM ; WILLIAM DAVID THOMSON ; DAVID WILLIAM THOMSON ; DAVID THOMSON WILLIAM ; CRAIG MARTIN SLOANE ; ALAN FAULKNER ; ALAN FAUKNER

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CZ DE DK EE ES FI FR GA GB GE GH GN GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

International class
 (IPC 8-9): [B65D41/34](#) [B65D45/32](#) [B65D49/04](#) (Advanced/Invention);
[B65D41/34](#) [B65D45/00](#) [B65D49/00](#) (Core/Invention)

International class
 (IPC 1-7): [B65D41/34](#) [B65D45/32](#) [B65D49/04](#) [B65D55/02](#)

CPC: [B65D41/3409](#) [B65D45/32](#) [B65D49/04](#) [B65D2101/0015](#) [B65D2101/0023](#) [B65D2101/0084](#)

European class: [B65D41/34A1](#) [B65D45/32](#) [B65D49/04](#) [L65D101/00A2](#) [L65D101/00A3](#) [L65D101/00A6](#)

[Classification Explorer](#)

Cited documents: WO9601216 A2, US4930647 A, US4805791 A, US4497415 A, US4372456 A, US4180175 A, GB2158424 A1, GB1588794 A, GB1402054 A, EP0711711 A1, DE3025903 A1,

Forward Citations: WO14091455, WO14082863, WO0218224, US8544663, US8113367, US7219820, FR2798647, EP1313649, CN105600129, CN102498044,

Abstract:

There is disclosed an improved closure assembly for application to a mouth of a container for liquid, for example, a neck of a bottle. It is an objection of the improvement to provide a closure assembly which cannot be removed without an extreme level of effort, or breakage being caused to the bottle. A closure assembly adapted to be applied to a mouth and neck portion of a container for liquid, comprises tubular means (2, 2') adapted to lie substantially concentrically with respect to said mouth and provided with projection means (6, 6') projecting inwardly of the tubular means (2, 2'), said projection means (6, 6') being moveable radially of the tubular means (2, 2') in a stiffly resilient manner, the closure assembly being further provided with a supporting sleeve means (10, 10') adapted to surround at least the projection means (6, 6') of said tubular means (2, 2'). A screw-cap with tamper-evident means is provided on top of the assembly.

11) Family number: 3659520 (US4632267A)

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Title: OVERMOLDED PORT CLOSURE**Priority:** CA19850495011 19851112 US19840670501 19841113 WO1985US02125 19851029**Family:**

Publication number	Publication date	Application number	Application date
CA1261301 A1	19890926	CA19850495011	19851112
DE3573585 D1	19891116	DE19853573585	19851029
EP0201560 A1	19861120	EP19850905692	19851029
EP0201560 A4	19870921	EP19850905692	19851029
EP0201560 B1	19891011	EP19850905692	19851029
JP1838552 C3	19940425	JP19850505029	19851029
JP5054792 B4	19930813	JP19850505029	19851029
JP62500841 T2	19870409	JP19850505029T	19851029
US4632267 A	19861230	US19840670501	19841113
WO8602905 A1	19860522	WO1985US02125	19851029
ZA8508570 A	19860625	ZA19850008570	19851107

Probable Assignee: BAXTER INT**Assignee(s):**^(std) BAXTER INT ; BAXTER TRAVENOL LAB**Assignee(s):** BAXTER TRAVENOL LABORATORIES INC ; FOWLES THOMAS A ; GREEN BRIAN C ; BAXTER INT INC ; BAXTER INT INC A DELAWARE CORP ; BAXTER INT INC A DELAWARE CORPORATION**Inventor(s):**^(std) BRIAN C GREEN ; FOWLES THOMAS ; FOWLES THOMAS A ; FUAURUSU TOOMASU EI ; GREEN BRIAN ; GREEN BRIAN C ; GURIIN BURAIAN SHII ; THOMAS A FOWLES**Agent(s):** SIM AND MCBURNEY**Designated states:** AT BE CH DE FR GB IT JP LI LU NL SE**International class**
^{(IPC 8-9):} [A61J1/05 A61J1/10 B65D39/00 B65D41/58 B65D47/36](#) (Advanced/Invention);
[A61J1/05 A61J1/10 B65D47/00](#) (Core/Invention)**International class**
^{(IPC 1-7):} [A61J1/00 A61J1/05 B65D39/00 B65D41/32 B65D41/58 B65D47/36](#)**CPC:** [Y10S215/03 A61J1/10 A61J2205/20 A61M2205/6081](#)**European class:** [A61J1/05B2 A61J1/10 K61J205/20 K61M205/60P4](#)**US class:** [215/253 215/DIG.3 220/266 604/408](#)[Classification Explorer](#)**Cited documents:** US4484916 A, US4478343 A, US4430077 A, US4303067 A, US4052497 A, US3994412 A, US3986507 A, US3974938 A, US3805986 A, US3554256 A, US3509879 A, US3443005 A, US3385158 A, JPS52110179, JPS4910155 U, JP52110179 A2, JP49010155 U, JP49010155, GB2084878 A1, FR2245539 A1, FR1089952 A,**Forward Citations:** WO9514455, WO9200118, WO9006143, USD639421, US8162915, US6723105, US6520212, US6173852, US5672162, US5620433, US5586672, US5584825, US5533994, US5498253, US5222950, US5152755, US5088995, US4903855, US4899903, US4892222, US2013306509, US2008009783, US2006074395, JP6500010, JP2013538633, EP0815825, EP0377035, AU709824, AU693835, AU636999,**Abstract:**

Source: US4632267A A improved port and closure assembly is provided. The closure is overmolded to the port. The closure hermetically seals the port and provides a tamper evident closure. The closure cooperates with the port to provide a band that circumscribes the port after the closure is removed.

12) Family number: 11478088 (US5292018A)

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Title: Tamper evident seal and system**Priority:** US19920909762 19920707

Family:	Publication number	Publication date	Application number	Application date
	<u>US5292018 A</u>	19940308	US19920909762	19920707

Probable Assignee: TRAVISANO FRANK P**Assignee(s):^(std):** TRAVISANO FRANK P**Inventor(s):^(std):** TRAVISANO FRANK P

International class B65D55/06 B65D55/08 (Advanced/Invention);
^{(IPC 8-9):} B65D55/02 (Core/Invention)

International class B65D41/02
^{(IPC 1-7):}

CPC: B65D55/06 B65D55/0854**European class:** B65D55/06 B65D55/08B3**US class:** 215/246 215/254[Classification Explorer](#)**Cited documents:** US5012940 A, US4652473 A, US4511052 A, US4363421 A, US3873018 A, US3746201 A, US3095103 A, US2790286 A, US2447983 A,

Forward Citations: WO9815469, WO9511168, WO10036416, WO08073859, WO06134030, WO0040474, USD574605, US9463138, US9365314, US9068682, US9027603, US8641665, US8511472, US8152068, US8152067, US8100875, US8051879, US7579061, US7225598, US6164473, US6146729, US6113720, US5566845, US5495944, US2016325895, US2016096670, US2014263341, US2014262898, US2014173867, US2014138274, US2013126462, US2012310219, US2010326868, US2010326560, US2010200098, US2010072163, US2009166438, US2009166401, US2008308444, US2008308443, US2008190883, US2007140921, US2007088300, US2006151414, US2005258634, US2005035081, US2005023173, US2004173613, US2004156667, US2003230577, ITBO20120043, GB2363788, GB2363788, FR2803938, FR2754248, EP2551212, EP1728816, EP1566786, EP1021353, EP0657362, EP0627361, AU767559, AU2006259127,

Abstract:

Source: US5292018A A tamper evident seal and system for use on a variety of container and closure combinations providing a seal across the juncture of the container and closure and positive indication to consumers of tampering with the seal. The seal comprises a heat shrink band to which is applied at least one strip of a heat activated adhesive extending perpendicularly to the band's circumference and along the full length of the band. Perforations are provided along either edge to permit separation of the majority of the band from that portion to which the adhesive is applied. Indicia are provided on the band and on the container to indicate the presence or absence of the band. Application of the band to the container by heating causes the band to shrink into tight conformance with the container and closure obscuring the indicia thereon and bringing the adhesive into engagement with the container and closure. The heat activates the adhesive causing it to adhere that portion of the band to the container and closure across their juncture. Removal of the band will leave the adhered strip in place as a secondary safety seal and will expose indicia on the container to alert the consumer that the outer band has been removed and that the secondary safety seal should still be intact but must be broken to open the container.

13) Family number: 57176853 (WO14122300A1)

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Title: TAMPER EVIDENT CLOSURE**Priority:** EP20130425024 20130208 WO2014EP52522 20140210

Family:	Publication number	Publication date	Application number	Application date
	<u>DE602013006696 D1</u>	20160602	DE201360006696T	20130208
	<u>EA201500827 A1</u>	20151230	EA20150000827	20140210
	<u>EP2765090 A1</u>	20140813	EP20130425024	20130208
	<u>EP2765090 B1</u>	20160420	EP20130425024	20130208
	<u>JP2016506898 T2</u>	20160307	JP20150556520T	20140210
	<u>WO14122300 A1</u>	20140814	WO2014EP52522	20140210

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):**^(std) GUALA CLOSURES SPA**Inventor(s):**^(std) GIOVANNINI MARCO ; JOHNSON STUART ; MITTINO MAURIZIO**Agent(s):** BONVICINI DAVIDE; AOKI ATSUSHI; SHIMADA TETSURO; BONVICINI DAVIDE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D55/02](#) (Advanced/Invention)
(IPC 8-9).**CPC:** [B65D55/026](#)[Classification Explorer](#)**Cited documents:** WO11086407 A2, US2011062106 AA, TW514615 B, GB280917 A, FR2688762 A1, FR2688761 A1, EP2081850 B1, EP1694576 B1, EP1511677 B1, EP1392575 B1,**Forward Citations:** WO17020403, EP3121130,**Abstract:**

The present invention relates to a tamper evident closure (1) for closing the mouth (11) of a container (10). The closure (1) has an inner part (20), an outer part (30) movable relative to the inner part (20) from a first position, corresponding to the position prior to first opening, to a second position, first reversible attachment means (40), capable of attaching the inner part (20) to the container (10) and second irreversible attachment means (50) capable of locking longitudinally said the outer part (30) relative to the inner part (20) in the second position. The second attachment means (50) comprise a deformable annular member (51) housed in the closure (1) and cooperating with the inner part (20) and the outer part (30) to lock the outer part (30) relative to the inner part (20) in the second position.

0) US2017320631A – CLOSURE

14) Family number: 67435431 (US2017320631A)

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Title: CLOSURE

Priority: US20160332128P 20160505 US20170586969 20170504

Family:	Publication number	Publication date	Application number	Application date
	<u>US2017320631 AA</u>	20171109	US20170586969	20170504
	<u>WO17192861 A1</u>	20171109	WO2017US31081	20170504

Probable Assignee: BERRY PLASTICS CORP

Assignee(s):^(std) BERRY PLASTICS CORP

Inventor(s):^(std) BRAGG JASON A ; DEUTSCH MARK A ; FAUBION TODD D ; KORING KARLA S ;
SPRICK WILLIAM D

Agent(s): REZEK RICHARD A ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD
GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP
KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW
MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC
SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ
VC VN ZA ZM ZW

International class
(IPC 8-9): B65D1/02 B65D25/48 B65D41/04 B65D41/26 B65D47/00 B65D47/06
B65D47/40 (Advanced/Invention)

CPC: B65D25/48 B65D47/40 B65D47/06 B65D1/023 B65D41/04 B65D41/26

[Classification Explorer](#)

Abstract:

Source: US2017320631A A package includes a container and a closure cap for mounting on the container. The closure cap is coupled to a neck of the container to block selectively removal of product stored within the container at the selection of a user.

0) IN01104DN2006A – CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

15) Family number: 41747944 (IN01104DN2006A)

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Title: CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

Family:	Publication number	Publication date	Application number	Application date
	<u>IN01104DN2006 A</u>	20070817	IN2006DN01104	20060302

Probable Assignee: ABACUS

Assignee(s): ABACUS

Inventor(s): HIGGINS CHRISTOPHER LYNDON

International class B65D41/34
(IPC 1-7).

Abstract:

Source: IN01104DN2006A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102), a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamperevident band (NO) frangibly connected to said skirt; the neck (10) of the container including a plurality of discretely spaced projections (18) extending outwardly from said neck and adapted to engage with tabs (122) on said tamper-evident band to facilitate breaking of the band (MO) from the skirt of the closure.

16) Family number: 60268698 (WO17001533A1)

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Title: TAMPER-EVIDENT OVERCAP**Priority:** GB20150011421 20150630

Family:	Publication number	Publication date	Application number	Application date
	GB201511421 A0	20150812	GB20150011421	20150630
	<u>WO17001533 A1</u>	20170105	WO2016EP65228	20160629

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** MCPHERSON ALEXANDER DONALD MEIKLEM ; RICHARDSON DAVID CONWAY**Agent(s):** BRYERS LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D51/18 B65D55/02 (Advanced/Invention)
 (IPC 8-9):

CPC: B65D55/024 B65D51/18 B65D55/026 B65D2101/0053[Classification Explorer](#)**Cited documents:** WO15113851 A1, US5740932 A,**Abstract:**

A tamper-evident overcap (100) for a closure (101) comprises a cap superior part (100A) fixable to an exterior surface of the closure (100), and a co-axial annular inferior part (100B) which is releasably connected to the cap superior part (100A) and comprises at least one inwardly directed projection (6) facing an interior of the overcap and at least one zone of weakness (5). At least one projection (6) of the annular inferior part (100B) is capable of interacting with at least one projection (3C) located on the exterior surface of the closure (101). The torque of the engagement of the projections (6, 3C) of the tamper-evident overcap (101) and the closure (101) causes the annular inferior part (100B) to break at the zone of weakness (5) if an attempt is made to open the closure (101) without the annular inferior part (100B) having been removed from the tamper-evident overcap (100).

17) Family number: 7208721 (GB2265890A)

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Title: Injection moulding a tamper evident closure**Priority:** GB19920007514 19920406

Family:	Publication number	Publication date	Application number	Application date
	GB2265890 A1	19931013	GB19920007514	19920406
	GB2265890 B2	19960117	GB19920007514	19920406
	GB9207514 A0	19920520	GB19920007514	19920406

Probable Assignee: RPC CONTAINERS LTD**Assignee(s):^(std):** RPC CONTAINERS LTD**Assignee(s):** RPC CONTAINERS LIMITED**Inventor(s):^(std):** DALE JAMES PATRICK**Inventor(s):** JAMES PATRICK DALE

International class
^{(IPC 8-9):} [B29C45/44](#) [B65D41/34](#) (Advanced/Invention);
[B29C45/33](#) (Advanced/Non-invention);
[B29C45/33](#) (Core/Non-invention)

International class
^{(IPC 1-7):} [B29C45/26](#) [B29C45/44](#) [B29L31/56](#) [B65D41/34](#) [B65D55/02](#)

CPC: [B29C45/33](#) [B29C45/4407](#) [B29L2031/565](#) [B65D41/3409](#)**European class:** [B29C45/44B](#) [B65D41/34A1](#) [L29C45/33](#) [L29L31/56B](#)[Classification Explorer](#)**Cited documents:** GB2022063 A1,**Forward Citations:** US8499950, US8365932, US8360257, EP2842886, EP2179942, CN102886862,**Abstract:**

Source: GB2265890A A tamper evident container closure comprising a cap 20 and tamper evident band 21, of outer diameter less or equal to the outer diameter of the cap, is formed in a mould comprising a core 35 defining the inner profile of the closure and an axially movable sleeve 37 arranged around a portion of the core, only axial movement of the mould parts being necessary to release a closure therefrom. A cavity 39 is defined between the core 35 and sleeve 37 to form the tamper evident band 21 of the closure, a shoulder 40 formed in the core being in contact with the inner surface 41 of the sleeve 37 so as to space the band 21 from the cap 20 of the container and the inner surface 41 of the sleeve 37 being formed with axially extending grooves 42 so as to connect the band defining cavity 39 with the cap forming cavity 38. The grooves serve to allow the formation of frangible bridges 22 and gaps 23 between the cap 20 and band 21 in the closure. These bridges 22 extend along the outer surface of the band 21 as ribs 24. A further mould part 31 defines the external profile of the cap and abuts the upper, planar surface of the sleeve 37, the core 35 and the sleeve 37 being removed axially from the part (31, (Figure 7). The tamper evident band 21 may be moulded to carry an internal bead or ratchet teeth for engagement with complementary projections on a container top.

18) Family number: 13530358 (WO0244046A1)

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Title: TAMPER-EVIDENT BOTTLE CLOSURES**Priority:** GB20000029161 20001130 WO2001GB05254 20011129

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2002218405 AA</u>	20020611	AU20020218405	20011129
	GB2000029161 A0	20010117	GB20000029161	20001130
	<u>WO0244046 A1</u>	20020606	WO2001GB05254	20011129

Probable Assignee: REXAM CONTAINERS LTD**Assignee(s):^(std):** BREACH JOHN ; COPE ALLMAN PLASTIC PACKAGING ; REXAM CONTAINERS LTD**Assignee(s):** REXAM CONTAINERS LIMITED ; COPE ALLMAN PLASTIC PACKAGING LIMITED ; COPE ALLMAN PLASTIC PACKAGING LTD**Inventor(s):^(std):** BREACH JOHN**Inventor(s):** JOHN BREACH

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class B65D41/34 (Advanced/Invention);
 (IPC 8-9): B65D41/34 (Core/Invention)

International class B65D41/34
 (IPC 1-7):

CPC: B65D41/3442**European class:** B65D41/34D[Classification Explorer](#)**Cited documents:** WO9731835, EP0663344,**Abstract:**

With reference to Figures (1 and 3), a bottle closure assembly comprises a sleeve (2) (Figure 1), that is adapted to be a snap-fit on the open end of a bottle neck, and a cap (8) (Figure 3) that is adapted to be a snap-fit onto the sleeve (2). The sleeve (2) carries an integral tamper-evident band (9) by way of a plurality of circumferentially-spaced bridges (11), the band being thereby radially spaced from the sleeve. The lower portion of the cap (8) is formed with a plurality of bridge-cutting blades (20) which, in the snapped-on condition of the cap on the sleeve, are received in respective arcuate slots (13) defined radially between the band (9) and sleeve (2), and circumferentially between the respectively adjacent pairs of intact bridges (11). The arrangement is such that on initial unscrewing of the cap (8) from the snapped-on condition, the blades (20) sever the bridges (11) to detach the band (9) from the sleeve (2).

19) Family number: 12707644 (US5544770A)

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Title: TAMPER EVIDENT SEAL AND SYSTEM**Priority:** US19930057809 19930507

Family:	Publication number	Publication date	Application number	Application date
	<u>US5544770 A</u>	19960813	US19930057809	19930507

Probable Assignee: TRAVISANO FRANK P**Assignee(s):^(std):** TRAVISANO FRANK P**Inventor(s):^(std):** TRAVISANO FRANK P

International class B65D55/02 B65D55/08 (Advanced/Invention);
 (IPC 8-9): B65D55/02 (Core/Invention)

International class B65D39/00
 (IPC 1-7):

CPC: Y10S206/807 B65D55/0854 B65D55/026**European class:** B65D55/02G B65D55/08B3**US class:** 206/807 215/230 215/232 215/246 215/250 215/253 215/254 215/347 215/349[Classification Explorer](#)

Cited documents: US5197618 A, US5082702 A, US4998666 A, US4890763 A, US4652473 A, US4545494 A, US4538740 A, US4511052 A, US4454956 A, US4004705 A, US3955699 A, US3095103 A, US2790286 A, US2447983 A,

Forward Citations: WO9921773, WO9920497, WO10036416, WO08156921, US9782326, US9637264, US9624008, US9463138, US9278506, US9221573, US8703265, US8584882, US8535464, US8522990, US8464749, US8282754, US8201385, US8141578, US7829163, US7690533, US7681587, US7596927, US7579061, US7350656, US7225598, US7014039, US7004341, US6655553, US6649259, US6581972, US6305541, US6302301, US6164473, US6161711, US5996849, US5990791, US5833928, US5718347, US2017297797, US2016325895, US2016166473, US2016009468, US2014299598, US2013026129, US2011210134, US2011177268, US2011138742, US2010326868, US2010200582, US2010072163, US2009166378, US2009021026, US2008308557, US2008308444, US2008308443, US2008233424, US2008231922, US2008210892, US2008190883, US2008066809, US2007158225, US2007108236, US2007084545, US2007017940, US2006150579, US2006016777, US2005258634, US2005258131, US2005035081, US2005023173, US2004256253, US2004156667, US2004118904, US2004118802, US2003230577, US2002161635, EP1728816, EP1027263, DE102004052163, AU2011346625,

Abstract:

Source: US5544770A A tamper evident seal and system for use on a variety of container and closure combinations providing a seal across the juncture of the container and closure or across the container opening and positive indication to consumers of tampering with the seal. The seal system comprises the combination of indicia specifically placed on the container and a seal means in the form of a heat shrink band or a foil sheet applied to the container in a manner so as to temporarily obscure the indicia. In a first embodiment the indicia is applied to the container in an area below the neck and the seal means comprises an opaque band adhered to the container and closure over the juncture of thereof and over the indicia. In a second embodiment, the indicia is applied to the lip around the container mouth and the seal means comprises a foil sheet adhered to the lip and covering the mouth. A third embodiment combines the two individual forms into a double seal system comprising the inner foil sheet and indicia and the outer opaque band and indicia.

0) EP0141591A2 – IMPROVED CLOSURE. VERSCHLUSS. FERMETURE.

20) Family number: 2124384 (EP0141591A2)

© PatBase

Title: Improved closure.
Priority: GB19830028326 19831024
Family:

Publication number	Publication date	Application number	Application date
AU198434579 A1	19850509	AU19840034579	19841023
AU561959 B2	19870521	AU19840034579	19841023
DE3472089 D1	19880721	DE19843472089	19841018
DK160199 B	19910211	DK19840005046	19841023
DK160199 C	19910715	DK19840005046	19841023
DK504684 A	19850425	DK19840005046	19841023
DK504684 A0	19841023	DK19840005046	19841023
EP0141591 A2	19850515	EP19840307190	19841018
EP0141591 A3	19860723	EP19840307190	19841018
EP0141591 B1	19880615	EP19840307190	19841018
GB8328326 A0	19831123	GB19830028326	19831024
JP60134859 A2	19850718	JP19840223798	19841024
ZA8408281 A	19850828	ZA19840008281	19841024

Probable Assignee: JOHNSEN JORGENSEN PLASTICS LTD
Assignee(s):^(std): JOHNSEN JORGENSEN PLASTICS LTD
Assignee(s): JIYONSON ANDO JIYOOGENSUN PURASUTEITSUKUSU LTD ; JOHNSEN AND JORGENSEN PLASTICS LIMITED ; JOHNSEN AND JORGENSEN PLASTICS LTD
Inventor(s):^(std): DAVIS EUGENE EDWARD ; EDWARD DAVIS EUGENE ; YUJJIN EDOWAADO DEIBISU
Inventor(s): EUGENE EDWARD DAVIS
Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD
Designated states: BE CH DE FR GB IT LI NL SE
International class [B65D47/06](#) [B65D47/08](#) (Advanced/Invention);
(IPC 8-9): [B65D47/06](#) (Advanced/Non-invention);
[B65D47/06](#) [B65D47/08](#) (Core/Invention)
International class [B65D47/08](#) [B65D55/02](#) [B65D55/06](#) [B67B](#)
(IPC 1-7):
CPC: [B65D47/0814](#) [B65D2101/0038](#)
European class: [B65D47/08B1A](#) [L65D101/00A3C](#)
[Classification Explorer](#)
Cited documents: JP55044758 U1, JP46007266 U1, GB2035274 A1, GB1500369 A, FR2113896 A1, EP0151242 A2, EP0025228 A1,
Forward Citations: WO06026836, WO02060776, US7556162, US6631820, US5497906, US5494185, US5356018, JP2013184726, GR980100387, FR2820120, EP0151242, EP0151242, AU654101, AU631432, AU593266, AU2005282233,

Abstract:

Source: EP0141591A2 This invention provides a closure for closing the mouth of a container. The closure has a body part for engagement with the container and which is provided with a number of openings. The cap part is arranged to open and close the opening and is connected to the body part by a snap hinge. The body part and the cap part have cooperable tamper evident means which interengage when the cap part is first closed and prevents opening of the cap part until the cap part is released by tearing away or breaking the tamper evident means.

21) Family number: 1887528 (GB2149765A)

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Title: Tamper evident closures
Priority: US19830551599 19831114
Family:

Publication number	Publication date	Application number	Application date
BE901042 A	19850301	BE19840213997	19841113
BE901042 A1	19850301	BE19840213997	19841113
DE3441431 A1	19850829	DE19843441431	19841113
FR2554791 A1	19850517	FR19840017287	19841113
GB2149765 A1	19850619	GB19840028738	19841114
GB2149765 B2	19871014	GB19840028738	19841114
GB8428738 A0	19841227	GB19840028738	19841114
IT1178230 A	19870909	IT19840049156	19841113
IT8449156 A0	19841113	IT19840049156	19841113
JP60172662 A2	19850906	JP19840238727	19841114
LU85640 A	19850604	LU19840085640	19841113
NL8403450 A	19850603	NL19840003450	19841112

Probable Assignee: ANCHOR HOCKING CORP

Assignee(s):^(std): ANCHOR HOCKING CORP

Assignee(s): ANCHOR HOCKING TE LANCASTER OHIO VER ST V AM CORP

Inventor(s):^(std): NIXDORFF F S ; NIXDORFF FRANK S ; FURANKU ESU NIKUSUDORUFU

Inventor(s): S NIXDORFF FRANK ; F S NIXDORFF ; FRANK S NIXDORFF ; FS NIXDORFF

International class
(IPC 8-9): [B29C45/44](#) [B65D41/34](#) [B65D55/02](#) (Advanced/Invention)

International class
(IPC 1-7): [B29C33/00](#) [B29C33/76](#) [B29C43/02](#) [B29C51/00](#) [B29D1/00](#) [B29L1/00](#) [B65D41/34](#) [B65D41/38](#) [B65D55/02](#) [B65D55/12](#)

CPC: [B29C45/4407](#) [B29L2001/00](#) [B29L2031/565](#) [B65D41/3409](#) [B65D55/022](#)

European class: [B29C45/44B](#) [B65D41/34A1](#) [B65D55/02D](#) [L29L1/00](#) [L29L31/56B](#)

[Classification Explorer](#)

Cited documents: GB2131344 A1, GB2125382 A1, GB2116155 A1, GB2108892 A1, GB1159029 A, GB1035476 A, FR2503672 A1,

Forward Citations: WO08002249, US8256632, GB2225778, FR2600629, EP0261037, DE9210306, DE9014858, DE4134741, DE4134741, DE4126015, DE102007005594,

Abstract:

Source: GB2149765A A tamper evident moulded closure cap (1) for sealing containers has an integrally moulded tamper indicating band (4) with a flared portion at the line of weakness (13) between the cap skirt and the tamper indicating band. The flare facilitates the cap moulding. As the container is sealed, the indicating band passes over a bead on the container having several outwardly projecting stops. When the cap is unscrewed the stops engage cooperating stops on the indicating band causing it to be torn loose. Each of the stops has one inclined flank to permit the cap to be screwed on to the container and one radial flank to resist rotation of the indicating band when the cap is unscrewed. The cap is moulded in moulding means comprising a cavity (17) and a complementary core (16) and sleeve portion (18), the sleeve portion having a shaping portion (20) to form the inner surface of the indicating band. A flared outer edge (22) of the sleeve portion (18) produces the line of weakness.

22) Family number: 32433161 (GB2418910A)**Title:** TAMPER EVIDENT CLOSURE WITH TEAR OFF BAND**Priority:** EP20040425749 20041006

Family:	Publication number	Publication date	Application number	Application date
	ES2292317 AA	20080301	ES20050002394	20051004
	ES2292317 BA	20081016	ES20050002394	20051004
	GB200518773 A0	20051026	GB20050018773	20050914
	GB2418910 A1	20060412	GB20050018773	20050914
	GB2418910 B2	20071010	GB20050018773	20050914
	ITMI20051659 A1	20060407	IT2005MI01659	20050908

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):^(std):** GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A**Inventor(s):^(std):** VIALE LUCA ; BATTEGAZZORE PIERO**Inventor(s):** PIERO BATTEGAZZORE ; LUCA VIALE

International class [B65D41/32](#) [B65D41/34](#) [B65D41/62](#) [B65D49/02](#) [B65D49/04](#) [B65D55/06](#) ^(Advanced/Invention);
^(IPC 8-9) [B65D41/00](#) [B65D41/32](#) [B65D41/34](#) [B65D49/00](#) [B65D55/02](#) ^(Core/Invention)

CPC: [B65D41/3409](#) [B65D41/62](#) [B65D49/04](#) [B65D2101/0038](#) [B65D2101/0076](#) [B65D2255/20](#)
[B65D41/32](#) [B65D49/02](#) [B65D55/06](#)

European class: [B65D41/32](#) [B65D41/34A1](#) [B65D41/62](#) [B65D49/02](#) [B65D49/04](#) [B65D55/06](#)
[L65D101/00A3C](#) [L65D101/00A5](#) [L65D255/20](#)

[Classification Explorer](#)**Cited documents:** US5373954 A, GB2285623 A1, ES2208734 T3, EP1526086 A2,

Forward Citations: WO17115193, WO14042885, WO12152404, WO07138191, WO07138191, US9624012, US9346591, US9027793, RU2585568, ITMI20111812, FR2901775, EP2522591, AU2013315946, AU2012252805,

Abstract:

Source: GB2418910A A cap 18 for tamper-evident seals of containers, in particular bottles for luxury beverages and liqueurs, with an opening 3 disposed at the end of a neck 1, the cap being provided with a tubular sleeve 24 extended axially outside the neck of the container and ending in a free end edge 27 facing the body of the container. The cap comprises an annular band 29 connected axially to the free end edge of the tubular sleeve by means of a peripheral weakened line 28, the annular band being discontinued axially by a cut-out 34 forming two ends 35,36 facing one another, and a manual take-up tongue 37 for tearing off and removing the band at the time of first opening of the seal, rigid with one of the facing ends. The annular band is provided with a deformable portion 38, which may be provided by bellows or plurality at bows 39 connected together in the configuration of a letter of the alphabet. A pouring body 7 is provided connected to the neck by a tubular portion 14. Valve means 8a provided by a sphere or ball may present re-filling.

23) Family number: 28821182 (US2003121879A)

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Title:ANTI-LEAK DUST COVER AND CLOSURE USED THEREWITH

Priority:

US20020345312P 20020102US20020683761 20020211

Family:

Publication number	Publication date	Application number	Application date
<u>US2003121879 AA</u>	20030703	US20020683761	20020211
<u>US7011221 BB</u>	20060314	US20020683761	20020211

Probable Assignee:

BERRY PLASTICS CORP

Assignee(s):^(std):

ERIE PLASTICS CORP

Assignee(s):

JPMORGAN CHASE BANK NA ; JPMORGAN CHASE BANK NA (SUCCESSOR IN INTEREST TO BANK ONE NA) ; JPMORGAN CHASE BANK NA SUCCESSOR IN INTEREST TO BA ; JPMORGAN CHASE BANK NA SUCCESSOR IN INTEREST TO BANK ONE NA ; BANK ONE NA ; BERRY PLASTICS CORP

Inventor(s):^(std):

SMITH ROBERT J ; STEBICK MATTHEW E

Agent(s):

BLYNN L; KRISANNE; BLK LAW GROUP

International class
^(IPC 8-9):

B65D39/00 B65D47/24 (Advanced/Invention);
B65D39/00 B65D47/04 (Core/Invention)

International class
^(IPC 1-7):

B65D41/62 B67D5/33

CPC:

B65D47/243 B65D2101/0038

European class:

B65D47/24A2 L65D101/00A3C

US class:

215/251 215/253 220/257.1 222/153.06 222/153.6

[Classification Explorer](#)

Cited documents:

US6827239 BB, US6827239 BA, US6827239 B1, US6321924 BA, US6095375 A, US6050452 A, US5992692 A, US5975369 A, US5829611 A, US5813575 A, US5429255 A, US5328063 A, US5265777 A, US5104008 A, US5096077 A, US4805807 A, US3910463 A, US2003034347 AA,

Forward Citations:

WO14096666, WO11137957, WO10063372, USD634200, USD634199, USD633386, US9555938, US9458920, US9452580, US8979686, US8931243, US8851315, US8746515, US8672158, US8251242, US8231020, US8083089, US8028851, US7866497, US7543920, US7431437, US7007523, US2011283665, US2011233210, US2011070987, US2010108680, US2010065567, US2009250461, US2009206082, US2009152230, US2007199914, US2007076064, US2007012710, US2005231568, US2005151803, US2005144992, FR3000047, EP2915760, DE202009015434, DE102014003131, DE102010019691, DE102008060773,

Abstract:

Source: US2003121879A A container closure includes a shell attachable to a container around a container opening thereof. The shell has a shell opening in fluid communication with the container opening when the shell is attached to the container. A tip is received on the shell movable between a closed position sealing the shell opening and an open position. A cover is releasably attached to the shell in a manner indicative of the tip being positioned in the closed position when the cover is attached to the shell. The cover includes rib engaging ribs for maintaining the cover tip and shell in proper alignment when the cover is attached to the shell.

24) Family number: 4455897 (US4465205A)

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Title: Fragile opening means for a container lid
Priority: GB19810034493 19811116 GB19820032610 19821115 US19820440175 19821108
Family:

Publication number	Publication date	Application number	Application date
AU1532283 A1	19840524	AU19830015322D	19830602
AU198315322 A1	19840524	AU19830015322	19830602
GB2110654 A1	19830622	GB19820032610	19821115
US4465205 A	19840814	US19830552853	19831117

Probable Assignee: ALCOA INC

Assignee(s):^(std) SUTCH B L C ; SUTCH BRIAN L C ; SUTCH BRIAN LEO CHUDLEIGH

Assignee(s): SUTCH BLC ; ALCOA INC ; BRIAN LEO CHUDLEIGH SUTCH

Inventor(s):^(std) SUTCH BRIAN L C ; SUTCH BRIAN LEO CHUDLEIGH

Inventor(s): BRIAN LEO CHUDLEIGH SUTCH

Agent(s): PHILLIPS ORMONDE FITZPATRICK

International class
^{(IPC 8-9):} [B65D17/40](#) [B65D43/02](#) [B65D45/20](#) [B65D45/30](#) [B65D55/06](#) [B65D55/08](#) (Advanced/Invention);
[B65D17/28](#) [B65D43/02](#) [B65D45/00](#) [B65D55/02](#) (Core/Invention)

International class
^{(IPC 1-7):} [B65D17/40](#) [B65D45/30](#) [B65D55/06](#) [B65D55/08](#)

CPC: [B65D43/0295](#) [B65D45/20](#) [B65D2101/0023](#) [B65D2101/0038](#) [B65D2543/00092](#)
[B65D2543/00296](#) [B65D2543/00509](#) [B65D2543/00537](#) [B65D2543/00546](#) [B65D2543/00555](#)
[B65D55/06](#)

European class: [B65D43/02T9E6](#) [B65D45/20](#) [B65D55/06](#) [L65D101/00A3](#) [L65D101/00A3C](#)
[L65D543/00Y1F2C](#) [L65D543/00Y1M6](#) [L65D543/00Y8D1C](#) [L65D543/00Y8D3](#)
[L65D543/00Y8D3N](#) [L65D543/00Y8D5](#)

US class: [220/270](#) [220/276](#) [220/306](#) [220/309](#)

[Classification Explorer](#)

Cited documents: US4387820 A, US4376493 A, US4212409 A,

Forward Citations: USRE32927, USD638704, USD637489, US9771187, US8955712, US8678212,
US7052078, US6817473, US6604647, US5979690, US5667092, US5474199,
US5348181, US5145088, US5114068, US4934557, US4890759, US4793510,
US4632271, US4574975, US2016311582, US2012248130, US2008230507,
US2007023434, US2005076604, US2005035128, US2005006390, US2002166857,
GB2236099, EP1466834, EP0853050, EP0829393, DE3229081, BE1010847,

Abstract:

Source: US4465205A A tamper evident retainer to hold a closure and container in closed condition, the retainer having a displaceable extension flange carrying retaining means, in the initial condition of the retainer, before application of the closure to the container, the retainer having the extension flange and retaining means out of the path of relative movement of the closure and container during closing and being displaceable to position the retaining means in the path of relative movement of the closure and container during opening, the retainer having a weakened zone so that access can be had to the container by rupturing the weakened zone to release the retaining means and thereby allow the closure to be removed from the container.

25) Family number: 7080590 (GB2255083A)**Title:** CLOSURES**Priority:** GB19910008694 19910417

Family:	Publication number	Publication date	Application number	Application date	
	<u>GB2255083 A1</u>	19921028	GB19920008278	19920415	
	<u>GB2255083 B2</u>	19951115	GB19920008278	19920415	
	GB9108694 A0	19910612	GB19910008694	19910417	
	GB9208278 A0	19920603	GB19920008278	19920415	
	<u>ZA9202805 A</u>	19921230	ZA19920002805	19920416	

Probable Assignee: JAYCARE LTD**Assignee(s):^(std):** JAYCARE LTD**Assignee(s):** JAYCARE LIMITED**Inventor(s):^(std):** STUBBS PETER**Inventor(s):** PETER STUBBS

International class [B65D47/18 B65D51/18](#) (Advanced/Invention);
 (IPC 8-9): [B65D47/06 B65D51/18](#) (Core/Invention)

International class [B65B B65D51/18 B67B](#)
 (IPC 1-7):

CPC: [B65D47/185 B65D51/18 B65D2251/0015 B65D2251/0087](#)**European class:** [B65D47/18A B65D51/18 L65D251/00Y2D L65D251/00Y6J](#)[Classification Explorer](#)**Cited documents:** GB701766 A, GB1316163 A, GB1225889 A,**Forward Citations:** WO12034175, US8827094, US8573423, US7963409, US5938054, GB2416535, GB2416535, GB2343444, FR2693176, EP1256524, EP0906869, EP0788975,**Abstract:**

Source: GB2255083A A closure comprises a cap 16A, 16B and a plug 40 loosely located inside the cap so that when the closure is applied by push fitting, the plug is forced into a mouth 42 of a container and the cap fits over the mouth. A tear band (18, fig 1) may be provided part of the way round the cap, enabling the top of the cap 16A to be hinged open to expose the plug which may have apertures 62 enabling the container's contents to be dispensed by being sprinkled through the apertures. The plug may be retained in the mouth by circumferential ribs 58, and the cap may have a retention band 52 which snaps under a ring 48 on the container. The band may also serve to retain the plug in the cap before the closure is applied.; The top part 60 of the plug may have a smaller radius than the outside of the container mouth (fig 8), to allow removal of the top of the cap without interfering with the top of the plug.

26) Family number: 34194396 (WO07015649A1)

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Title: CAP OR CLOSURE ASSEMBLIES, RETENTION FORM, MOULDINGS AND TOOLING

Priority: NZ20050541604 20050801 NZ20050542859 20051005 NZ20050544060 20051208
 NZ20060564975 20060727

Family:	Publication number	Publication date	Application number	Application date
	<u>AR056011 AA</u>	20070912	AR2006P103345	20060801
	<u>NZ541604 A</u>	20080430	NZ20050541604	20050801
	<u>WO07015649 A1</u>	20070208	WO2006NZ00194	20060727

Probable Assignee: ALTO PACKAGING LTD

Assignee(s):^(std): ALTO HOLDINGS LTD ; ALTO PACKAGING LTD ; NOONAN MICHAEL PATRICK

Assignee(s): ALTO PACKAGING LIMITED ; ALTO HOLDINGS LIMITED

Inventor(s):^(std): NOONAN MICHAEL PATRICK

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN
 CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ
 GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU
 LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH
 PL PT RO RS RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA
 UG US UZ VC VN ZA ZM ZW

International class B65D41/34 B65D41/62 B65D43/06 B65D47/06 B65D50/00 B65D51/18 (Advanced/Invention);
 (IPC 8-9): B65D41/00 B65D41/34 B65D43/02 B65D47/06 B65D50/00 B65D51/18 (Core/Invention)

International class B65D41/34 B65D41/62 B65D47/06 B65D47/20 B65D47/24
 (IPC 1-7):

CPC: B65D47/247

European class: B65D47/24C2

[Classification Explorer](#)

Cited documents: WO9832670 A1, WO04056670 A1, WO03051734 A1,

Forward Citations: DE102008026449, CN104326152, CN102658906,

Abstract:

A sipper closure assembly having a folded in retention flange for a nozzle component thereof, the nozzle component being adapted to move to one limit of its reproducible reciprocal movement at which there is an interaction of said folded in flange (or part thereof) on said nozzle component.

27) Family number: 5513262 (EP0127704A1)

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Title: Improvements in lids and containers.**Priority:** EP19830303131 19830601

Family:	Publication number	Publication date	Application number	Application date
	<u>EP0127704 A1</u>	19841212	EP19830303131	19830601

Probable Assignee: SUTCH BRIAN LEO CHUDLEIGH**Assignee(s):^(std):** SUTCH BRIAN LEO CHUDLEIGH**Inventor(s):^(std):** SUTCH BRIAN LEO CHUDLEIGH**Designated states:** AT BE CH DE FR GB IT LI LU NL SE**International class** B65D43/02 (Advanced/Invention)
(IPC 8-9):**International class** B65D55/06
(IPC 1-7):**CPC:** B65D43/0295 B65D2101/0023 B65D2101/0038 B65D2543/00092 B65D2543/00296
B65D2543/00509 B65D2543/00537 B65D2543/00546 B65D2543/00555**European class:** B65D43/02T9E6 L65D101/00A3 L65D101/00A3C L65D543/00Y1F2C L65D543/00Y1M6
L65D543/00Y8D1C L65D543/00Y8D3 L65D543/00Y8D3N L65D543/00Y8D5[Classification Explorer](#)**Cited documents:** US3831798 A, GB895191 A, GB568935 A, FR2443978 A1, FR2395909 A1, FR2187629 A1,**Forward Citations:** EP0727136,**Abstract:**

Source: EP0127704A1 A tamper evident retainer to hold a closure and container in closed condition, the retainer having a displaceable extension flange (22) carrying retaining means (26), in the initial condition of the retainer, before application of the closure to the container, the retainer having the extension flange and retaining means out of the path of relative movement of the closure and container during closing and being displaceable to position the retaining means in the path of relative movement of the closure and container during opening, the retainer having a weakened zone (25, 28) so that access can be had to the container by rupturing the weakened zone to release the retaining means and thereby allow the closure to be removed from the container.

- **search:** SS8 (4) and FT=(sleeve and (weak* W3 lin*)) (Results 80)
- **List:** SS8 1–50 ((4) and FT=(sleeve and (weak* W3 lin*))) (Results 80)

0) US2005115915A – LIQUID CONTAINER CLOSURE ASSEMBLY

1) Family number: 23521644 (US2005115915A)

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Title: LIQUID CONTAINER CLOSURE ASSEMBLY

Priority: GB20020013257 20020610 US20040005198 20041206 WO2003GB02185 20030521

Family:

Publication number	Publication date	Application number	Application date
AT327179 E	20060615	AT20030735804T	20030521
AU2003236886 AA	20031222	AU20030236886	20030521
AU2003236886 BB	20090604	AU20030236886	20030521
BRPI0311671 A	20080304	BR2003PI11671	20030521
BRPI0311671 B1	20161213	BR2003PI11671	20030521
CN100340459 C	20071003	CN20038013579	20030521
CN1659084 A	20050824	CN20038013579	20030521
DE60305490 D1	20060629	DE20036005490	20030521
DE60305490 T2	20061102	DE20036005490T	20030521
DE60305490 T3	20110505	DE20036005490T	20030521
EA006145 B1	20051027	EA20040001616	20030521
EA200401616 A1	20050630	EA20040001616	20030521
EP1511677 A1	20050309	EP20030735804	20030521
EP1511677 B1	20060524	EP20030735804	20030521
EP1511677 B2	20101006	EP20030735804	20030521
ES2261945 T3	20061116	ES20030735804T	20030521
ES2261945 T5	20110217	ES20030735804T	20030521
GB200213257 A0	20020717	GB20020013257	20020610
GB2390086 A1	20031231	GB20020013257	20020610
IN03107CN2004 A	20060217	IN2004CN03107	20041231
IN259691 B	20140328	IN2004CN03107	20041231
KR100985342 B1	20101004	KR20047020052	20030521
KR20050028918 A	20050323	KR20047020052	20030521
MXPA04012131 A1	20050524	MX2004PA12131	20030521
PL200301 B1	20081231	PL20030372495	20030521
PL372495 A1	20050725	PL20030372495	20030521
US2005115915 AA	20050602	US20040005198	20041206
US7398890 BB	20080715	US20040005198	20041206
WO03104100 A1	20031218	WO2003GB02185	20030521

Probable Assignee: GUALA CLOSURES PATENTS BV

Assignee(s):^(std): GUALA CLOSURES PATENTS BV ; GUALA CLOSURES PATENTS B V ; GUALA CLOSURES INT BV ; MONTGOMERY DANIEL AND SON LTD ; THOMSON DAVID WILLIAM ; SON LTD ; DANIEL MONTGOMERY AND AMP ; DANIEL MONTGOMERY AND SON LTD ; GUALA CLOSURES U K LTD

Assignee(s): GUALA CLOSURES U K LTD KIRKINTILLOCH ; DANIEL MONTGOMERY AND SON LIMITED ; GUALA CLOSURES U K LIMITED ; AMP ; DANIEL MONTGOMERY AMP AMP ; DANIEL MONTGOMERY AND ; GUALA CLOSURES UK LTD ; SON LIMITED

Inventor(s):^(std): DAVID WILLIAM THOMSON ; THOMPSON DAVID WILLIAM ; THOMSON DAVID W ; THOMSON DAVID W DANIEL MONTGOM ; THOMSON DAVID WILLIAM ; WILLIAM THOMSON DAVID ; THOMSON DAVID W DANIEL

Inventor(s): AND THOMSON DAVID W DANIEL MONTGOMERY ; THOMSON DAVID W DANIEL MONTGOMERY and ; THOMSON DAVID W DANIEL MONTGOMERY AND SON LIMITED ; THOMSON ; THOMSON DAVID

Agent(s):

PHILLIPS ORMONDE FITZPATRICK; PERANI AURELIO; NOTARO AND MICHALOS;
NOTARO AND MICHALOS PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO
CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW
HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG
MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL
SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D39/00 B65D41/00 B65D41/04 B65D41/34 B65D41/62 B65D43/00 B65D47/00
B65D49/02 B65D49/04 B65D49/06 B65D51/00 B65D55/08 (Advanced/Invention);
B65D41/34 B65D41/62 B65D49/02 B65D49/06 (Advanced/Non-invention);
B65D39/00 B65D41/00 B65D41/04 B65D43/00 B65D47/00 B65D49/00 B65D51/00
B65D55/02 (Core/Invention)

International class
(IPC 1-7): B65D39/00 B65D41/00 B65D41/34 B65D41/62 B65D43/00 B65D47/00 B65D49/02
B65D49/06 B65D51/00 B65D55/08

CPC: B65D55/0845 B65D49/04 B65D49/06 B65D41/62

European class: B65D41/62 B65D49/04 B65D49/06 B65D55/08B2A

US class: 215/21 215/252 215/258 215/277

[Classification Explorer](#)

Cited documents: WO0218224 A1, WO02096771 A1, WO02083518 A1, WO0075033 A1, WO0007898 A1,
US6854612 BB, US6619492 BB, US6276544 BA, US5740932 A, US5484084 A,
US5419446 A, US5251769 A, US4550845 A, US4497415 A, US4458817 A, US4382520
A, US3850328 A, US2970711 A, GB2377699 A1, GB2375532 A1, GB2366287 A1,
GB2158424 A1, FR2340256 A2, EP0988237 B1,

Forward Citations: WO11086407, WO09106172, WO09056379, WO09000279, WO08127137, WO08121086,
WO08110917, WO08089778, WO08056227, WO08049951, WO07006878, WO06123961,
WO06022573, US9346591, US9145240, US9102448, US9038841, US9010554,
US8627968, US8439213, US8181803, US2016347520, US2015158622, US2014319178,
US2014183195, US2012152884, US2011259844, US2010308054, US2010163510,
US2010044336, US2009289027, US2009166313, US2009145872, KR200467567,
ITPD20090094, EP2765090, EP2055646, EP2006212, EP1921019, EP1679268, EA9265,
EA11751, EA019762, EA017652, EA013202, EA013177, EA011751, EA009265,
CN103906689, CN103906689, CN102001484, CN101905773, CN101875418,
CN101875418,

Abstract:

Source: US2005115915A A closure assembly for a mouth and neck portion of a container for liquid has a sleeve adapted to lie substantially concentrically with respect to the mouth and provided with a mechanism for fixing the sleeve on the container. A first outer sleeve is coaxially mounted over the sleeve and a second outer sleeve separate from the first outer sleeve and substantially tight fit with a container closure member. The first and second outer sleeves are axially aligned and have respective initially adjacent portions. A mechanism is provided for spacing apart the initially adjacent portions of the first and second outer sleeves upon reclosure of the assembly after an initial opening of the container.

0) US2002033374A – TAMPER EVIDENCING CLOSURE

2) Family number: 28185285 (US2002033374A)

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Title: Tamper evidencing closure

Priority: EP20030770468 20030924 KR20007000005U 20000522 US19970904878 19970801
 US19990323571 19990601 US20000653679 20000901 US20050250249 20051011
 US20080203992 20080904 WO2000US12283 20000505 WO1998US15527 19980723
 WO2003US30350 20030924 US20020266091 20021004 US20010955844 20010918
 US20010900505 20010705

Family:

Publication number	Publication date	Application number	Application date
AT361239 E	20070515	AT19980937158T	19980723
AU199885938 A1	19990222	AU19980085938	19980723
AU200048219 A1	20001218	AU20000048219	20000505
AU200048219 A5	20001218	AU20000048219	20000505
AU200191356 A1	20030123	AU20010091356	20011115
AU200191356 A5	20030123	AU20010091356	20011115
AU2003278956 AA	20040504	AU20030278956	20030924
AU2003278956 AH	20040504	AU20030278956	20030924
AU785404 B2	20070419	AU20010091356	20011115
CA2298700 AA	20000131	CA19982298700	19980723
CA2298700 C	20070522	CA19982298700	19980723
CA2501327 AA	20050404	CA20032501327	20030924
CA2501327 C	20110823	CA20032501327	20030924
CN1089711 C	20020828	CN19988007824	19980723
CN1275114 A	20001129	CN19988007824	19980723
CN1701028 A	20051123	CN20038025129	20030924
DE69837713 D1	20070614	DE19986037713	19980723
DE69837713 T2	20080110	DE19986037713T	19980723
EP1025015 A1	20000809	EP19980937158	19980723
EP1025015 A4	20050727	EP19980937158	19980723
EP1025015 B1	20070502	EP19980937158	19980723
EP1556280 A2	20050727	EP20030770468	20030924
EP1556280 A4	20090624	EP20030770468	20030924
EP2123569 A1	20091125	EP20090010762	20030924
KR200227370 Y1	20010615	KR20000014667U	20000524
MXPA04000110 A1	20040521	MX2004PA00110	20040107
MXPA05003566 A1	20050603	MX2005PA03566	20030924
US2002033374 AA	20020321	US20010900505	20010705
US2002066713 AA	20020606	US20010955844	20010918
US2003071007 AA	20030417	US20020266091	20021004
US2006060555 AA	20060323	US20050250249	20051011
US2009057261 AA	20090305	US20080203992	20080904
US5913437 A	19990622	US19970904878	19970801
US6112923 A	20000905	US19990323571	19990601
US6484896 BB	20021126	US20010900505	20010705
US6766916 BB	20040727	US20010955844	20010918
US6981602 BB	20060103	US20020266091	20021004
WO0073164 A1	20001207	WO2000US12283	20000505
WO03004369 A1	20030116	WO2002US19318	20020617

<u>WO04033312 A2</u>	20040422	WO2003US30350	20030924	
<u>WO04033312 A3</u>	20040826	WO2003US30350	20030924	
<u>WO9906295 A1</u>	19990211	WO1998US15527	19980723	
<u>ZA200109159 A</u>	20021106	ZA20010009159	20011106	
<u>ZA200205290 A</u>	20030410	ZA20020005290	20020702	

Probable Assignee: PORTOLA PACKAGING INC

Assignee(s):^(std): PORTOLA PACKAGING INC ; ADAMS BRIAN M ; MA MIKE X ; MA MIKE XIAOLI

Assignee(s): MA XIAOLI ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL CORP ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGE ; GENERAL ELECTRIC CAPITAL US AGENT AND CANADIAN AGENT AS CORP ; HELLER FINANCIAL ; HELLER FINANCIAL INC ; WAYZATA INVESTMENT PARTNERS LLC ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDI ; WELLS FARGO FOOTHILL LLC AS AGENT ; WELLS FARGO FOOTHILL LLC AGENT AS ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDIN ; WAYZATA INVESTMENT PARTNERS LLC (AGENT FOR SUBORDINATED CREDITORS) ; WAYZATA INVESTMENT PARTNERS LLC AGENT FOR SUBORDINATED CREDITORS

Inventor(s):^(std): MIKE X MA ; MA XIAOLI ; MA MIKE XIAOLI ADAMS BRIAN M ; MA MIKE X ; ADAMS BRIAN M ; XIAOLI MA ; MA MIKE XIAOLI ; BRIAN M ADAMS

Inventor(s): THE DESIGNATION OF THE INVENTOR HAS NOT YET BEEN FILED ; MA MIKE ; ADAMS BRIAN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL; DAVID J BREZNER DORSEY AND WHITNEY LLP; ADAM K SACHAROFF MUCH SHELST FREED DENENBERG AMENT AND RUBENSTEIN PC; DORSEY AND WHITNEY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B28B13/06 B28B7/10 B29C41/42 B29C45/44 B65D1/00 B65D39/00 B65D41/00 B65D41/32 B65D41/34 B65D49/12 B65D50/00 B65D51/00 B65D51/16 B65D55/02 (Advanced/Invention); B65D41/34 (Advanced/Non-invention); B65D39/00 B65D41/34 B65D50/00 B65D55/02 (Core/Invention); B65D (Subclass/Invention)

International class
(IPC 1-7): B28B13/06 B28B7/10 B29C41/42 B65D0/0000 B65D1/00 B65D39/00 B65D41/00 B65D41/34 B65D50/00 B65D55/02

CPC: B65D41/3428 B29C43/42 B29C43/50 B29C45/4407 B29L2031/565 B65D41/3409 B65D2101/0046

European class: B29C43/42 B29C43/50 B29C45/44B B65D41/34A1 B65D41/34C1 L29C43/50 L29L31/56B L65D101/00A3D

US class: 215/252 215/254 215/256 215/258 215/258S 215/307 215/307S 215/329 215/344 215/344S 215/43 215/44 264/328.1 264/328.100S 264/334 264/334S

[Classification Explorer](#)

Cited documents: WO0012402 A1, US7228979 BB, US6736280 BA, US6474491 BA, US6276543 BA, US6224802 BA, US6177041 BA, US6177041 B1, US6173853 BA, US6152316 A, US6119883 A, US6116442 A, US6112923 A, US6109464 A, US6105802 A, US6102226 A, US6053344 A, US6015054 A, US5913437 A, US5893474 A, US5868281 A, US5853095 A, US5779075 A, US5775527 A, US5749484 A, US5727705 A, US5715959 A, US5692628 A, US5685443 A, US5660288 A, US5657889 A, US5609262 A, US5570798 A, US5533633 A, US5480045 A, US5465876 A, US5456376 A, US5415306 A, US5400913 A, US5346082 A, US5307946 A, US5307945 A, US5295600 A, US5285912 A, US5246125 A, US5232125 A, US5190178 A, US5105961 A, US5105960 A, US5080246 A, US5078290 A, US5076453 A, US4981230 A, US4978016 A, US4875594 A, US4813561 A, US4801031 A, US4732289 A, US4664278 A, US4526282 A, US4511053 A, US4196818 A, US3338446 A, US3329296 A, US3329295 A, US2007108154 AA, US2005199573 AA, US2002001637 AA, US2001027957 AA, FR2421812 A1, EP0635434 A1, EP0489865 A1, EP0341992 A1, EP0049876 A1, DE3912137 A1,

Forward Citations:

WO15046889, WO13001454, WO13001454, WO11070326, WO09095297, WO08092716, WO08092716, WO07081656, WO07033722, WO04048220, WO03050033, WO03016161, WO03004369, USD763691, USD756776, USD756234, USD747201, USD746685, USD723919, USD664852, USD654362, USD619003, USD613162, USD606401, USD584619, USD584149, USD564879, USD553987, USD550084, USD538654, USD534802, USD531505, USD530205, USD529804, USD527631, USD525523, USD525125, USD518716, USD508204, USD507745, USD457433, USD449991, US9821934, US9738409, US9676129, US9617045, US9522759, US9409680, US9403310, US9290306, US9205946, US8931243, US8926590, US8845256, US8807360, US8650839, US8567619, US8544666, US8529501, US8517194, US8499950, US8443999, US8413830, US8408208, US8348576, US8251236, US8231018, US8206377, US8100277, US8066139, US8061543, US8016142, US7891511, US7875000, US7798359, US7780024, US7766178, US7735664, US7721510, US7644902, US7637384, US7451898, US7445130, US7422169, US7413097, US7293396, US7261226, US7198170, US7059553, US7032772, US6974046, US6968966, US6968965, US6948630, US6877624, US6702161, US6659297, US6622460, US6571994, US6557714, US6382443, US2017057139, US2015166225, US2014263475, US2014190968, US2013206718, US2013038992, US2012111822, US2012067892, US2012018401, US2011309048, US2011151980, US2011100947, US2011024423, US2010314391, US2010308050, US2010230374, US2010215548, US2010102021, US2010089863, US2010084364, US2010032402, US2009302037, US2009200259, US2009200258, US2009020530, US2009013642, US2008218362, US2008210745, US2008173612, US2007257002, US2007251950, US2007232893, US2007173756, US2007158295, US2007125785, US2007125783, US2007034590, US2007000932, US2006266727, US2006208115, US2006163192, US2006151423, US2006070972, US2005252878, US2005199574, US2005167879, US2005167389, US2005145629, US2005092750, US2005072751, US2005040176, US2005000931, US2004251276, US2004168999, US2004159727, US2004155006, US2004094501, US2004045925, US2003192854, US2003150833, US2003116522, TWI498258, KR200462672, JP4932710, JP2008508151, JP2007501169, ITMI20111912, GB2476089, FR2911584, ES2321471, EP2586721, EP2223656, EP2123569, EP2088090, EP1953091, EP1660379, EP1445207, EP1288133, DE102010039036, CN103857599, CN103857599, AU2003302391, AU2002333387,

Abstract:

Source: US2002033374A A container including a neck and an opening, in combination with a tamper-evidencing closure including a top, a depending annular skirt and a tamper-evidencing band frangibly connected to the annular skirt. The container includes a first securing structure on the neck spaced from the opening. The tamper-evidencing band includes an inwardly turned retaining rim that extends at least partially upwardly. The retaining rim has a free edge for engagement with the locking surface as the closure is removed from the neck. The retaining rim includes a plurality of outwardly directed flutes spaced circumferentially thereon and a second securing structure located on the retaining rim between the flutes.

0) US2007131641A – CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

3) Family number: 31517864 (US2007131641A)

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Title: CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

Priority:

AU20030900141	20030114	AU20030900678	20030217	AU20030904044	20030804
AU20040261315	20040804	AU20040900141	20040114	AU20030904359	20030815
AU20030904196	20030808	AU20030904527	20030822	AU20040200617	20040217
AU20040902799	20040526	AU20040902799	20040526	AU20040902722	20040521
AU20040900744	20040216	AU20040900450	20040203	AU20040902794	20040526
AU20040900814	20040218	AU20040900245	20040121	AU20040902721	20040521
AU20040900657	20040212	AU20040902799	20040527	AU20040900879	20040223
AU20060203297	20060801	GB20070009820	20040804	GB20060004470	20040804
WO2004AU01035	20040804	AU20040903406	20040622	AU20040903775	20040709
AU20040903477	20040624	AU20040903434	20040624	AU20040903507	20040629
AU20040902928	20040601	AU20040903041	20040607	AU20040902931	20040602
AU20040903153	20040610				

Family:

Publication number	Publication date	Application number	Application date
AU2003900141 A0	20030130	AU20030900141	20030114
AU2003900678 A0	20030227	AU20030900678	20030217
AU2003904044 A0	20030814	AU20030904044	20030804
AU2003904196 A0	20030821	AU20030904196	20030808
AU2003904359 A0	20030828	AU20030904359	20030815
AU2004200617 AA	20040902	AU20040200617	20040217
AU2004261315 AA	20050210	AU20040261315	20040804
AU2004261315 BB	20060504	AU20040261315	20040804
AU2004261315 CA	20070802	AU20040261315	20040804
AU2006203297 AA	20060824	AU20060203297	20060801
BRPI0412963 A	20060926	BR2004PI12963	20040804
CA2534758 AA	20060203	CA20042534758	20040804
CN1863710 A	20061115	CN200480028971	20040804
DE112004001435 T5	20060727	DE200411001435	20040804
EP1660379 A1	20060531	EP20040737650	20040804
EP1660379 A4	20091230	EP20040737650	20040804
GB200604470 A0	20060412	GB20060004470	20040804
GB200709820 A0	20070704	GB20070009820	20040804
GB2420114 A1	20060517	GB20060004470	20040804
GB2420114 B2	20070718	GB20060004470	20040804
GB2435038 A1	20070815	GB20070009820	20040804
GB2435038 B2	20080521	GB20070009820	20040804
JP2007501169 T2	20070125	JP20060522180T	20040804
KR20060042422 A	20060512	KR20067002437	20040804
KR20070033052 A	20070323	KR20077005410	20040804
NZ544867 A	20080926	NZ20040544867	20040804
US2007131641 AA	20070614	US20040567195	20040804
WO05012125 A1	20050210	WO2004AU01035	20040804
WO05077777 A1	20050825	WO2005AU00222	20050218
ZA200601839 A	20070627	ZA20060001839	20060101

Probable Assignee: RBC TRUSTEES CI LTD

Assignee(s):^(std): ABACUS ; ABACUS C I LTD ; ABACUS C I LTD TRUSTEE OF T AS ; ABACUS C I LTD COMO FIDEI COMI ; ABACUS C I LTD TRUSTEE FOR AS ; ABACUS C I LTD AS TRUSTEE FOR ; ABACUS C I LTD AS TRUSTEE OF T ; CTECH EQUIPMENT PTY LTD ; WOOLFORD L ; RBC TRUSTEES CI LTD AS TRUSTEE ; HIGGINS CHRISTOPHER

LYNDON ; CTECH CLOSURES PTY LTD ; ABACUS C I COMO FIDEI COMISSARIO DO FIDE LTD

Assignee(s): ABACUS C I LIMITED ; ABACUS TRUSTEE OF BAYVIEW TRUST AS LTD ; ABACUS COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVI ; ABACUS TRUSTEE FOR BAYVIEW TRUST AS LTD ; ABACUS C I TRUSTEE OF BAYVIEW TR AS LTD ; RBC TRUSTEES LTD ; RBC TRUSTEES CI LTD ; RBC TRUSTEES CI LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS CI TRUSTEE OF BAYVIEW TRUST LTD AS ; ABACUS CI LTD ; RBC TRUSTEES (CI) LTD ; ABACUS CI LIMITED TRUSTEE FOR BAYVIEW TRUST AS ; ABACUS C I TRUSTEE FOR BAYVIEW T AS LTD ; ABACUS C I LIMITED AS TRUSTEE OF THE BAYVIEW TRUST ; ABACUS C I LIMITED COMO FIDEI COMISSARIO DO FIDEICOMISSO BAYVIEW TRUST ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST JERSEY ; ABACUS C I LIMITED AS TRUSTEE FOR THE BAYVIEW TRUST ; ABACUS LTD ; ABACUS C I TRUSTEE FOR BAYVIEW TR AS LTD ; ABACUS (C I) LIMITED AS TRUSTEE FOR THE... ; ABACUS (C I) LIMITED COMO FIDEI COMISSARIO DO... ; ABACUS (CI) LTD

Inventor(s):^(std): PETER WILLIAM BROWN ; LYNDON HIGGINS CHRISTOPHER ; HIGGINS CHRISTOPHER LYNDON ; CHRISTOPHER LYNDON HIGGINS ; BROWN PETER WILLIAM ; HIGGINS CHRISTOPHER L

Inventor(s): HIGGINS CHRISTOPHER

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; BROOKS KUSHMAN PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D41/04 B65D41/32 B65D41/34 B65D47/06 B65D47/08 B65D47/20 B65D51/00 B65D51/28 B65D81/32 B65D83/00 (Advanced/Invention);
B65D41/32 B65D41/34 (Advanced/Non-invention);
B65D41/04 B65D41/32 B65D41/34 B65D47/04 B65D47/06 B65D47/08 B65D51/00 B65D51/24 (Core/Invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B65D101/00 B65D41/34 B65D47/20 B65D51/28

CPC: B65D51/2835 B65D47/06 B65D47/08 B65D41/3409 B65D51/2828 B65D41/0421 B65D41/0428 B65D41/3428 B65D47/0857 B65D51/2807 B65D2101/00

European class: B65D41/04B1A B65D41/04B2 B65D41/34 B65D41/34A1 B65D41/34C1 B65D47/06 B65D47/08 B65D47/08D B65D51/28B1B B65D51/28B1B1 L65D101/00

US class: 215/252

[Classification Explorer](#)

Cited documents: WO9840289 A1, WO9838104 A1, WO9743190 A1, WO05012125 A1, WO03010061 A2, WO03004369 A1, WO02062675 A1, WO0168469 A1, US6230884 BA, US6148996 A, US5950850 A, US5660288 A, US5346082 A, US5038951 A, US5020682 A, US4903865 A, US4813561 A, US4738370 A, US4458821 A, US4457438 A, US2003102280 AA, US2003015490 AA, JP8091402 A2, JP2003519602 T2, JP2003165555 A2, JP11100093 A2, JP11059791 A2, GB2222812 A1, EP1332977 A1, EP1316507 A2,

Forward Citations: WO16009192, WO15004352, WO12130916, WO09154666, WO09154666, WO08061766, WO07082322, WO06013443, WO06013443, WO05077777, US9828146, US9731869, US9382044, US9061801, US8851310, US8807360, US8684225, US8684204, US8356711, US7775386, US2013313287, US2012292321, US2011024423, RU2507137, KR100951526, FR3008393, EP1778555,

Abstract:

Source: US2007131641A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102), a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamper-evident band (110) frangibly connected to said skirt; the neck (10) of the container including a plurality of discretely spaced projections (18) extending outwardly from said neck and adapted to engage with tabs (122) on said tamper-evident band to facilitate breaking of the band (110) from the skirt of the closure.

4) Family number: 28343964 (WO04067387A2)

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Title: LIQUID CONTAINER CLOSURE ASSEMBLY**Priority:** GB20030001818 20030125 WO2004GB00189 20040122**Family:**

Publication number	Publication date	Application number	Application date
AT370894 E	20070915	AT20040704267T	20040122
BRPI0406972 A	20060110	BR2004PI06972	20040122
BRPI0406972 B1	20161220	BR2004PI06972	20040122
CN100355632 C	20071219	CN200480002509	20040122
CN1741942 A	20060301	CN200480002509	20040122
DE602004008423 D1	20071004	DE200460008423T	20040122
DE602004008423 T2	20080515	DE200460008423T	20040122
EA007834 B1	20070227	EA20050001177	20040122
EA200501177 A1	20060224	EA20050001177	20040122
EP1585684 A2	20051019	EP20040704267	20040122
EP1585684 B1	20070822	EP20040704267	20040122
ES2294459 T3	20080401	ES20040704267T	20040122
GB200301818 A0	20030226	GB20030001818	20030125
GB200401356 A0	20040225	GB20040001356	20040122
GB2399339 A1	20040915	GB20040001356	20040122
KR101070559 B1	20111005	KR20057013620	20040122
KR20050085984 A	20050829	KR20057013620	20040122
MXPA05007720 A1	20050930	MX2005PA07720	20040122
UA80858 C2	20071112	UA20050008270	20040122
WO04067387 A2	20040812	WO2004GB00189	20040122
WO04067387 A3	20041118	WO2004GB00189	20040122

Probable Assignee: GUALA CLOSURES INT BV**Assignee(s):^(std):** GUALA CLOSURES INT BV ; GUALA CLOSURES PATENTS B V ; GUALA CLOSURES PATENTS BV ; GUALA CLOSURES U K LTD ; THOMSON DAVID WILLIAM ; JOHNSON STUART ; MONTGOMERY DANIEL AND SON LTD**Assignee(s):** GUALA CLOSURES UK LTD ; GUALA CLOSURES U K LIMITED ; DANIEL MONTGOMERY AND SON LIMITED ; DANIEL MONTGOMERY AND SON LTD**Inventor(s):^(std):** JOHNSON STUART DANIEL MONTGOME ; STUART JOHNSON ; STUART THOMSON DAVID WILLIAM J ; THOMPSON DAVID WILLIAM ; THOMSON DAVID W ; THOMSON DAVID WILLIAM ; THOMSON DAVID WILLIAM JOHNSON STUART ; WILLIAM THOMSON DAVID ; JOHNSON STUART**Inventor(s):** JOHNSON STUART DANIEL ; DAVID WILLIAM THOMSON**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class [B65D41/62](#) [B65D49/00](#) [B65D49/02](#) [B65D49/04](#) [B65D49/06](#) [B65D49/10](#) [B65D55/02](#)
^(IPC 8-9) [B65D55/08](#) (Advanced/Invention);
[B65D49/00](#) [B65D49/02](#) (Advanced/Non-invention);
[B65D41/00](#) [B65D49/00](#) [B65D55/02](#) (Core/Invention)

International class [B65D0/00](#) [B65D49/00](#) [B65D49/02](#) [B65D49/04](#) [B65D49/10](#)
^(IPC 1-7)**CPC:** [B65D49/04](#) [B65D55/026](#) [B65D55/0845](#)

European class: B65D49/04 B65D55/02G B65D55/08B2A

[Classification Explorer](#)

Cited documents: WO04011347 A2, WO02096771 A1, WO0075033 A1, US6276544 BA, US4497415 A, US4232795 A, US4232795, US3861548 A, GB2274837, GB2219570 A1, GB2099394 A1, FR2738802 A1, FR1478109 A, EP1147994 A1, EP0985607 A1, EP0807585 A1,

Forward Citations: WO16159923, WO16159922, WO14042884, WO12112127, WO10125595, WO09010722, WO08127137, WO08089778, WO08041119, WO07091173, WO07091173, WO06022573, US9102448, US9016524, US9010554, TWI599520, TWI345541, RU2613090, RU2607859, RU2604323, KR101512526, ITMI20090740, EP2006212, EA9265, EA016756, EA013177, EA013022, EA009265, CN104619602, CN104203767, CN104203767,

Abstract:

There is disclosed a closure assembly (5; 5a; 5b) or tamper-proof device adapted to be applied to a mouth of a container (e.g. for liquid), such as a neck of a bottle. There is a need for such closure assemblies (5; 5a; 5b) to provide tamper-evidence, e.g. indication of opening, and beneficially to also provide non-refilling means. Accordingly, the invention provides a closure assembly (5; 5a; 5b) comprising: a first member or tamper indication means (10a; 10b; 10c), and a container closure member (20; 20a; 20b) are retained in association with one another by retaining means, and wherein further initial opening of the closure assembly (5; 5a; 5b) causes release of the retaining means which causes the first member (10; 10a; 10b) thereafter to act as a valve member.

5) Family number: 55161590 (WO13171116A1)

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Title: TAMPER-EVIDENT SHRINK SLEEVE
Priority: EP20120167852 20120514 EP20130723728 20130508 WO2013EP59600 20130508
Family:

Publication number	Publication date	Application number	Application date
AU2013261875 AA	20131121	AU20130261875	20130508
AU2013261875 BB	20170615	AU20130261875	20130508
CN104411598 A	20150311	CN201380035278	20130508
CN104411598 B	20170308	CN201380035278	20130508
EP2664557 A1	20131120	EP20120167852	20120514
EP2850015 A1	20150325	EP20130723728	20130508
TH146478 A	20160229	TH20141006806	20130508
WO13171116 A1	20131121	WO2013EP59600	20130508

Probable Assignee: NESTEC SA**Assignee(s):**^(std): CCL LABEL GMBH ; NESTEC SA**Assignee(s):** NESTEC S A**Inventor(s):**^(std): TEMBL ROMAN ; WILLKE SANDRA**Agent(s):** SHELSTON IP; SHELSTON IP PTY LTD; LISK A HORST; LISK A HORST ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D55/08](#) (Advanced/Invention);
 (IPC 8-9): [B65D55/08](#) (Core/Invention)

CPC: [B65D55/0854](#)[Classification Explorer](#)

Cited documents: WO9728062 A1, GB2325219 A1, GB2271333 A1, FR2698851 A1, FR2518060 A1, EP1835477 A1, CN2357389 Y, CN1955078 A,

Abstract:

A tamper-evident shrink sleeve (9) is described to be shrunk around at least a mouth portion of a container and a closure member closing the mouth portion so as to provide a seal. The shrink sleeve (9) comprises breaking means (17) and a tab (15) arranged adjacent the breaking means (17) for tearing the shrink sleeve (9) as defined by the breaking means (17). The shrink sleeve (9) is formed from heat-shrinkable sheet material having a first end portion (25) and a second end portion (29) overlying the first end portion (25) and being bonded or adhered to the first end portion (25) at a bonding section (27) to define an annularly closed sleeve portion (11) of the shrink sleeve (9). The tab (15) is formed by at least one of the end portions (25, 29) projecting outwardly from the sleeve portion (11). The tab (15) further comprises at least one layer (31) of a non-heat-shrinkable or essentially non-heat-shrinkable sheet material overlying at least a partial section of the at least one end portion (29) and prevents shrinking of the end portion.

6) Family number: 56591243 (US2015297036A)

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Title: CONTAINER CONSTRUCTION FOR POWDERED MATERIAL
Priority: EP20130802733 20131127 WO2012NL50843 20121127 WO2013NL50856 20131127
 WO2013NL50857 20131127

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2013352629 AA</u>	20140605	AU20130352629	20131127
	<u>CN104918865 A</u>	20150916	CN201380070035	20131127
	<u>CN104918866 A</u>	20150916	CN201380070055	20131127
	<u>CN104918866 B</u>	20171124	CN201380070055	20131127
	<u>EP2925631 A1</u>	20151007	EP20130802733	20131127
	<u>EP2925631 B1</u>	20170222	EP20130802733	20131127
	<u>EP2925632 A1</u>	20151007	EP20130802734	20131127
	<u>ES2625748 T3</u>	20170720	ES20130802733T	20131127
	<u>ID201604057 A</u>	20160617	ID2015P0003563	20131127
	<u>IN04954DN2015 A</u>	20151211	IN2015DN04954	20150609
	<u>PH2015501177 A</u>	20150817	PH20150501177	20150527
	<u>PL2925631 T3</u>	20170831	PL20130802733T	20131127
	<u>RU2015125553 A</u>	20170110	RU20150125553	20131127
	<u>TH158337 A</u>	20161129	TH20151002914	20131127
	<u>US2015297036 AA</u>	20151022	US20130647184	20131127
	<u>US2015320263 AA</u>	20151112	US20130647316	20131127
	<u>WO14084721 A1</u>	20140605	WO2012NL50843	20121127
	<u>WO14084732 A1</u>	20140605	WO2013NL50856	20131127
	<u>WO14084733 A1</u>	20140605	WO2013NL50857	20131127

Probable Assignee: NUTRICIA NV

Assignee(s):^(std) N V NUTRICIA ; NUTRICIA NV

Inventor(s):^(std) BURDETT GARY JOHN ; CAROLINE ROBERTS PRIYA ; CRUSIUS SJORS FLORIS ; FLORIS CRUSIUS SJORS ; FRANCOIS PIETTE BENOIT MARIE ; JOHN BURDETT GARY ; JOSEPHUS MARICUS ; MARICUS PUIJENBROEK ALEXANDER JOSEPHUS VAN ; MICHAEL BAAL PATRICK VAN ; PIETTE BENOIT MARIE FRAN OIS ; PIETTE BENOIT MARIE FRANCOIS ; ROBERTS PRIYA CAROLINE ; VAN BAAL PATRICK MICHAEL ; VAN PUIJENBROEK ALEXANDER ; VAN PUIJENBROEK ALEXANDER JOSEPHUS MARICUS

Agent(s): GRIFFITH HACK; NEDERLANDSCH OCTROOIBUREAU; TOMAS TESIFONTE ENRIQUE; HUTTER JACOBUS JOHANNES

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
^(IPC 8-9): A23L1/29 A23L33/00 A47J47/04 B65B1/04 B65B31/02 B65B43/10 B65B5/02 B65B7/28 B65D17/00 B65D43/06 B65D43/16 B65D51/20 B65D51/22 B65D59/04 B65D77/04 B65D85/00 (Advanced/Invention);
B65B31/02 B65D77/04 (Core/Invention)

CPC: B65D2251/0018 B65D2251/0093 B65D2565/385 B65D51/20 B65D17/163 B65D43/16 B65D51/22 B65D85/70 B65D2517/0007 B65D2517/0013 B65D2251/0021 B65D2251/0028 B65D2251/0071 B65D2251/009 A23V2002/00 B65D77/0433 B65B43/10 B65D43/06 A47J47/04 B65B1/04 B65B7/2842 B65D59/04 A23L33/40

US class: 220/23.91 426/124 53/449

Cited documents: WO10071424 A1, US8308008 BB, US8042704 BB, US7322171 BB, US6761279 BA, US6557319 BA, US5370883 A, US4736870 A, US3891779 A, US3759437 A, US2012205376 AA, US2011220533 AA, US2010326016 AA, US2010310742 AA, US2009065467 AA, US2008187694 AA, US2008083758 AA, US2008041861 AA, US2005188651 AA, US2002000445 AA, FR2236737 A1, EP0442433 A1, DE6919071 U, CN104603018 A, CN102190118 A, CA2552111 AA, BE1015310 AD,

Abstract:

Source: US2015297036A A packaging for a powdered material includes a tub for receiving the material, the tub having a base and a peripheral wall with a top edge; an outer sleeve around at least the peripheral wall of the tub, thereby supporting the tub; a removable membrane for separating the powdered material in the tub from the environment; and a lid assembly having a peripheral rim for connection over the top edge of the peripheral wall of the tub and defining a wide access opening and a lid, hingedly attached to the rim for reclosing the access opening. A method of manufacturing such a package for a powdered material includes sliding the tub in the sleeve, such that at least the peripheral wall of the tub is enclosed by the sleeve, whereby sleeve supports the tub and the tub and sleeve form a container for the powdered material.

0) US2007017830A – TWO-PART VESSELS

7) Family number: 30497792 (US2007017830A)

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Title: TWO-PART VESSELS

Priority: AU20020951977 20021010 AU20030266848 20031010 WO2003AU01339 20031010

Family:

Publication number	Publication date	Application number	Application date
AT432227 E	20090615	AT20030747732T	20031010
AU2002951977 A0	20021024	AU20020951977	20021010
AU2003266848 AA	20040504	AU20030266848	20031010
AU2003266848 BB	20071206	AU20030266848	20031010
BRPI0314563 A	20050816	BR2003PI14563	20031010
BRPI0314563 B1	20131224	BR2003PI14563	20031010
CA2501210 AA	20050404	CA20032501210	20031010
CA2501210 C	20111129	CA20032501210	20031010
CN1328127 C	20070725	CN200380101242	20031010
CN1703354 A	20051130	CN200380101242	20031010
DE60327799 D1	20090709	DE20036027799	20031010
EP1562839 A1	20050817	EP20030747732	20031010
EP1562839 A4	20070815	EP20030747732	20031010
EP1562839 B1	20090527	EP20030747732	20031010
ES2325493 T3	20090907	ES20030747732T	20031010
IN01417DN2005 A	20090320	IN2005DN01417	20050407
JP2006502051 T2	20060119	JP20040542102T	20031010
MXPA05003816 A1	20050603	MX2005PA03816	20031010
PL205281 B1	20100331	PL20030375022	20031010
PL375022 A1	20051114	PL20030375022	20031010
RU2005114003 A	20060120	RU20050114003	20031010
RU2331559 C2	20080820	RU20050114003	20031010
RU2331559 C9	20081210	RU20050114003	20031010
US2007017830 AA	20070125	US20030530804	20031010
US7584842 BB	20090908	US20030530804	20031010
WO04033336 A1	20040422	WO2003AU01339	20031010

Probable Assignee: INFINEON TECHNOLOGIES AG

Assignee(s):^(std): LEO ENGINEERING PTY LTD ; NEUMEYER LEO ; NEUMEYER MARK D ; WELLINGTON IND PTY LTD ; NEUMEYER MARK DAMIAN ; WELLINGTON KEVIN ; SEAQUIST CLOSURES ; SIKVIST KLOUZHHERZ FORIN INK ; SEAQUIST CLOSURES FOREIGN INC

Assignee(s): WELLINGTON IND ; APTARGROUP INC ; INFINEON TECHNOLOGIES AG ; WELLINGTON INDUSTRIES PTY LTD

Inventor(s):^(std): KEVIN NEUMEYER MARK DAMIAN NEU ; KEVIN WELLINGTON ; NEUMEYER LEO ; NEUMEYER MARK ; NEUMEYER MARK D ; NEUMEYER MARK DAMIAN ; WELLINGTON KEVIN ; VELLINGTON KEVIN ; N JUMEJER MARK DEHJMIAN ; N JUMEJER LEO ; MARK DAMIAN NEUMEYER ; LEO NEUMEYER ; KEVIN NEUMEYER LEO NEUMEYER MA

Inventor(s): N'JUMEJER MARK DEHJMIAN ; N'JUMEJER LEO ; NEUMEYER LEO NEUMEYER MARK DAMIAN WELLINGTON KEVIN ; NEUMEYER MARK DAMIAN NEUMEYER LEO WELLINGTON KEVIN

Agent(s): GRIFFITH HACK; SMART AND BIGGAR; SAJDA WOLF E ET AL; WOOD PHILLIPS KATZ CLARK AND MORTIMER

Designated states:

AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO
CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR
GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD
MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE
SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B65D25/08 B65D41/50 B65D47/32 B65D47/36 B65D51/22 B65D51/28 (Advanced/Invention);
B65D25/04 B65D41/32 B65D47/00 B65D47/04 B65D51/18 B65D51/24 (Core/Invention)

International class
(IPC 1-7): B65D41/50 B65D51/22 B65D51/28

CPC: Y10S215/08 B65D51/2835

European class: B65D51/28B1B1

US class: 206/219 206/222 215/6 215/DIG.8

[Classification Explorer](#)

Cited documents: WO9965783 A1, WO9803265 A1, WO04033336 A1, WO0236446 A1, WO0236065 A1, WO02051711 A1, WO0136289 A1, WO0112520 A1, WO0078632 A1, WO0053507 A1, WO0027723 A1, WO0027717 A1, US6152296 A, US6148996 A, US6138821 A, US6135275 A, US5927549 A, US5772017 A, US5246142 A, US2005161348 AA, US2004118709 AA, US2003017236 AA, US2002096440 AA, JPUH07011543, JPUH01161479, JP80166, JP7080166 A2, JP7011543 A2, JP1161479 A2, EP0577200 B1, EP0577200, EP0057200 A1, DE19950884 A1, AU756328 B2, AU756328, AU756095 B2, AU756095, AU752149 B2, AU752149, AU752089 B2, AU752089, AU747684 B2, AU747684, AU737696 B3, AU737696, AU737612 B2, AU737612, AU732159 B2, AU732159, AU731634 B2, AU731634, AU731584 B2, AU731584, AU728008 B2, AU728008, AU712054 B2, AU712054, AU711119 B2, AU711119, AU686428 B2, AU686428, AU683068 B2, AU683068, AU681401 B2, AU681401, AU680724 B2, AU680724, AU679558 B2, AU679558, AU672311 B2, AU672311, AU661402 B2, AU661402, AU653367 B2, AU653367, AU653335 B2, AU653335, AU643305 B2, AU643305, AU6066799 A1, AU602500 B2, AU602500, AU590534 B2, AU590534, AU5188199 A1, AU200151881 A1, AU199960667 A1,

Forward Citations: WO17119815, WO17077467, WO14165983, WO13116204, WO12099501, WO12099501, WO08017890, WO08014541, WO06112776, WO05023667, USD616303, USD610004, US9718598, US9415923, US9207164, US8887905, US8714808, US8622209, US8302795, US8226126, US8177059, US7584842, US7475774, US2015203273, US2015129439, US2013193010, US2011163102, US2011163060, US2011042944, US2007280042, KR200460241, JP2008536771, GB2452676, GB2452676, EP3190062, EP2046658, EP1956969, EP1956969, EP1663807, EP1663807, EA11980, EA011980,

Abstract:

Source: US2007017830A A device (10) for location at an opening to a receptacle comprises a projection in the form of a hingedly movable cutter (32) which is located on a sleeve (38) which is adapted for location at the opening of the receptacle. The device (10) also comprises a lid (12) for location at the opening including a sealed compartment (20) in the lid (12) that is positionable at the opening and a longitudinal rib (24) located inside the lid (12). In use when the lid (12) and its compartment (20) are positioned at the opening and the lid is rotated relative to the receptacle, the rib (24) is caused to act on the cutter (32) to move it into a position whereby it opens the sealed compartment (20). The movement of the lid (12) in a unidirectional rotation alone with respect to the receptacle causes both opening of the compartment (20) followed by removal of the lid (12) from the receptacle.

8) Family number: 60160932 (US2017043921A)

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Title: IMPROVED TAMPER-EVIDENT CLOSURE

Priority: EP20150748589 20150217 US20140939852P 20140214 WO2015US16136 20150217
US20150118753 20150217

Family:	Publication number	Publication date	Application number	Application date
	CL2016002025 A1	20170106	CL20160002025	20160810
	CN106103297 A	20161109	CN201580008525	20150217
	EP3105137 A1	20161221	EP20150748589	20150217
	EP3105137 A4	20171101	EP20150748589	20150217
	EP3219637 A1	20170920	EP20170159175	20150217
	IN201647027142 A	20160831	IN201647027142	20160809
	JP2017508679 T2	20170330	JP20160551286T	20150217
	MX2016010338 A1	20161130	MX20160010338	20150217
	PE00052017 A1	20170304	PE20160001448	20150217
	US2017043921 AA	20170216	US20150118753	20150217
	WO15123666 A1	20150820	WO2015US16136	20150217

Probable Assignee: CLOSURE SYSTEMS INT INC

Assignee(s):^(std): CLOSURE SYSTEMS INT INC

Inventor(s):^(std): DANIEL ELLIOTT ; ELLIOTT DANIEL

Agent(s): JOHANSSON AND LANGLOIS; ALGEMEEN OCTROOI EN MERKENBUREAU BV;
GEIMER STEPHEN D ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH
CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE
GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ
LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ
NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG
SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA
ZM ZW

International class [B65D39/08](#) [B65D41/34](#) [B65D50/06](#) [B65D51/18](#) [B65D55/08](#) (Advanced/Invention)
(IPC 8-9):

CPC: [B65D39/08](#) [B65D55/0863](#) [B65D51/18](#) [B65D2251/0028](#) [B65D2251/0078](#) [B65D41/3414](#)
[B65D41/3423](#) [B65D2101/0023](#) [B65D2101/003](#) [B65D2101/0046](#) [B65D2101/0076](#)
[B65D2251/0015](#) [B65D2251/0087](#)

US class: [220/270](#)

[Classification Explorer](#)

Cited documents: WO13132384 A1, WO09154666 A2, US6758359 BB, US6050436 A, US5052574 A,
US4807770 A, US2124873 A, US2010038337 AA, US2004020943 AA, FR2778643 A1,
DE29706672 U1, DE19708909 A1, CN102015472 A,

Forward Citations: WO17037271,

Abstract:

Source: US2017043921A Embodiments of a tamper-evident closure are disclosed which prevent unauthorized access to a container and its contents, deterring adulteration or introduction of counterfeit product. In one embodiment the tamper-evident closure can be fitted to an associated container and closure, and includes a portion which is removed by fracture of the tamper-evident closure to gain access to the container closure. In another embodiment, an arrangement of wedge-like tongues permit fitment of the tamper-evident closure to associated container for tamper-evidence. In another embodiment, the tamper-evident closure is joined by frangible bridges to the container closure to provide the desired tamper-evidence. In another embodiment, the tamper-evident closure is movable axially of the associated container closure to thereby provide evidence of removal.

9) Family number: 30003516 (US2002104852A)

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Title: Dispensing closure with tamper-evident sleeve
Priority: US20000696681 20001025 US20020086234 20020227 US20020179803 20020625
Family:

Publication number	Publication date	Application number	Application date
<u>US2002104852 AA</u>	20020808	US20020086234	20020227
<u>US2002166873 AA</u>	20021114	US20020179803	20020625
<u>US6655553 BB</u>	20031202	US20020179803	20020625

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s):^(std): SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC ; STANISZEWSKI JOSEPH W

Assignee(s): BLOMDAHL CORI M ; POZGAY DAVID S

Inventor(s):^(std): STANISZEWSKI JOSEPH W ; POZGAY DAVID S ; BLOMDAHL CORI M

International class B65D47/08 B65D55/08 (Advanced/Invention)
 (IPC 8-9):

International class B65D41/62 B67B5/00
 (IPC 1-7):

CPC: B65D47/0804 B65D55/0863

European class: B65D47/08B B65D55/08C

US class: 215/251 215/253 222/153.06 222/153.07 222/153.070P 222/562

[Classification Explorer](#)

Cited documents: WO9958418 A1, USD366418 S1, US6269986 BA, US6116477 A, US6116445 A, US6095354 A, US6050436 A, US6050434 A, US6039218 A, US5996849 A, US5992659 A, US5975369 A, US5918752 A, US5884788 A, US5875942 A, US5875906 A, US5833123 A, US5735419 A, US5667086 A, US5662247 A, US5611445 A, US5544770 A, US5524782 A, US5497906 A, US5467879 A, US5462181 A, US5456374 A, US5320235 A, US5284264 A, US5129531 A, US5107998 A, US5100011 A, US5085333 A, US5080245 A, US5065883 A, US4984716 A, US4874101 A, US4830208 A, US4821897 A, US4801054 A, US4779750 A, US4752013 A, US4746035 A, US4733787 A, US4709823 A, US4595123 A, US4487324 A, US4467931 A, US4433790 A, US4371089 A, US4279353 A, US4176755 A, US4073399 A, US3971488 A, US3952901 A, US3946889 A, US3945525 A, US3923183 A, US3901403 A, US3823841 A, US3799381 A, US3785519 A, US3690499 A, US3603472 A, US3596790 A, US3208649 A, US2787394 A, US2705085 A, US2108583 A, US1965713 A, US1214675 A,

Forward Citations: WO13132384, WO10027398, WO08031178, WO07050496, USD513585, US9650184, US9649254, US9592936, US9533800, US9321562, US9068682, US9033153, US9027603, US8365940, US8302805, US8276773, US8151985, US8061544, US8051879, US8003033, US7971747, US7731048, US7611027, US7152760, US7140519, US2012222980, US2011174817, US2011101036, US2011024381, US2010326560, US2010200534, US2010051631, US2010038337, US2010029452, US2009071927, US2008314775, US2008232927, US2007181526, US2007090131, US2007090105, US2007007230, US2006273111, US2006273110, US2006043031, US2005092751, US2005070853, US2004238477, ITMI20120361, ES2209667, EP3031743, EA025981, CN105540029, CN104136336,

Abstract:

Source: US2002104852A A closure structure for a container includes a closure body, a cooperating lid and a surrounding tamper-evident sleeve. The closure body has an end wall having a dispensing orifice, and an annular sidewall depending from the end wall and having internal threads engageable to external threads of the container. The closure lid is movable to cover the dispensing orifice in a closed position and movable away from said closed position to uncover the dispensing orifice. The tamper-evident sleeve surrounds the closure body and has a bead engageable to a retaining element of the container located below the closure body to prevent axial upward displacement of the sleeve with respect to the container. The sleeve includes a retention member overlying the lid to prevent opening movement of the lid. The sleeve includes a frangible feature arranged to be torn to remove the sleeve and disengage the retention member from over the lid to allow opening of the lid.

0) US2007131642A – TAMPER EVIDENT CLOSURES FOR CONTAINERS

10) Family number: 32017844 (US2007131642A)

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Title: TAMPER EVIDENT CLOSURES FOR CONTAINERS

Priority: WO2004ZA00154 20041208 WO2004ZA00162 20041223 WO2004ZA00162 20060825
 ZA20040001930 20040310 ZA20040003984 20040520 ZA20040001930 20040510
 ZA20050006860 20050826 ZA20030009654 20031212 ZA20040000618 20040127
 ZA20050006892 20041208

Family:

Publication number	Publication date	Application number	Application date
AU2004314348 AA	20050804	AU20040314348	20041223
BRPI0418467 A	20070605	BR2004PI18467	20041223
CA2557751 AA	20060828	CA20042557751	20041223
CN1922076 A	20070228	CN200480042123	20041223
EA010520 B1	20081030	EA20060001370	20041223
EA200601370 A1	20070629	EA20060001370	20041223
EP1732813 A1	20061220	EP20040818102	20041223
IL177133 A0	20061210	IL20040177133	20041223
IN03090CN2006 A	20070608	IN2006CN03090	20060825
JP2007533488 T2	20071122	JP20060551657T	20041223
KR100835896 B1	20080609	KR20067017192	20041223
KR20060113780 A	20061102	KR20067017192	20041223
NO20063823 A	20061025	NO20060003823	20060828
TH72986 A	20051128	TH20051002672	20050610
TH78367 A	20060629	TH20051003022	20050630
US2007131642 AA	20070614	US20040582291	20041208
US2007160792 AA	20070712	US20040587647	20041223
WO05056413 A1	20050623	WO2004ZA00154	20041208
WO05070771 A1	20050804	WO2004ZA00162	20041223
ZA2005006860 A	20070328	ZA20050006860	20050826
ZA2005006892 A	20070228	ZA20050006892	20041208

Probable Assignee: JAN HUMAN

Assignee(s):^(std): HUMAN JAN P ; HUMAN JAN PETRUS ; JAN HUMAN ; PETRUS HUMAN JAN

Assignee(s): JAN PETRUS HUMAN

Inventor(s):^(std): HUMAN JAN P ; HUMAN JAN PETRUS ; PETRUS HUMAN JAN

Inventor(s): HUMAN JAN ; JAN PETRUS HUMAN

Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; KIRBY EADES GALE BAKER; TOMLINSON AND OCONNELL PC; DALINA LAW GROUP PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
 (IPC 8-9): B29B11/14 B29C45/00 B29C45/26 B29C45/40 B29C47/00 B29C49/00 B29C49/02 B29C49/20 B29C49/76 B29C49/80 B32B1/08 B65D1/00 B65D1/02 B65D41/34 B65D49/12 B65D51/00 B65D55/08 (Advanced/Invention); B29C49/06 B29L22/00 (Advanced/Non-invention); B29B11/14 B29C45/00 B29C45/26 B29C45/40 B29C47/00 B29C49/00 B29C49/02 B29C49/20 B29C49/42 B29C49/78 B32B1/00 B65D1/00 B65D1/02 B65D41/34 B65D49/00 B65D51/00 B65D55/02 (Core/Invention); B29C49/06 (Core/Non-invention); B65D (Subclass/Invention)

International class B29C45/00 B29C45/26 B29C49/00 B65D1/02 B65D41/34 B65D55/08
(IPC 1-7).

CPC: B29C45/40 B65D41/3466 Y10T428/139 B29C49/0073 B29B2911/1402 B29B2911/14026
B29B2911/14033 B29B2911/1404 B29B2911/14106 B29B2911/14133 B29B2911/14433
B29B2911/14446 B29B2911/14473 B29C45/0055 B29C45/26 B29C49/06
B29C2045/0056 B29K2067/00 B29K2105/258 B29K2995/0049 B29L2031/565
B29L2031/7158 B65D1/023 B65D55/08 B65D2101/0015 B65D2101/0023 B65D2501/0054

European class: B29C45/00J2 B29C45/26 B29C45/40 B29C49/00G B65D1/02D1 B65D41/34E1
B65D55/08 L29B911/14B2B L29B911/14B2D L29B911/14B2F L29B911/14B2H
L29B911/14B4L L29B911/14B4N L29B911/14D10D4D L29B911/14D10D4D2B
L29B911/14D10D6 L29C45/00J2A L29C49/06 L29K105/25C6 L29K67/00 L29K995/00F9
L29L31/56B L29L31/7158 L65D101/00A2 L65D101/00A3 L65D501/02Y3

US class: 215/252 215/258 215/258S 428/36.9 428/36.900P

[Classification Explorer](#)

Cited documents: WO03057583 A1, US6325226 BA, US5804227 A, US4923073 A, US4852751 A, US4805792 A, US4509654 A, US4501373 A, US4485934 A, US4476987 A, US4378893 A, US4369889 A, US4206851 A, US2003062369 AA, KR890019203 U, KR19980065276 U, KR19890019203 U, GB1384370 A, EP0366198 A1,

Forward Citations: WO17135824, WO08071860, WO08071860, WO07045894, US8808593, NL2016212, FR2908746,

Abstract:

Source: US2007131642A A cap (10) including a transverse end wall (12) and a skirt (14) is disclosed. The skirt (14) is divided by a line of weakening (24, 26) into a main part (22) and a band (20). At least the band (20) is of heat shrinkable material. When the band is heated after fitting to the container (18) it pulls in under a bead (36) which encircles the container's neck.

11) Family number: 10334264 (US5875906A)

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Title: Tamper evident sleeves and method of forming them**Priority:** US19960653454 19960524 WO1997US08878 19970522

Family:	Publication number	Publication date	Application number	Application date
	AU199732134 A1	19971209	AU19970032134	19970522
	US5875906 A	19990302	US19960653454	19960524
	WO9744262 A1	19971127	WO1997US08878	19970522

Probable Assignee: ZAPATA INNOVATIVE CLOSURES INC**Assignee(s):**^(std) ZAPATA INNOVATIVE CLOSURES INC**Inventor(s):**^(std) GOMEZ CLAUDIO ZAPATA ; KROPKE JAMES ; PRICE MICHAEL L ; ZAPATA GOMEZ CLAUDIO**Inventor(s):** CLAUDIO ZAPATA GOMEZ ; MICHAEL L PRICE ; JAMES KROPKE**Designated states:** AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CH CN CU CZ DE DK EE ES FI FR GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG UZ VN**International class**
^{(IPC 8-9):} [B29C57/12 B65D55/08](#) (Advanced/Invention);
[B29C57/00 B65D55/02](#) (Core/Invention)**International class**
^{(IPC 1-7):} [B29C57/12 B65D41/34](#)**CPC:** [B29C57/12 B29L2031/56 B65D55/0863 B65D2101/00](#)**European class:** [B29C57/12 B65D55/08C L29L31/56 L65D101/00](#)**US class:** [215/252 215/276](#)[Classification Explorer](#)**Cited documents:** US5579934 A, US5341949 A, US5263600 A, US4813561 A, US4709824 A, US3968894 A,**Forward Citations:** WO9958418, WO08122078, WO02062675, WO0112537, US8308005, US7004341, US6772893, US6655553, US6631820, US6405885, US6116443, US2017081088, US2009188888, US2008011706, US2007272647, US2003205549, US2003102282, FR2778643,**Abstract:**

Source: US5875906A A tamper evident sleeve and method of forming the sleeve. The tamper evident sleeve is used in conjunction with a closure or cap, such as a twist-off metal crown seal, for a container or bottle. The sleeve has a skirt made from plastic material which engages the crown seal and rotates with the crown seal in opening and closing the container without discomfort or injury which can be encountered in-directly gripping a metal crown seal. The sleeve also includes a tamper evident feature depending from the skirt of the sleeve which indicates the condition of the container upon the initial removal of the sleeve and crown seal.

12) Family number: 24121621 (WO04011347A2)

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Title: LIQUID CONTAINER CLOSURE ASSEMBLY**Priority:** GB20020020554 20020731 WO2003GB03241 20030718

Family:	Publication number	Publication date	Application number	Application date
	AU2003254489 AA	20040216	AU20030254489	20030718
	CN1323908 C	20070704	CN20038018283	20030718
	CN1671604 A	20050921	CN20038018283	20030718
	EA006807 B1	20060428	EA20050000278	20030718
	EA200500278 A1	20050630	EA20050000278	20030718
	GB200220554 A0	20021009	GB20020020554	20020731
	MXPA05000956 A1	20050912	MX2005PA00956	20030718
	WO04011347 A2	20040205	WO2003GB03241	20030718
	WO04011347 A3	20040415	WO2003GB03241	20030718

Probable Assignee: MONTGOMERY DANIEL AND SON LTD**Assignee(s):**^(std) DANIEL MONTGOMERY AND SON LTD ; GUALA CLOSURES U K LTD ; MONTGOMERY DANIEL AND SON LTD ; THOMSON DAVID WILLIAM ; MONTGOMERY DANIEL AND SON CO LTD**Assignee(s):** DANIEL MONTGOMERY AND SON LIMITED ; GUALA CLOSURES UK LTD ; MONTGOMERY DANIEL AND SON CO ; GUALA CLOSURES U K LIMITED**Inventor(s):**^(std) DAVID WILLIAM THOMSON ; THOMPSON DADID WILLIAM ; THOMSON DAVID WILLIAM ; WILLIAM THOMSON DAVID**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
(IPC 8-9): [B65D49/04](#) [B65D55/02](#) (Advanced/Invention);
[B65D49/00](#) [B65D55/02](#) (Core/Invention)**International class**
(IPC 1-7): [B65D49/04](#) [B65D55/02](#)**CPC:** [B65D49/04](#) [B65D55/02](#)**European class:** [B65D49/04](#) [B65D55/02](#)[Classification Explorer](#)**Cited documents:** WO9942375 A1, GB2274837 A1, FR2767794 A1, FR2739360 A1,**Forward Citations:** WO08041119, WO08041119, WO07144750, WO07091173, WO07091173, USD630093, US9242768, US9102448, US9038841, US9010554, US8522991, US8490804, US8453856, US8413830, US7999006, US7830263, GB2450940, GB2450940, GB2450939, GB2450939, GB2399339, EP1743846, EP1743846, EA016756, EA013177, CN104053608, CN104053608,**Abstract:**

There is disclosed an improved closure assembly (5) adapted to be applied to a mouth and neck portion of a container (e.g. for liquid) such as a neck of a bottle. Known container closure assemblies suffer from a number of problems, e.g. simplicity of manufacture and provision of tamper evidence. Accordingly, the closure assembly (5) (or tamper-evident device) of the present invention comprises: a first body part (10); a tamper-evidence member or lock means (15); and a container closure member (20), wherein prior to initial opening the tamper-evident member or lock means (15) is in a first position such that the first body 15 part (10) and the container closure member (20) are disposed in a first relation to one another, and initial opening of the closure assembly (5) causes the tamper-evident member or lock means (15) to move a second position. Upon reclosure the lock means (15) causes the first body part (10) and the container closure member (20) to be disposed in a second (spaced) relation to one another, thereby evidencing opening and reclosure.

13) Family number: 62244676 (WO16066521A1)

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Title: TAMPER-EVIDENT SEAL FOR HEAT-SHRINKABLE SLEEVE**Priority:** FR20140060469 20141030

Family:	Publication number	Publication date	Application number	Application date
	FR3027881 A1	20160506	FR20140060469	20141030
	FR3027881 B1	20161230	FR20140060469	20141030
	WO16066521 A1	20160506	WO2015EP74503	20151022

Probable Assignee: ARJOWIGGINS SECURITY**Assignee(s):**^(std) ARJOWIGGINS SECURITY ; ARJOWIGGINS SOLUTIONS**Inventor(s):**^(std) MOURAO JEROME ; RANCIEN SANDRINE**Inventor(s):** SANDRINE RANCIEN ; JEROME MOURAO**Agent(s):** CABINET NONY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D41/62](#) [B65D55/08](#) (Advanced/Invention)
(IPC 8-9).

CPC: [B65D55/0854](#) [B65D41/62](#) [B65D2203/00](#)[Classification Explorer](#)

Cited documents: WO14023919 A1, US6254139 BA, US2361464 A, GB2273492 A1, FR3003549 A1, FR2998881 A1, EP1901969 B1, EP1864113 A1, EP1307520 A1, EP0929886 B1, EP0812451 A1, EP0698562 A1, EP0698561 A1, EP0585076 A2,

Abstract:

The present invention relates to a security sleeve for a container with a neck, notably for a bottle, comprising a heat-shrinkable sleeve (20), and at least one tamper-evident seal (22) that is fixed, at least at one location, to the inner face of the heat-shrinkable sleeve (20), each tamper-evident seal extending along the heat-shrinkable sleeve (20), the heat-shrinkable sleeve (20) and each tamper-evident seal (22) being shaped such that if a force is applied to the heat-shrinkable sleeve (20), the latter is torn substantially circumferentially, and each tamper-evident seal (22) remains fixed only to one of the two parts of the heat-shrinkable sleeve (20) that are delimited by the substantially circumferential tear.

14) Family number: 31715656 (US2005189313A)

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Title: EASY OPEN CONTAINER CLOSURE

Priority: US19990136332P 19990526 US20000579050 20000526 US20050049821 20050203

Family:

Publication number	Publication date	Application number	Application date
US2005189313 AA	20050901	US20050049821	20050203
US6860397 BA	20050301	US20000579050	20000526
US7568586 BB	20090804	US20050049821	20050203
WO06083606 A2	20060810	WO2006US02322	20060124
WO06083606 A3	20071129	WO2006US02322	20060124

Probable Assignee: WALTERS LAWRENCE SJR

Assignee(s):^(std): WALTERS JR LAWRENCE S ; WALTERS LAWRENCE

Assignee(s): WALTERS LAWRENCE S JR ; WALTERS LAWRENCE SJR

Inventor(s):^(std): WALTERS LAWRENCE S JR ; WALTERS JR LAWRENCE S

Inventor(s): WALTERS LAWRENCE SJR ; WALTERS LAWRENCE ; WALTERS LAWRENCE S

Agent(s): OHLANDT GREELEY RUGGIERO AND PERLE LLP; OHLANDT GREELEY RUGGIERO AND PERLE

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class B65D41/00 B65D41/16 B65D41/18 B65D41/22 B65D41/46 (Advanced/Invention);
(IPC 8-9); B65D41/18 (Advanced/Non-invention)

International class B65D41/16 B65D41/22
(IPC 1-7);

CPC: B65D41/16 B65D47/127 B65D50/061 B65D55/026 Y10S215/901 Y02W30/807 B65D41/18 B65D41/22

European class: B65D41/16 B65D41/18 B65D41/22 B65D47/12D B65D50/06B B65D55/02G

US class: 215/295 215/304 215/305 215/317 215/321 215/321S 215/324 215/901 220/281 220/793

[Classification Explorer](#)

Cited documents: USRE28862 E, US873867 A, US6860397 BA, US6299005 BA, US5884788 A, US5722568 A, US5267494 A, US5265748 A, US5265746 A, US5265501 A, US5251770 A, US4976172 A, US4967622 A, US4951829 A, US4949600 A, US4864898 A, US4852432 A, US4768667 A, US4756442 A, US4703867 A, US4702130 A, US4679697 A, US4653354 A, US4633740 A, US4564116 A, US4502605 A, US4433597 A, US4431111 A, US4409864 A, US4326649 A, US4251770 A, US4170315 A, US3927796 A, US3794207 A, US3603473 A, US3425580 A, US3300073 A, US3204813 A, US2778520 A, US2750062 A, US2254826 A, US1894504 A, US1838534 A,

Forward Citations: WO16070250, USD754921, USD748478, USD733497, USD732339, USD727097, USD697798, USD696551, USD696079, USD626838, USD626837, US9589226, US9548231, US9492024, US9330951, US9156668, US9120598, US9078535, US9038845, US8939312, US8939305, US8844746, US8833586, US8708188, US8695830, US8308003, US8011524, US7913870, US7861881, US7703617, US7643734, US7611027, US7568586, US7296498, US2014184390, US2013318758, US2013313148, US2012138620, US2010224630, US2010200581, US2010193463, US2010181323, US2008072989, US2008072710, US2007007230, US2006266751, US2006091140, US2005189313, CN103231849,

Abstract:

Source: US2005189313A The present invention is directed to an improved container closure or lever cap comprising one or more of the following features: (i) an improved interface on the interior surface of the closure

that consists of strategically positioned locking lugs to securely affix the closure onto a container, (ii) a repositioned lever handle and fulcrum to optimize function and mechanical advantage, (iii) a retro-fit sleeve for an incompatible container, which on the inner surface is fashioned to interface with twist necks bottles, or other closure designs and mechanisms incompatible with the interior fitting of the lever cap, and which on the exterior is fashioned to receive the interior fitting of the lever cap, (iv) a tamper-evident safety indicator, (v) a specialized vertical sloping sidewall at the container's distal end near the opening to improve the closure's vertical lift during operation, (vi) a child safety design and mechanism that requires two functions to unlock the lever and position it for normal operation, and (vii) certain ergonomic, aesthetic, and customizable features that improve its function and consumer appeal.

15) Family number: 49278496 (US2012279940A)

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Title: TAMPER EVIDENT CLOSURE**Priority:** EP20100812878 20101119 WO2010IB02959 20101119 WO2010IT00009 20100115**Family:**

Publication number	Publication date	Application number	Application date
CN102725203 A	20121010	CN201080061455	20101119
CN102725203 B	20141126	CN201080061455	20101119
CO6561834 A2	20121115	CO20120134302	20120809
DE602010017109 D1	20140807	DE201060017109T	20101119
EA022140 B1	20151130	EA20120001020	20101119
EA201201020 A1	20130130	EA20120001020	20101119
EP2523865 A2	20121121	EP20100812878	20101119
EP2523865 B1	20140625	EP20100812878	20101119
ES2505495 T3	20141010	ES20100812878T	20101119
KR101786138 B1	20171017	KR20127021339	20101119
KR20120109628 A	20121008	KR20127021339	20101119
MX2012007881 A1	20121001	MX20120007881	20101119
UA104928 C2	20140325	UA20120007598	20101119
US2012279940 AA	20121108	US20100519250	20101119
US9114912 BB	20150825	US20100519250	20101119
WO11086407 A2	20110721	WO2010IB02959	20101119
WO11086407 A3	20110922	WO2010IB02959	20101119

Probable Assignee: GUALA CLOSURES PATENTS BV**Assignee(s):^(std)** CREATIVE GCL S R L ; GIOVANNINI MARCO ; GUALA CLOSURES PATENTS BV ; VIALE LUCA ; GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A ; CREATIVE GCL SRL**Inventor(s):^(std)** GIOVANNINI MARCO ; LUCA VIALE ; MARCO GIOVANNINI ; VIALE LUCA**Agent(s):** LUZ CLEMENCIA DE PAEZ; BONVICINI DAVIDE; CARPINTERO MARIO; KING AND SPALDING; FIORANI GIUSEPPE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D39/00](#) [B65D39/16](#) [B65D41/04](#) [B65D55/02](#) (Advanced/Invention);
 (IPC 8-9): [B65D39/00](#) (Core/Invention)

CPC: [B65D39/0052](#) [B65D39/16](#) [B65D55/026](#) [B65D2101/00](#)**European class:** [B65D39/00G](#) [B65D39/16](#) [B65D55/02G](#)**US class:** [1/1](#) [215/200](#) [215/329](#) [215/364](#)[Classification Explorer](#)

Cited documents: WO05021400 A1, WO03066467 A1, WO02083515 A1, US869700 A, US7731043 BB, US7276202 BB, US6915920 BB, US6769560 BA, US6719160 BB, US6651834 BB, US6536618 BA, US6168036 BA, US6168036 B1, US5732837 A, US5722548 A, US5117995 A, US4902270 A, US4674641 A, US4621743 A, US3638821 A, US3430777 A, US3091358 A, US2940629 A, US2718974 A, US2008116165 AA, US2005127155 AA, JP2008127105, GB2004000189, FR2688762 A1, EP2028121 A2, EP1511677 B1, EP1423310 A1, DE1157101 B, CN101372274 A,

Forward Citations:

Abstract:

Source: US2012279940A The present invention relates to a tamper evident closure in which the outer portion (10) rises upon first opening, and having means that prevent such outer portion from falling back to the original position once it has risen. Therefore, the tamper evident effect is given by the misalignment of the outer portion and the central portion (8). The closure may be made of cork, possibly of synthetic nature, or of screw type, adapted to be tightened to a threaded pouring device applied to the neck of the bottle.

16) Family number: 50918532 (US2014183195A)

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Title: TAMPER-EVIDENT CLOSURE**Priority:** EP20120808731 20121207 GB20120001976 20120203 WO2012EP74846 20121207**Family:**

Publication number	Publication date	Application number	Application date
CN104203767 A	20141210	CN201280071340	20121207
CN104203767 B	20160706	CN201280071340	20121207
CO7240353 A2	20150417	CO20140168333	20140801
DE602012020061 D1	20160811	DE201260020061T	20121207
EP2809589 A1	20141210	EP20120808731	20121207
EP2809589 B1	20160629	EP20120808731	20121207
ES2594412 T3	20161220	ES20120808731T	20121207
GB201201976 A0	20120321	GB20120001976	20120203
JP2015509064 T2	20150326	JP20140555104T	20121207
JP6067751 B2	20170125	JP20140555104T	20121207
MX2014009278 A1	20140911	MX20140009278	20121207
MX345129 B	20170118	MX20140009278	20121207
PE24272014 A1	20150213	PE20140001202	20121207
PH2014501691 A	20141110	PH20140501691	20140725
PH2014501691 B	20141110	PH20140501691	20140725
PL2809589 T3	20170228	PL20120808731T	20121207
RU2014131782 A	20160327	RU20140131782	20121207
RU2612853 C2	20170313	RU20140131782	20121207
TR201613259 T4	20161021	TR20160013259T	20121207
US2014183195 AA	20140703	US20120824936	20121207
US9010554 BB	20150421	US20120824936	20121207
WO13113435 A1	20130808	WO2012EP74846	20121207

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND ; OBRIST KLOUZHES SVITTSEERLAND GMBKH**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** ALEXANDER DONALD MEIKLEM MCPHERSON ; MAKFERSON ALEKSANDR DONALD MEJKLEM ; MCPHERSON ALEXANDER DONALD MEIKLEM ; MEIKLEM MCPHERSON ALEXANDER DONALD**Agent(s):** LICHOTA CATHERINE MARGARET TIMMIS; ISERN JORGE; OZAWA SEIJI; HIROTA MASANORI; TOLGA CAYLAK; ALLEMAN HALL MCCOY RUSSELL AND TUTTLE LLP; BEATSON MATTHEW ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class** [B65D41/34](#) [B65D49/04](#) [B65D50/00](#) [B65D55/02](#) (Advanced/Invention)
(IPC 8-9):**CPC:** [B65D50/00](#) [B65D49/04](#) [B65D55/022](#) [B65D55/026](#) [B65D2101/0023](#)**US class:** [215/17](#) [215/215](#) [215/230](#) [215/252](#) [215/26](#) [220/259.4](#) [220/266](#)[Classification Explorer](#)

Cited documents: WO09010722 A1, WO06117505 A1, WO05049443 A1, WO04067387 A2, WO04011347 A2, WO02096771 A1, US8439213 BB, US6908013 BB, US5738231 A, US4984699 A, US2011259844 AA, US2010170898 AA, US2010170898, US20100170898, US2009289027 AA, US2008105644 AA, US2005115915 AA, JP61164953 A2, JP61164953, JP59500961 T2, JP59500961, JP54157146 U, JP54157146 U, GB2450939 A1, CN201334173 Y, CN1741942 A, CN1318027 A, CN1264674 A, CN102076573 A,

Forward Citations: WO17093218, WO17081045, WO15113851, US2016347520, EP3093256,

Abstract:

Source: US2014183195A A tamper-evident closure for a container is provided. The closure comprises a first portion including inner and outer parts, and a second portion. The outer part is rotatable relative to the inner part from a first position in which at least part of the first and second portions are adjacent each other to a second position in which there is a gap therebetween. The first portion comprises locking means for irreversibly locking the closure in the second position upon a first opening so that the gap cannot be closed. The inner part includes a line of weakness which breaks if the outer part is reverse rotated relative to the inner part.

17) Family number: 55187596 (WO13171719A1)

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Title: BOTTLE CLOSURE DEVICE**Priority:** IN2012MU01758 20120619 IT2012MI00858 20120517

Family:	Publication number	Publication date	Application number	Application date
	<u>IN01758MU2012 A</u>	20140221	IN2012MU01758	20120619
	<u>IN03603MU2014 A</u>	20151009	IN2014MU03603	20141115
	<u>IN04905MU2015 A</u>	20160826	IN2015MU04905	20151228
	<u>ITMI20120858 A1</u>	20131118	IT2012MI00858	20120517
	<u>WO13171719 A1</u>	20131121	WO2013IB54048	20130517

Probable Assignee: AXIOM PROPACK PVT LTD**Assignee(s):**^(std): AXIOM PROPACK PVT LTD ; FABIANO NICOLA**Inventor(s):**^(std): FABIANO NICOLA**Inventor(s):** NICOLA FABIANO

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
^(IPC 8-9): [B65D41/02 B65D41/18 B65D41/62 B65D47/06 B65D49/04 B65D51/18 B65D51/24 B65D55/02](#) ^(Advanced/Invention)

CPC: [B65D41/62 B65D47/06 B65D2101/0038 B65D2101/0053](#)[Classification Explorer](#)**Cited documents:** WO9117090 A1, WO02096771 A1, WO0007898 A1, US5129531 A, EP1876111 A1, EP1818272 A1, DE4126015 C1,**Abstract:**

The present invention refers to a bottle closure device (10) comprising a cap (11) having an upper portion and a side portion, a covering sleeve (20) comprising an upper portion (21) and a lower portion (22) connected to each other along a breaking line (23) provided with a plurality of connecting bridges (24), the covering sleeve being coupled to the cap so that the upper portion (21) of the covering sleeve at least partially covers the side portion of the cap (11), the bottle closure device (10) being characterised in that the plurality of connecting bridges (24) is obtained inside the covering sleeve (20), leaving the lower edge of the upper portion (21) and the upper edge of the lower portion (22) free and entirely facing each other, the plurality of connecting bridges (24) internally comprising means (25) for constraining the axial movement of the cap (11) with respect to the covering sleeve (20).

0) US4899898A – CLOSURES FOR CONTAINERS

18) Family number: 2270014 (US4899898A)

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Title: Closures for containers

Priority: CA19880576430 19880902 GB19870020683 19870903

Family:	Publication number	Publication date	Application number	Application date
	<u>AT128688 E</u>	19951015	AT19880308005T	19880830
	<u>AU198821712 A1</u>	19890309	AU19880021712	19880831
	<u>AU612400 B2</u>	19910711	AU19880021712	19880831
	<u>CA1308061 A1</u>	19920929	CA19880576430	19880902
	<u>CN1019782 B</u>	19921230	CN19881006480	19880902
	<u>CN1031683 A</u>	19890315	CN19881006480	19880902
	<u>DE3854545 D1</u>	19951109	DE19883854545	19880830
	<u>DE3854545 T2</u>	19960314	DE19883854545T	19880830
	<u>DK171377 B1</u>	19961007	DK19880004895	19880902
	<u>DK489588 A</u>	19890304	DK19880004895	19880902
	<u>DK489588 A0</u>	19880902	DK19880004895	19880902
	<u>EG18800 A</u>	19940130	EG19880000464	19880831
	<u>EP0306259 A2</u>	19890308	EP19880308005	19880830
	<u>EP0306259 A3</u>	19900117	EP19880308005	19880830
	<u>EP0306259 B1</u>	19951004	EP19880308005	19880830
	<u>ES2079356 T3</u>	19960116	ES19880308005T	19880830
	<u>GB8720683 A0</u>	19871007	GB19870020683	19870903
	<u>GR3018580 T3</u>	19960331	GR19950403724T	19951229
	<u>IE68663 B</u>	19960710	IE19880002621	19880829
	<u>IE882621 L</u>	19890303	IE19880002621	19880829
	<u>IL87617 A0</u>	19890131	IL19880087617	19880831
	<u>IL87617 A1</u>	19920525	IL19880087617	19880831
	<u>JP1070364 A2</u>	19890315	JP19880220272	19880902
	<u>JP2701880 B2</u>	19980121	JP19880220272	19880902
	<u>JP64070364 A2</u>	19890315	JP19880220272	19880902
	<u>NO176269 B</u>	19941128	NO19880003906	19880901
	<u>NO176269 C</u>	19950308	NO19880003906	19880901
	<u>NO883906 A</u>	19890306	NO19880003906	19880901
	<u>NO883906 A0</u>	19880901	NO19880003906	19880901
	<u>NZ226007 A</u>	19911126	NZ19880226007	19880901
	<u>PH25737 A</u>	19911018	PH19880037499	19880902
	<u>US4899898 A</u>	19900213	US19880238862	19880831
	<u>ZA8806537 A</u>	19890726	ZA19880006537	19880902

Probable Assignee: METAL CLOSURES LTD

Assignee(s):^(std): METAL CLOSURES LTD ; GROUP TWO

Assignee(s): MCG CLOSURES LTD ; METAL CLOSURES LIMITED ; METAL CLOSURES LTD WEST BROMWICH WEST MIDLANDS GB ; THOMPSON NIGEL

Inventor(s):^(std): NAIJIERU TONPUSON ; THOMPSON NIGEL ; NIGEL THOMPSON

Inventor(s): THOMPSON NIGEL STOURBRIDGE WEST MIDLANDS GB

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; FETHERSTONHAUGH AND CO; EITAN PEARL LATZER AND COHEN ZEDEK

Designated states: AT BE CH DE ES FR GB GR IT LI LU NL SE

International class B29C45/40 B29C45/44 B29D99/00 B65D41/34 (Advanced/Invention);
(IPC 8-9): B29C45/40 B29L31/56 (Advanced/Non-invention);
B29C45/40 B29C45/44 B29D99/00 B65D41/34 (Core/Invention)

International class B29C33/48 B29C43/14 B29C45/40 B29C45/44 B29D1/00 B29D31/00 B29L31/56
(IPC 1-7): B29L31/56 B65D35/08 B65D41/06 B65D41/34 B65D49/00 B65D55/06 B65D55/08

CPC: B29C45/4407 B29L2031/565 B65D41/3447

European class: B29C45/44B B65D41/34D1 L29L31/56B

US class: 215/252

[Classification Explorer](#)

Cited documents: US4552328 A, US4549667 A, US4526282 A, US4496302 A, US4196818 A, JPS6362351 U, JPS6295550 U, JPS6199539 U, JPS6127846 U, JPS6099860 U, JPS60183355, JPS56161953 U, JP63062351 U1, JP63062351 U, JP62095550 U1, JP62095550 U, JP61099539 U1, JP61099539 U, JP61027846 U1, JP61027846 U, JP60183355 A2, JP60099860 U1, JP60099860 U, JP56161953 U1, JP56161953 U, AU4705879 A1, AU2714784 A1,

Forward Citations: WO9418085, WO9213773, US9617045, US8975537, US7228979, US6968966, US6793082, US6705479, US6325227, US6325225, US6116443, US6089390, US5547092, US5450972, US5413235, US5356020, US5137163, US2013270270, US2010140210, US2009120936, US2004251228, US2003192854, JP2006106170, FR2706426, EP1256523, EP0903212, EP0870693, EP0799772, EP0783953, EP0783952, EP0783950, EP0573138, EP0408364, CN102550139, AU659538, AU633939,

Abstract:

Source: US4899898A A container closure molded from plastics material has a top, an annular skirt depending from the top and formed with a screw-threaded on its internal surface, and a tamper-evident ring connected to the bottom edge of the skirt by frangible bridges. The radially inner surface of the ring is formed with wedge-shaped inwardly projecting protrusions for engaging under a security band on the neck of a container. An annular groove is formed on the radially-outer surface of the ring at a location axially between the upper ends of the protrusions and the bridges, and serves to form a hinge in an advantageous method of molding the closure.

19) Family number: 48200879 (US2012261476A)

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Title: WIRELESSLY DETECTABLE TAMPER EVIDENT SEAL

Priority: AU20090903461 20090724 AU20100276091 20100726 WO2010AU00936 20100726

Family:

Publication number	Publication date	Application number	Application date
AU2010276091 AA	20110127	AU20100276091	20100726
AU2010276091 BB	20141218	AU20100276091	20100726
CN103348362 A	20131009	CN201080042582	20100726
IN00658DN2012 A	20160831	IN2012DN00658	20120123
NZ597925 A	20130830	NZ20100597925	20100726
SG178079 A1	20120329	SG20120004651	20100726
TH112224 A	20120215	TH20101001156	20100728
US2012261476 AA	20121018	US20100386853	20100726
WO11009174 A1	20110127	WO2010AU00936	20100726

Probable Assignee: WI PROTECT PTY LTD**Assignee(s):**^(std) BORTZ GARY ; ELCOMBE JONATHAN HUGH ; PARTRIDGE KEVIN JOHN ; VISIBILITY SOLUTIONS PTY LTD ; WI PROTECT PTY LTD**Assignee(s):** WI PROTECH PTY LTD**Inventor(s):**^(std) BORTZ GARY ; ELCOMBE JONATHAN HUGH ; PARTRIDGE KEVIN JOHN**Agent(s):** TATLOCKS CHRYSILIOU IP; DREW DAVID ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
 (IPC 8-9): [B65B51/00](#) [B65D17/00](#) [B65D27/30](#) [B65D5/43](#) [B65D5/54](#) [B65D51/20](#) [G06K19/077](#)
[G08B13/14](#) [H05K7/00](#) (Advanced/Invention);
[G06K19/077](#) (Core/Invention)

International class
 (IPC 1-7): [G06K19/077](#)

CPC: [G06K19/041](#) [G06K19/07749](#) [G06K19/07798](#)**European class:** [G06K19/04K](#) [G06K19/077T](#) [G06K19/077T9](#)**US class:** [235/492](#) [361/679.01](#) [361/807](#) [53/416](#)[Classification Explorer](#)**Cited documents:** WO04021299 A1, US6069563 A, US5874902 A, US5478991 A, CN1695176 A, CN1692382 A,**Forward Citations:** WO17039428, US2016379103,**Abstract:**

Source: US2012261476A A wirelessly detectable tamper-evident seal (1) including a receptacle part (10) and a frangible part (50), the receptacle part (10) including a first receptacle (10a) and a second receptacle (10b-d) attachable to a container to seal a closure of the container and the frangible part (50) including a first portion (51) and a second portion (52) frangibly connected to each other, the first receptacle (10a) adapted to receive the first portion (51) and the second receptacle (10b-d) adapted to receive the second portion (52), the frangible part (50) including a transponder (54), the second portion (52) able to be trapped against movement in the reverse direction in the second receptacle (10b-d) to effect a tamper evident seal between the first and second receptacles (10a-d), wherein the transponder (54) includes at least two circuit interruption locations (94a, 94b) that must be connected to activate the transponder (54) and the transponder (54) is activatable by inserting the second portion (51) in the second receptacle (10b-d) whereby to connect both or all circuit interruption (94a,94b) locations.

20) Family number: 23330088 (WO02083518A1)

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Title: BOTTLE CLOSURE WITH ONE-WAY VALVE**Priority:** RU20030132170 20010404 WO2001IT00174 20010404**Family:**

Publication number	Publication date	Application number	Application date
AU2001252542 AA	20021028	AU20010252542	20010404
BR0116959 A	20040803	BR20010016959	20010404
BRPI0116959 A	20040803	BR2001PI16959	20010404
BRPI0116959 B1	20101228	BR2001PI16959	20010404
CN100390029 C	20080528	CN20018023117	20010404
CN1639021 A	20050713	CN20018023117	20010404
EP1373087 A1	20040102	EP20010925867	20010404
EP1373087 B1	20060607	EP20010925867	20010404
ES2234449 T1	20050701	ES20010925867T	20010404
ES2234449 T3	20070216	ES20010925867T	20010404
GB200207472 A0	20020508	GB20020007472	20010404
GB2375532 A1	20021120	GB20020007472	20010404
GB2375532 B2	20040929	GB20020007472	20010404
IN01556CN2003 A	20051125	IN2003CN01556	20031001
IN203527 B	20070202	IN2003CN01556	20031001
ITMI20020616 A0	20020325	IT2002MI00616	20020325
ITMI20020616 A1	20030925	IT2002MI00616	20020325
MXPA03009098 A1	20040212	MX2003PA09098	20010404
PL363755 A1	20041129	PL20010363755	20010404
RU2003132170 A	20050110	RU20030132170	20010404
RU2263059 C2	20051027	RU20030132170	20010404
TH30878 B	20111004	TH20021003474	20020916
TH55830 A	20030318	TH20021003474	20020916
WO02083518 A1	20021024	WO2001IT00174	20010404

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):^(std):** BATTEGAZZORE PIERO ; GUALA CLOSURES S P A ; GUALA CLOSURES SPA**Assignee(s):** M S GUALA CLOSURES S P A**Inventor(s):^(std):** BATTEGATSTSOE P ERO ; BATTEGAZZORE PIERO ; BATTEGAZZORE PIETRO**Inventor(s):** PIERO BATTEGAZZORE ; BATTEGATSTSOE P'ERO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

International class
 (IPC 8-9): [B65D49/00](#) [B65D49/04](#) [B65D51/18](#) (Advanced/Invention);
[B65D49/02](#) (Advanced/Non-invention);
[B65D49/00](#) [B65D49/04](#) [B65D51/18](#) (Core/Invention)

International class
 (IPC 1-7): [B65D47/00](#) [B65D49/00](#) [B65D49/02](#) [B65D49/04](#) [B65D51/18](#)

CPC: [B65D49/04](#) [B65D51/18](#) [B65D2251/0015](#) [B65D2251/0087](#)**European class:** [B65D49/04](#) [B65D51/18](#) [L65D251/00Y2D](#) [L65D251/00Y6J](#)[Classification Explorer](#)

Cited documents: WO9608421 A1, WO9601216 A2, US4454954 A, US4382520 A, GB2334707 A1, GB2302867 A1, GB2285623 A1, EP0670271 A1,

Forward Citations: WO14201098, WO04103846, WO04078613, US9533806, US9145241, US7398890, RU2568180, RU2552774, JP2016521663, GB2436560, GB2424871, GB2424871, GB2403201, GB2390086, GB2378940, GB2378940, ES2544003, ES2257141, EP1679268, EP1526086, EP1511677, EA015739, EA013202, EA013149, EA013148, EA013022, CN105408219, CN105408219, CN102616442, CN102211687,

Abstract:

A closure for containers of liquids, particularly bottles, the closure comprising an anti-tamper pourer member (7) having valve means (8,a 8b) which allow liquid to leave the container (2) but not to enter it, a cup (19) with a tubular sleeve (21) closing the pouring hole (15), as well as an outer security cap (25) and in which the pourer body (7) includes a first sleeve (8) fitted in the container neck, as well as a separate tubular body (14) defining the pouring hole (15). The separate tubular body (14) is fitted on the outer wall (4) of the container neck (1).

Moreover, axial engagement means (5,17) and radial engagement means (6,18) are provided between the tubular body (14) and the outer wall (4) of the container neck (1), and threaded means (22,23) are provided between the outer wall (14a) of the tubular body (14) and the inner wall of the tubular sleeve (21).

21) Family number: 54110629 (US2016060007A)

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Title: TAMPER-EVIDENT CLOSURE**Priority:** EP20140719674 20140414 GB20130007034 20130418 WO2014EP57551 20140414**Family:**

Publication number	Publication date	Application number	Application date
CN105246791 A	20160113	CN201480026937	20140414
CN105246791 B	20170308	CN201480026937	20140414
CO7550394 A2	20160318	CO20150247120	20151016
EP2986525 A1	20160224	EP20140719674	20140414
EP2986525 B1	20170621	EP20140719674	20140414
ES2637786 T3	20171017	ES20140719674T	20140414
GB201307034 A0	20130529	GB20130007034	20130418
HK1216631 A1	20161125	HK20160104632	20160422
JP2016515502 T2	20160530	JP20160508122T	20140414
MX2015014462 A1	20160205	MX20150014462	20140414
PH2015502344 A	20160125	PH20150502344	20151008
PT2986525 T	20170922	PT20140719674T	20140414
RU2015143114 A	20170523	RU20150143114	20140414
TH160052 A	20170209	TH20151006372	20140414
TR201713426 T4	20171121	TR20170013426T	20140414
US2016060007 AA	20160303	US20140784728	20140414
WO14170286 A1	20141023	WO2014EP57551	20140414

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** ALEXANDER DONALD MEIKLEM MCPHERSON ; MCPHERSON ALEXANDER DONALD MEIKLEM ; MEIKLEM MCPHERSON ALEXANDER DONALD**Agent(s):** JAIME EDUARDO DELGADO VILLEGAS; BRYERS LLP; ISERN JORGE; TOLGA CAYLAK; BRYERS LLP ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class**
(IPC 8-9): [B65D39/00](#) [B65D41/28](#) [B65D41/38](#) [B65D55/02](#) (Advanced/Invention);
[B65D41/28](#) [B65D55/02](#) (Core/Invention);
[B65D](#) (Subclass/Invention)**CPC:** [B65D55/026](#) [B65D2101/0023](#) [B65D39/0011](#) [B65D55/022](#) [B65D41/28](#)**US class:** [220/259.3](#)[Classification Explorer](#)**Cited documents:** WO11086407 A2, WO05049443 A1, WO02096771 A1, CN1524053,**Abstract:**

Source: US2016060007A A tamper-evident closure for a container. The closure comprises a first portion including inner and outer parts, and a second portion. The outer part is rotatable relative to the inner part from a first position in which at least part of the first and second portions are adjacent each other to a second position in which there is a gap therebetween. The first portion comprises locking means for irreversibly locking the closure in the second position upon first opening so that the gap cannot be closed, in which the first portion comprises a

compressible stopper for sealing the second portion and/or the container. A tamper-evident closure in combination with a container.

Title: A TAMPER-EVIDENT CLOSURE**Priority:** GB20140001682 20140131 WO2015EP50894 20150119

Family:	Publication number	Publication date	Application number	Application date
	CN105939941 A	20160914	CN201580006669	20150119
	CO20160001431 A2	20170209	CO20160001431	20160830
	EP3099596 A1	20161207	EP20150701946	20150119
	GB201401682 A0	20140319	GB20140001682	20140131
	JP2017507086 T2	20170316	JP20160547177T	20150119
	KR20160115950 A	20161006	KR20167023290	20150119
	MX2016009649 A1	20170919	MX20160009649	20150119
	PH2016501501 A	20170206	PH20160501501	20160728
	TH165254 A	20170720	TH20161004418	20150119
	US2017137189 AA	20170518	US20150115665	20150119
	WO15113851 A1	20150806	WO2015EP50894	20150119

Probable Assignee: OBRIST CLOSURES SWITZERLAND GMBH**Assignee(s):**^(std) OBRIST CLOSURES SWITZERLAND ; OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):**^(std) ALEXANDER DONALD MEIKLEM MCPHERSON ; MCPHERSON ALEXANDER DONALD MEIKLEM**Agent(s):** JAIME EDUARDO DELGADO VILLEGAS; BRYERS LLP; TOMITA HIROYUKI; HIROTA MASANORI; OZAWA SEIJI

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D41/34](#) [B65D55/02](#) [B65D55/06](#) (Advanced/Invention);
^(IPC 8-9) [B65D55/02](#) (Core/Invention)

CPC: [B65D2101/0053](#) [B65D41/34](#) [B65D55/024](#) [B65D55/06](#)[Classification Explorer](#)**Cited documents:** WO14016391 A1, WO13113435 A1, WO13079545 A1, US5740932 A, GB2302867 A1, FR546991 A, EP0711711 A1, DE4441435 A1, CN1150106 A, CN103958361 A,**Forward Citations:** WO17001533,**Abstract:**

Source: US2017137189A A tamper-evident closure (1) for a container, the closure comprising: a shell comprising a first shell part (3A) and a second shell part (3B); and a tamper-evident overcap, the overcap comprising a cap (4A) which is fixed to the exterior of the first shell part and a tamper-evident member (4B) which is releasably connected to the cap (4A) and releasably located around the exterior of at least part of the second shell part (3B), such that the first and second shell parts (3A, 3B) cannot be separated unless the member (4B) is released, and thereafter the cap (4A) is removable together with the first shell part (3A).

23) Family number: 40891076 (US2007278256A)

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Title: TAMPER-EVIDENT CLOSURE FOR A CONTAINER

Priority: CA20072590786 20070530 EP20070252116 20070523 US20060447822 20060606
US20060447882 20060606

Family:	Publication number	Publication date	Application number	Application date
	<u>CA2590786 AA</u>	20071206	CA20072590786	20070530
	<u>DE602007027913 D1</u>	20130307	DE200760027913T	20070523
	<u>EP1864915 A2</u>	20071212	EP20070252116	20070523
	<u>EP1864915 A3</u>	20080206	EP20070252116	20070523
	<u>EP1864915 B1</u>	20130109	EP20070252116	20070523
	<u>MX2007006712 A1</u>	20071205	MX20070006712	20070605
	<u>US2007278256 AA</u>	20071206	US20060447822	20060606

Probable Assignee: RIEKE CORP

Assignee(s):^(std): RIEKE CORP ; LAW BRIAN R ; ROHR ROBERT D

Assignee(s): TRIMAS CORP ; RIEKE LEASING CO INC ; TRIMAS CO LLC ; TRIMAS INT HOLDINGS LLC ; TRIMAS SUCCESSOR TO MASCO TECH INC CORP ; ARMINAK AND ASSOCIATES LLC ; ARROW ENGINE CO ; CEQUENT CONSUMER PRODUCTS INC ; CEQUENT PERFORMANCE PRODUCTS INC SUCCESSOR TO CEQUENT ELECTRICAL PRODUCTS INC CEQUENT TOWING PRODUCTS INC CEQUENT TRAILER PRODUCTS INC FULTON PERFORMA ; COMPAC CORP ; JPMORGAN CHASE BANK NA COLLATERAL AGENT AS ; INNOVATIVE MOLDING ; LAMONS GASKET CO ; MONOGRAM AEROSPACE FASTENERS INC ; NI IND INC ; NORRIS CYLINDER CO ; RIEKE ARMINAK CORP ; RIEKE AUBURN CORP

Inventor(s):^(std): LAW BRIAN R ; ROHR ROBERT D

Inventor(s): ROHR ROBERT D LAOTTO ; ROBERT D ROHR ; BRIAN R LAW

Agent(s): SMART AND BIGGAR; WAECHTERS HAEUSER AND HARTZ
PATENTANWALTSPARTNERSCHAFT MBB; WILLIAMS MICHAEL IAN ET AL;
WILLIAMS MICHAEL IAN; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC
MK MT NL PL PT RO SE SI SK TR YU

International class
(IPC 8-9): B65D41/34 B65D47/06 B65D47/12 B65D47/26 B65D51/18 B65D51/20 B65D55/02
B67D3/00 (Advanced/Invention);
B65D47/04 B65D51/00 B65D55/02 B67D3/00 (Core/Invention)

CPC: B65D47/061 B65D47/063 B65D47/068 B65D47/123 B65D51/20 B65D2251/0015
B65D2251/0087

European class: B65D47/06A B65D47/06A1 B65D47/06C B65D47/12B1 B65D51/20 L65D251/00Y2D
L65D251/00Y6J

US class: 222/530

[Classification Explorer](#)

Cited documents: USD617188 S1, USD612236 S1, USD519837 S1, US7798378 BB, US7789277 BB, US7717307 BB, US7614530 BB, US7080749 BB, US6966469 BB, US6871752 BB, US6848484 BA, US6561370 BA, US6454137 BA, US6360908 BA, US6338414 BA, US6296130 BA, US6237818 BA, US5899364 A, US5749484 A, US5720402 A, US5685445 A, US5649650 A, US5609262 A, US5251788 A, US5101993 A, US4550862 A, US4351442 A, US4261478 A, US4236629 A, US4111331 A, US3934744 A, US3613966 A, US3250428 A, US3040938 A, US2895654 A, US2772037 A, US2715480 A, US2661128 A, US2565699 A, US2561596 A, US2124638 A, US2005124057 AA, US2004011812 AA, US2004011757 AA, FR2862620 A1, EP0286843 A1,

Forward Citations: WO16153835, WO14201098, WO13155127, US9550606, US9533806, US9145241, US9056699, US8505787, US2012085788, US2010043910, EP2595892, CN105584717,

Abstract:

Source: US2007278256A A closure for capping a container neck finish by threaded engagement includes a unitary, molded plastic inner cap designed for threaded connection to the neck finish and a unitary, molded plastic outer cap designed for threaded connection to the inner cap. The container neck finish includes an annular series of ratchet teeth positioned below the threaded portion of the neck finish and the inner cap includes a cooperating plurality of ratchet teeth to prevent removal of the inner cap from the neck finish once fully assembled. The inner cap includes an integral pouring spout defined by an inner spout wall and the inner and outer caps cooperate to create a liquid-tight plug seal. A tamper-evident arrangement is provided by the connection of the inner cap and the outer cap, resulting in the fracture of frangible portions as the outer cap is unscrewed from the inner cap to open the container.

24) Family number: 29446204 (US6981600B)

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Title: TAMPER EVIDENT CLOSURE FOR BOTTLES OF QUALITY LIQUOR
Priority: IT1999MI02006 19990927 IT1999MU02006 19990927 WO2000IT00357 20000912
Family:

Publication number	Publication date	Application number	Application date
AT245575 E	20030815	AT20000964615T	20000912
AU200075536 A1	20010430	AU20000075536	20000912
AU200075536 A5	20010430	AU20000075536	20000912
BRPI0014356 A	20020611	BR2000PI14356	20000912
BRPI0014356 B1	20110517	BR2000PI14356	20000912
CN1120789 C	20030910	CN20008013410	20000912
CN1376127 A	20021023	CN20008013410	20000912
DE60004076 D1	20030828	DE20006004076	20000912
DE60004076 T2	20040415	DE20006004076T	20000912
EP1222121 A1	20020717	EP20000964615	20000912
EP1222121 B1	20030723	EP20000964615	20000912
ES2203512 T3	20040416	ES20000964615T	20000912
IN216002 B	20080331	IN2002CN00574	20020419
IT1313634 B1	20020909	IT1999MI02006	19990927
ITMI992006 A0	19990927	IT1999MI02006	19990927
ITMI992006 A1	20010327	IT1999MI02006	19990927
MXPA02003198 A1	20020930	MX2002PA03198	20000912
PL201580 B1	20090430	PL20000354326	20000912
PL354326 A1	20040112	PL20000354326	20000912
RU2002111352 A	20040227	RU20020111352	20000912
RU2232116 C2	20040710	RU20020111352	20000912
UA73323 C2	20020715	UA20020403555	20000912
US6981600 BA	20060103	US20000088373	20000912
WO0123265 A1	20010405	WO2000IT00357	20000912

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):^(std):** BATTEGAZZORE PIERO ; GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A ; GUALA CLOSURES S P A ALESSANDRIA**Inventor(s):^(std):** BATTEGAZZORE PIERO ; PIERO BATTEGAZZORE ; BATTEGAZZORE PIERO ; BATTEGATSTSOE P ERO**Inventor(s):** BATTEGATSTSOE P'ERO ; PIERO BATTEGAZZORE**Agent(s):** NOTARO AND MICHALOS PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

International class [B65D41/34](#) [B65D47/06](#) [B65D47/12](#) (Advanced/Invention) ;
 (IPC 8-9) [B65D41/34](#) [B65D47/06](#) [B65D47/12](#) (Core/Invention)

International class [B65D41/30](#) [B65D41/34](#) [B65D47/06](#) [B65D47/12](#) [B65D50/00](#)
 (IPC 1-7)

CPC: [B65D41/3442](#) [B65D47/123](#) [B65D2101/00](#) [B65D2101/0069](#)**European class:** [B65D41/34D](#) [B65D47/12B1](#) [L65D101/00](#) [L65D101/00A4](#)

US class: 215/230 215/252

[Classification Explorer](#)

Cited documents: WO9731838 A1, WO9106486 A2, US6619492 BB, US6439411 BA, US5740932 A, US5433331 A, US5244107 A, US5176270 A, US5105961 A, US4919285 A, US4775064 A, US4679696 A, US4133462 A, US3850328 A, US3737064 A, GB453025 A, GB2240098 A1, GB2176467 A1, GB2172273 A1, FR2490598 A1, FR2290364 A1, FR2263165 A1,

Forward Citations: WO13059332, WO09002291, WO07033686, WO07033685, USD613163, USD542657, USD541155, US9694948, US9399534, US8702663, US8453857, US2016347520, US2010178148, US2010018942, RU2613090, RU2607859, RU2604323, EP2548811, EP2006212, EP1950144, EA007668, CN103987626, CN103987626,

Abstract:

Source: US6981600B A closure particularly for a bottle for a good-quality liquor which renders the difference between an intact bottle and a wrongfully opened bottle unusually clear, comprises a pourer body of predetermined axis fixed axially and angularly to the bottle, a cap having a skirt screwed onto the pourer body, a sleeve in at least two portions extending around the bottle, and a tubular appendix forming around an extension of the skirt of the cap and extending around the sleeve in order to keep the at least two portions juxtaposed.

25) Family number: 11606235 (US6385878B)

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Title: Rotatable label system including tamper-evident feature and method for constructing same**Priority:** US19990247245 19990209 WO2000US02875 20000204**Family:**

Publication number	Publication date	Application number	Application date
<u>AU200029807 A1</u>	20000829	AU20000029807	20000204
<u>AU200029807 A5</u>	20000829	AU20000029807D	20000204
<u>CA2362436 AA</u>	20010808	CA20002362436	20000204
<u>EP1194911 A2</u>	20020410	EP20000908472	20000204
<u>EP1194911 A4</u>	20030102	EP20000908472	20000204
<u>JP2002541498 T2</u>	20021203	JP20000599004T	20000204
<u>US6385878 BA</u>	20020514	US19990247245	19990209
<u>WO0048161 A2</u>	20000817	WO2000US02875	20000204
<u>WO0048161 A3</u>	20010525	WO2000US02875	20000204

Probable Assignee: STEPHEN KEY DESIGN LLC FLORIDA**Assignee(s):^(std):** STEPHEN KEY DESIGN LLC**Assignee(s):** STEPHEN KEY DESIGN LLC FLORIDA ; KEY STEPHEN**Inventor(s):^(std):** KEY STEPHEN ; KEY STEPHEN M**Inventor(s):** STEPHEN KEY**Agent(s):** FINLAYSON AND SINGLEHURST**Designated states:** AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW**International class**
(IPC 8-9): B65D71/08 B65D75/32 G09F3/00 G09F3/02 G09F3/03 G09F3/20 (Advanced/Invention);
G09F3/03 (Advanced/Non-invention);
B65D71/06 B65D75/28 G09F3/02 G09F3/03 G09F3/08 (Core/Invention)**International class**
(IPC 1-7): B65D71/08 B65D75/32 G09F3/00 G09F3/02 G09F3/03 G09F3/20**CPC:** G09F3/0288 G09F3/0292**European class:** G09F3/02C G09F3/02D2**US class:** 40/306 40/310 40/506 403/60[Classification Explorer](#)**Cited documents:** US736035 A, US5712021 A, US5605230 A, US5403636 A, US5342093 A, US5324559 A, US5154448 A, US5076613 A, US4877119 A, US4724973 A, US4658974 A, US4567681 A, US4505497 A, US4405045 A, US4381615 A, US4203240 A, US4044889 A, US3960713 A, US3733002 A, US3604584 A, US3542229 A, US3488880 A, US3374911 A, US3278182 A, US2971283 A, US2935814 A, US2931657 A, US2860431 A, US2844893 A, US2739564 A, US2706464 A, US2504076 A, US2468000 A, US2441607 A, US2129364 A, US2013616 A, US1486313 A, US1387625 A, US1334031 A, US1312611 A, US1064576 A, IT327286 A, FR965522 A, FR2677786 A1, FR2460260 A1, FR1347102 A, FR1114750 A, EP0285514 A1, DK85214 C, DK85214 A,**Forward Citations:** WO14047077, WO12024218, WO12020084, WO12020084, WO12006008, WO08153581, WO02098742, WO02098742, WO02076834, USD500343, US9469428, US9463138, US9415928, US9382061, US9342999, US9085402, US8973755, US8640870, US8603557, US8511472, US8479919, US7530821, US7513071, US7374633, US7273146, US7225598, US7172668, US7087298, US6793755, US6691439, US6649007, US2016325895, US2014210198, US2014076766, US2013126462, US2013125431, US2013105568, US2012211526, US2010326868, US2010005692,

US2008314862, US2008308444, US2008308443, US2008003410, US2007158225, US2007148393, US2007065619, US2007063506, US2006107563, US2005274687, US2005229450, US2005023173, US2004166277, US2004154196, US2004064983, US2004028866, US2004028865, US2002157984, US2002038685, TWI335294, RU2608276, KR200475987, JP2013537506, JP2006151480, EP2654032, EP2003064, EP1790578, CN105564807, CN103619717, CN103153367, BE1020621, AU2011292173,

Abstract:

Source: US6385878B A rotatable label system includes a container having a removable closure and a shell of heat-shrinkable material arranged about the container. The shell has a tamper-evident portion which extends over at least a portion of the closure to prevent its removal. The remainder of the shell comprises a rotatable label portion having indicia disposed thereon. The rotatable label portion is provided with at least one transparent window through which co-located indicia disposed on an inner label affixed to the container may be viewed. The rotatable label portion is rotatable relative to the container about a vertical axis thereof to enable viewing of a selected subset of the indicia disposed on the inner label. At least one perforation line divides the tamper-evident portion of the shell from the rotatable label portion and facilitates detachment of the tamper-evident portion.

26) Family number: 18162751 (US5131549A)

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Title: TAMPER-EVIDENT CLOSURE FOR SPIRITS BOTTLES AND THE LIKE**Priority:** EP19900119757 19901015 IT19890022330 19891109

Family:	Publication number	Publication date	Application number	Application date
	AR247526 A1	19950131	AR19900318243	19901030
	AT97874 E	19931215	AT19900119757T	19901015
	BRPI9005667 A	19910917	BR1990PI05667	19901108
	DE69004936 D1	19940113	DE19906004936	19901015
	DE69004936 T2	19940324	DE19906004936T	19901015
	EP0427009 A1	19910515	EP19900119757	19901015
	EP0427009 B1	19931201	EP19900119757	19901015
	ES2047800 T3	19940301	ES19900119757T	19901015
	IE904032 A1	19910522	IE19900004032	19901108
	IT1236687 A	19930326	IT19890022330	19891109
	IT8922330 A0	19891109	IT19890022330	19891109
	PT8477 U	19920930	PT19920008477U	19920415
	US5131549 A	19920721	US19900606548	19901031

Probable Assignee: GUALA SPA**Assignee(s):^(std):** GUALA S P A ; GUALA SPA**Assignee(s):** GUALA S P A ALESSANDRIA IT**Inventor(s):^(std):** PIERO BATTEGAZZORE ; BATTEGAZZORE PIERO**Inventor(s):** BATTEGAZZORE PIERO I 15100 ALESSANDRIA IT**Designated states:** AT BE CH DE DK ES FR GB GR IT LI LU NL SE

International class [B65D41/08](#) [B65D41/34](#) [B65D41/38](#) (Advanced/Invention);
 (IPC 8-9): [B65D41/04](#) [B65D41/34](#) (Core/Invention)

International class [B65D](#) [B65D41/20](#) [B65D41/32](#) [B65D41/34](#) [B65D41/38](#) [B65D41/8](#) [B65D50/00](#)
 (IPC 1-7):

CPC: [B65D41/3419](#) [B65D41/38](#)**European class:** [B65D41/34A3](#) [B65D41/38](#)**US class:** [215/252](#) [215/343](#) [215/356](#)[Classification Explorer](#)

Cited documents: US4775064 A, US4679696 A, US4530437 A, US4493427 A, US4232795 A, US3850328 A, US3124273 A, GB2187177 A1, GB2039817 A1, FR2194620 A1, EP0144450 A1, DE2518117 A1, DE2508388 A1, DE2450557 A1, DE2338069 A1, DE2213772 A1,

Forward Citations: WO9323304, WO04078613, USD542657, USD541155, US9694948, US8534510, US6619492, US6439411, US6276544, US2016347520, US2011095058, US2008302755, US2006237471, US2003098286, FR2779702, DE4404069, AU686562, AU2010278821,

Abstract:

Source: US5131549A A tamper-evident closure for a spirits bottle and the like, which can be easily and rapidly applied to the bottle during the bottling step and affords improved pouring of the bottle contents in use, comprises a cap having an inside threadway, a cylindrical sleeve coaxial with the cap, having an upper edge, an outside threadway matching the inside threadway of the cap, an inside spline formation and a lower edge, as well as a tamper-proofing seal formed between the cap and the sleeve, the sleeve being adapted to arrange itself with the upper and lower edges facing respective shoulders formed on the bottle, and with the inside spline formation engaged with a corresponding spline formation formed on the bottle.

27) Family number: 29081705 (US2003173379A)

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Title: COVER FOR DISPENSING CLOSURE WITH PRESSURE ACTUATED VALVE**Priority:** US20020098819 20020315 US20050169133 20050628

Family:	Publication number	Publication date	Application number	Application date
	MXPA03002321 A1	20041029	MX2003PA02321	20030317
	US2003173379 AA	20030918	US20020098819	20020315
	US2005269373 AA	20051208	US20050169133	20050628
	US6910607 BB	20050628	US20020098819	20020315

Probable Assignee: CROWN PACKAGING TECHNOLOGY INC**Assignee(s):^(std):** CROWN CORK AND SEAL TECH CORP ; GAISER RICKY G ; HIERZER VALENTIN ; SIMPSON ROBERT**Assignee(s):** CROWN PACKAGING TECHNOLOGY INC ; OBRIST CLOSURES SWITZERLAND GMBH ; CROWN CORK AND SEAL TECHNOLOGIES ; CROWN CORK AND SEAL TECHNOLOGIES CORP ; CROWN HOLDINGS INC ; CROWN OBRIST GMBH ; CITICORP NORTH AMERICA INC ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS**Inventor(s):^(std):** GAISER RICKY G ; HIERZER VALENTIN ; SIMPSON ROBERT**Inventor(s):** GAISER RICKY**Agent(s):** WOODCOCK WASHBURN LLP**International class**
(IPC 8-9): [B65D47/20](#) (Advanced/Invention);
[B65D47/04](#) (Core/Invention)**International class**
(IPC 1-7): [B65D5/72](#) [B65D51/00](#) [B67B5/00](#) [B67D5/06](#)**CPC:** [B65D47/2031](#)**European class:** [B65D47/20E2](#)**US class:** [222/212](#) [222/490](#) [222/494](#) [222/556](#) [222/562](#)[Classification Explorer](#)**Cited documents:** US6910607 BB, US6662977 BB, US6179166 BA, US6179166 B1, US6112951 A, US6089418 A, US6089411 A, US6039224 A, US5971232 A, US5954237 A, US5927566 A, US5927549 A, US5897033 A, US5743443 A, US5642824 A, US5632420 A, US5531363 A, US5456374 A, US5409144 A, US5390805 A, US5377877 A, US5271531 A, US5213236 A, US5115950 A, US5025942 A, US4749108 A, US4728006 A, US3856170 A, US2713953 A, US2684789 A, US1989714 A, JP8282703 A2, EP0555623 A1,**Forward Citations:** WO08118302, USD801827, USD738732, USD728378, USD720622, US9580214, US8794489, US8397957, US8397956, US7861393, US7837403, US7681750, US7398900, US7255250, US7178361, US2016023818, US2014224356, US2012199118, US2011163134, US2010108724, US2008237271, US2007251079, US2007181523, US2006169723, US2006133886, US2006075773, US2006037975, US2005279781, US2005269373,**Abstract:**

Source: US2003173379A A cover for a valved dispensing closure prevents the valve from opening while the cover is disposed on closure. The cover's central projection prevents flaps formed in the valve from opening, and the cover's outer projection prevents the flexible valve head from moving or inverting. The cover may also have projections that project inwardly from its skirt. The cover projections interact with mating projections formed on an exterior of the closure, and a lower end of the skirt may be disposed into an annular groove in the closure, to enhance a seal between the closure and the cover.

28) Family number: 54740241 (WO13132384A1)

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Title: TAMPER-EVIDENT CLOSURE WITH TEAR-OFF SEAL
Priority: EP20130720031 20130226 IT2012MI00361 20120307 WO2013IB51532 20130226
Family:

Publication number	Publication date	Application number	Application date
CN104136336 A	20141105	CN201380009815	20130226
CN104136336 B	20170728	CN201380009815	20130226
DE602013009593 D1	20160901	DE201360009593T	20130226
EA025981 B1	20170228	EA20140000817	20130226
EA201400817 A1	20141128	EA20140000817	20130226
EP2822869 A1	20150114	EP20130720031	20130226
EP2822869 B1	20160720	EP20130720031	20130226
ES2598854 T3	20170130	ES20130720031T	20130226
IN06111CN2014 A	20160701	IN2014CN06111	20140812
ITMI20120361 A1	20130908	IT2012MI00361	20120307
TR201614645 T4	20161121	TR20160014645T	20130226
UA113973 C2	20170410	UA20140008327	20130226
WO13132384 A1	20130912	WO2013IB51532	20130226

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):**^(std): CREATIVE GCL S R L ; GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A ; CREATIVE GCL SRL**Inventor(s):**^(std): GIOVANNINI MARCO ; VIALE LUCA**Inventor(s):** LUCA VIALE ; MARCO GIOVANNINI**Agent(s):** BONVICINI DAVIDE; CARPINTERO MARIO; UGUR GUERSAD YALCINER; BONVICINI DAVIDE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D41/04](#) [B65D41/34](#) [B65D41/62](#) [B65D47/08](#) [B65D51/18](#) [B65D55/02](#)
^(IPC 8-9) [B65D55/08](#) (Advanced/Invention)

CPC: [B65D41/62](#) [B65D41/0414](#) [B65D41/3447](#) [B65D47/0838](#) [B65D51/18](#) [B65D55/024](#)
[B65D55/0863](#) [B65D2101/0038](#) [B65D2251/0015](#) [B65D2251/0078](#)

[Classification Explorer](#)

Cited documents: WO9317926 A1, WO05092731 A1, US5667086 A, US5373954 A, US4919286 A, US2005035081 AA, US2002166873 AA, ITMI20031795 A1, GB2285623 A1, FR1581775 A, EP1818272 A1, EP0320475 A2, CN1100058 A,

Forward Citations: WO17124581, EP3105137, EP3031743, DE102014018155,**Abstract:**

The present invention relates to a tamper-evident closure (1) for a container (2) having a mouth (3). The closure (1) comprises a cap (10) for closing the mouth (3) of the container (2), a capsule (30) associated outside with the cap (10) and having fixing means (31) for fixing the capsule to the container, tamper-evident means for providing evidence of first opening of the closure (1). The tamper-evident means comprise a first tear-off seal (36) configured to remove at least one portion of the capsule (30), once it has been torn off, and a second tear-off seal (40) for attaching the cap (10) to the container (2) and allowing removal of the cap (10) from the mouth (3) of the container (2), once it has been torn off.

0) US2006180643A – BAG IN BOX (BIB)

29) Family number: 32195967 (US2006180643A)

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Title: BAG IN BOX (BIB)

Priority: GB20030014815 20030625 GB20040003439 20040217 WO2004GB02609 20040617
WO2005GB00570 20050216

Family:

Publication number	Publication date	Application number	Application date
<u>AU2004251098 AA</u>	20050106	AU20040251098	20040617
<u>AU2005214140 AA</u>	20050901	AU20050214140	20050216
<u>BRPI0411912 A</u>	20060808	BR2004PI11912	20040617
<u>CA2531432 AA</u>	20051216	CA20042531432	20040617
<u>CA2556633 AA</u>	20060816	CA20052556633	20050216
<u>CN101014511 A</u>	20070808	CN200580011599	20050216
<u>CN1812916 A</u>	20060802	CN200480017818	20040617
<u>CN1812916 B</u>	20101201	CN200480017818	20040617
<u>EP1641681 A1</u>	20060405	EP20040742964	20040617
<u>EP1716054 A2</u>	20061102	EP20050708375	20050216
GB200314815 A0	20030730	GB20030014815	20030625
GB200403439 A0	20040324	GB20040003439	20040217
GB200413509 A0	20040721	GB20040013509	20040617
<u>GB2403467 A1</u>	20050105	GB20040003439	20040217
<u>GB2403467 B2</u>	20070314	GB20040003439	20040217
<u>GB2403468 A1</u>	20050105	GB20040013509	20040617
<u>IL172749 A0</u>	20060410	IL20050172749	20051222
<u>IL172749 A1</u>	20101230	IL20040172749	20040617
<u>IN00202KN2006 A</u>	20070316	IN2006KN00202	20060125
<u>IN03346CN2006 A</u>	20070622	IN2006CN03346	20060915
<u>MXPA06000279 A1</u>	20060703	MX2006PA00279	20040617
<u>MXPA06009428 A1</u>	20070321	MX2006PA09428	20050216
<u>US2006180643 AA</u>	20060817	US20040561676	20040617
<u>US2008041018 AA</u>	20080221	US20050590096	20050216
<u>US7681783 BB</u>	20100323	US20040561676	20040617
<u>WO05000705 A1</u>	20050106	WO2004GB02609	20040617
<u>WO05080219 A2</u>	20050901	WO2005GB00570	20050216
<u>WO05080219 A3</u>	20051117	WO2005GB00570	20050216
<u>ZA200600723 A</u>	20080730	ZA20060000723	20060125

Probable Assignee: INTELLECTUAL PROPERTY SHOP LTD

Assignee(s):^(std): INTELLECTUAL PROPERTY SHOP IPS LTD ; INTELLECTUAL PROPERTY SHOP LTD ; JOHN STEPHENSON ; PHILIP STEPHENSON JOHN ; STEPHENSON JOHN ; STEPHENSON JOHN H ; STEPHENSON JOHN PHILIP ; STEPHENSON JOHN THE INTERLLECT ; STEPHENSON JOHN INTERLLECT

Assignee(s): STEPHENSON JOHN INTERLLECTUAL PROPERTY SHOPSTEPHENSON JOHN INTERLLECT ; THE INTELLECTUAL PROPERTY SHOP LIMITED IPS ; STEPHENSON JOHN THE INTERLLECTUAL PROPERTY SHOPSTEPHENSON JOHN THE INTERLLECT

Inventor(s):^(std): JOHN STEPHENSON ; PHILIP STEPHENSON JOHN ; STEPHENSON JOHN H ; STEPHENSON JOHN PHILIP ; STEPHENSON JOHN

Agent(s): AHEARN FOX; PHILLIPS ORMONDE FITZPATRICK; SMITHS IP; MACRAE AND CO; REINHOLD COHN AND PARTNERS; JOHN ALEXANDER GALBREATH; WATSON INTELLECTUAL PROPERTY GROUP PLC; JOVAN N; VLADAN M; WATSON IP GROUP

PLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
(IPC 8-9): B31B1/84 B31B1/86 B31B1/98 B31B7/00 B65B17/00 B65B3/00 B65B3/02 B65B3/04 B65D5/46 B65D5/46B B65D5/56 B65D5/72 B65D77/04 B65D77/06 B65D77/22 (Advanced/Invention);
B31B1/74 B31B7/00 B65B17/00 B65B3/00 B65B3/04 B65D5/46 B65D5/56 B65D5/72 B65D77/00 B65D77/04 B65D77/06 B65D77/22 (Core/Invention);
B65D (Subclass/Invention)

International class
(IPC 1-7): B31B7/00 B65B3/00 B65B3/02 B65B3/04 B65D77/06 B65D77/22

CPC: B65D5/727 B65D5/46008 B65D5/4608 B65D5/46096 B65D77/22 B65B3/00 B65D77/068 B65D77/065 B65B3/02 B65B3/045 B31B50/84 B31B50/87 B31B50/98 B31B2105/00 B31B2120/408

European class: B31B1/84 B31B1/86 B31B1/98 B31B7/00 B31B7/00K B65B3/00 B65B3/02 B65B3/04B B65D5/46A B65D5/46B1 B65D5/46B2A B65D5/72F B65D77/06B2 B65D77/06B3 B65D77/22 L31B201/90J L31B201/90K1 L31B201/92B L31B217/00C2

US class: 220/495.01 229/117.3 229/117.35 53/167 53/167S 53/449 53/449P

[Classification Explorer](#)

Cited documents: WO9601766 A1, WO9419255 A1, WO9314984 A1, WO9119651 A1, WO8808401 A1, WO05080219 A3, WO05080219 A2, WO0121496 A1, US6877654 BB, US6736289 BB, US6651845 BA, US6637623 BB, US6446859 BA, US6378733 BA, US6375040 BA, US6290124 BB, US6209781 BA, US6196452 BA, US6195452 BA, US6062431 A, US6059182 A, US6053401 A, US5909841 A, US5826752 A, US5803348 A, US5803346 A, US5715992 A, US5474203 A, US5265753 A, US5156295 A, US4834255 A, US4815631 A, US4781314 A, US4696840 A, US4560090 A, US4524883 A, US4445550 A, US4386923 A, US4379455 A, US4322018 A, US4280634 A, US4209092 A, US4176748 A, US4174051 A, US4165023 A, US3599840 A, US3458084 A, US3448889 A, US3363807 A, US3349960 A, US3233817 A, US3184117 A, US3171571 A, US3100587 A, US3090526 A, US3087655 A, US3042271 A, US2973119 A, US2954901 A, US2946494 A, US2721674 A, US2412544 A, US2003160092 AA, US2002047040 AA, US2001030228 AA, US1207421 A, JP9164609 A2, JP8048376 A2, JP62206427, JP2002225941 A2, JP2002145322, JP2002012265 A2, JP2000185743 A2, JP10251417 A2, JP10147369 A2, GB959306 A, GB927866 A, GB2403467 A1, GB1207421 A, FR2624107 A1, FR2483893 A1, FR2446233 A1, FR2436082 A1, FR2371355 A1, FR2112854 A5, EP1129961 A2, EP0225677 A2, EP0053310 A1, DE9006586 U, DE89082702, DE8908270 U, DE3802793 A1,

Forward Citations: WO15187374, WO15021483, WO14066467, WO13017119, WO11124508, WO10138174, WO10047933, WO10030801, WO09068764, WO09068764, WO08155431, WO08090362, WO07133952, WO07057677, WO06051320, WO05080219, WO05080219, WO785448, USD772054, USD729342, USD729341, USD727458, USD725465, USD705054, USD703529, USD691883, USD684049, USD682679, USD682093, USD671405, USD671404, USD668951, USD606863, USD602778, US9758285, US9751656, US9751548, US9725193, US9708113, US9650169, US9643768, US9637300, US9555920, US9533814, US9522773, US9498929, US9452863, US9428326, US9415997, US9211993, US9144642, US9126717, US9090362, US8991635, US8950657, US8807418, US8757440, US8746541, US8720769, US8701933, US8672184, US8627999, US8511538, US8474655, US8387817, US8365939, US8333224, US8276806, US8245844, US8091768, US8025208, US8025206, US7726503, US7708186, US7681783, US2016090289, US2015164248, US2015041494, US2014374447, US2014356488, US2014353364, US2014312107, US2014144974, US2014083061, US2014027007, US2012217265, US2012104079, US2011259916, US2011215136, US2011068034, US2011056983, US2011031243, US2010326562, US2010308053, US2010301108, US2010301106, US2010200585, US2010127057, US2010116824, US2010102112, US2010084361, US2010065581, US2008267538, US2008116206, US2008087713, US2008073317, US2006243783, NL2002235, JP6146643, JP2014122066, ITBO20110703, GB2487422, GB2420558, FR2921644, EP2189391, DE102010014481, CN106687388, CN105501669, CN105307849, CN105283309, CN105283309, CN103350898, CN103350898, CN102639405, CN102639405, CN102481999, CN102481999, AU2009307929,

Abstract:

Source: US2006180643A A bag in box container package (10) has a recessed neck piece (14)—such as a discrete insert or part—integrated with box or bag—between inner bag liner (12) and outer box carton (11), to emulate a (rigid neck) jerrycan; with optional collapse fold, pull-out spout (33) and handle (34).

30) Family number: 44316005 (WO10066259A1)

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Title: CLOSURE DEVICE WITH AN EXTENSIBLE TAMPER INDICATOR
Priority: EA20080002321 20081212 EP20090831489 20091126 WO2009EA00010 20091126
 WO2009EA00005 20090902

Family:	Publication number	Publication date	Application number	Application date
	AT549263 E	20120315	AT20090831489T	20091126
	DE602009005943 D1	20120510	DE200960005943T	20091126
	EA012805 B1	20091230	EA20080002321	20081212
	EA200802321 A1	20091230	EA20080002321	20081212
	EP2275359 A1	20110119	EP20090831489	20091126
	EP2275359 A4	20110525	EP20090831489	20091126
	EP2275359 B1	20120314	EP20090831489	20091126
	EP2298663 A1	20110323	EP20090831485	20090902
	EP2298663 A4	20110810	EP20090831485	20090902
	WO10066259 A1	20100617	WO2009EA00005	20090902
	WO10066260 A1	20100617	WO2009EA00007	20091126
	WO10066261 A1	20100617	WO2009EA00008	20091126
	WO10066262 A1	20100617	WO2009EA00009	20091126
	WO10066263 A1	20100617	WO2009EA00010	20091126

Probable Assignee: INOSTRANNOYE CHASTNOE PROIZV UNITARNOYE PREDPR ALCOPACK

Assignee(s):^(std): BIRUCOV NICOLAI PETROVITCH ; BIRYUKOV NIKOLAY PETROVICH ; H M V DMITRI IV VIT H ; INOSTRANNOYE CHASTNOE PROIZV UNITARNOYE PREDPR ALCOPACK ; INOSTRANNOYE CHASTNOE PROIZV UNITARNOYE PREDPR SALCOPACKS ; PAKHOMOV DMITRIJ IVANOVICH ; IRU V NI L I TR VIT H ; PACHOMOV DIMITRIY IVANOVITCH ; PACHOMOV DMITRIY IVANOVITCH

Assignee(s): INOSTRANNOYE CHASTNOE PROIZVODSTVENNOYE UNITARNOYE PREDPRIYATIYE SALCOPACKS ; INOSTRANNOYE CHASTNOE PROIZVODSTVENNOYE UNITARNOYE PREDPRIYATIYE ALCOPACK

Inventor(s):^(std): BIRUCOV NICOLAI PETROVICH ; BIRUCOV NICOLAI PETROVITCH ; BIRYUKOV NIKOLAY PETROVICH ; PACHOMOV DIMITRIY IVANOVITCH ; PACHOMOV DMITRIY IVANOVICH ; PACHOMOV DMITRIY IVANOVITCH ; PAKHOMOV DMITRIJ IVANOVICH

Inventor(s): H M V DMITRI IV VIT H ; IRU V NI L I TR VIT H

Agent(s): BENATOV EMIL GABRIEL; ANDRIENKO LIUDMILA ALEXANDROWNA; NDRI NKO LIUDMIL L DR WN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D47/36](#) (Advanced/Invention);
 (IPC 8-9): [B65D47/00](#) (Core/Invention)

CPC: [B65D47/244](#) [B65D49/00](#) [B65D55/024](#) [B65D2101/0023](#)

European class: [B65D47/24A3](#) [B65D49/00](#) [B65D55/02F](#) [L65D101/00A3](#)

[Classification Explorer](#)

Cited documents: US2005167455 AA, UA35550 U, RU73652 U1, RU73652, RU67550 U1, RU67550, RU65483 U1, RU30726 U1, RU23290 U1, RU22937 U1, RU2180311 C1, FR2631318 A1, EP1876111 A1, EA006731 B1,

Abstract:

A closure device with an extensible tamper indicator comprises an outer bushing provided with means for the attachment thereof to a bottle, a base for the leak-proof fitting of said bushing in the opening of the neck of the bottle, and inclined lifting surfaces. A pouring sleeve has, on the outer cylindrical surface thereof, guide ridges for axial translational motion along the inclined surfaces in the opening direction so that a closing bushing can emerge from a decorative shell, thereby indicating that the bottle has already been opened.

31) Family number: 43159877 (WO09049965A1)

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Title: CLOSURE**Priority:** EP20070425655 20071018 WO2008EP61748 20080905

Family:	Publication number	Publication date	Application number	Application date
	<u>AT555033 E</u>	20120515	AT20070425655T	20071018
	<u>BRPI0817783 A2</u>	20150324	BR2008PI17783	20080905
	<u>DE602007022230 D1</u>	20120621	DE200760022230T	20071018
	<u>EA018673 B1</u>	20130930	EA20100000647	20080905
	<u>EA201000647 A1</u>	20101029	EA20100000647	20080905
	<u>EP2050686 A1</u>	20090422	EP20070425655	20071018
	<u>EP2050686 B1</u>	20120425	EP20070425655	20071018
	<u>ES2386203 T3</u>	20120813	ES20070425655T	20071018
	<u>UA97539 C2</u>	20120227	UA20100003732	20080905
	<u>WO09049965 A1</u>	20090423	WO2008EP61748	20080905

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):**^(std) BATTEGAZZORE PIERO ; CAPRA DAVIDE ; GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A**Inventor(s):**^(std) BATTEGAZZORE PIERO ; BATTEGAZZORE PIERO ; CAPRA DAVIDE**Inventor(s):** DAVIDE CAPRA ; PIERO BATTEGAZZORE**Agent(s):** FIORANI GIUSEPPE; PERANI AURELIO

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D47/06 B65D47/12 B65D47/40 B65D49/04](#) ^{(Advanced/Invention);}
^{(IPC 8-9):} [B65D47/00 B65D47/06 B65D47/12 B65D49/00](#) ^(Core/Invention)

CPC: [B65D47/061 B65D47/123 B65D47/40 B65D49/04](#)**European class:** [B65D47/06A B65D47/12B1 B65D47/40 B65D49/04](#)[Classification Explorer](#)**Cited documents:** WO9008074 A1, WO03068621 A1, US6112949 A, US2773632 A, EP0129934 A1,**Abstract:**

This invention relates to a closure (1) provided with an extractable pourer (5) operated by the operations of mouth and closing the outer capsule (2) of the closure (1), in which the pourer (5) is extracted more quickly than the outer capsule (2).

32) Family number: 53485516 (WO13050390A1)

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Title: TAMPER EVIDENT CLOSURE**Priority:** IT2011MI01799 20111004 WO2012EP69496 20121002**Family:**

Publication number	Publication date	Application number	Application date
CN103842264 A	20140604	CN201280049233	20121002
CN103842264 B	20160120	CN201280049233	20121002
EA201400343 A1	20140829	EA20140000343	20121002
EP2763910 A1	20140813	EP20120766699	20121002
ITMI20111799 A1	20130405	IT2011MI01799	20111004
KR20140091676 A	20140722	KR20147009567	20121002
UA112321 C2	20160825	UA20140003225	20121002
WO13050390 A1	20130411	WO2012EP69496	20121002

Probable Assignee: CREATIVE GCL S R L**Assignee(s):^(std):** CREATIVE GCL S R L ; GUALA CLOSURES PATENTS BV ; GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A ; CREATIVE GCL SRL**Inventor(s):^(std):** GIOVANNINI MARCO ; MITTINO MAURIZIO ; PHIMISTER COLIN**Agent(s):** BONVICINI DAVIDE; BONVICINI DAVIDE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D55/02](#) (Advanced/Invention)
(IPC 8-9):**CPC:** [B65D55/026](#) [B65D2101/0069](#) [B65D47/123](#) [B65D51/18](#)[Classification Explorer](#)**Cited documents:** WO09128095 A1, WO09022892 A1, WO05049443 A1, WO03095326 A1, GB2450939 A1, EP1867576 A1, CN2214369 Y, CN1221386 A, CN101743175 A,**Abstract:**

The present invention relates to a tamper evident closure (1) comprising a threaded outer cap (20), an inner element (30) longitudinally movable relative to the threaded outer cap (20) from a first lower position, corresponding to the position prior to first opening, to a second higher position, corresponding to the position after first opening, cam means (40) to cause longitudinal movement of the inner element (30) upon first opening, locking means (50) to lock the inner element (30) in the second position upon first opening. The threaded outer cap (20) is configured such that a lateral portion (31) of the inner element (30) is visible in the second position.

33) Family number: 33586568 (WO06114107A1)

© PatBase

Title: CLOSING DEVICE FOR A BOTTLE PROVIDED WITH A SLIDING PIPE
Priority: EA20050000560 20050428 EP20050801635 20051110 WO2005EA00007 20051110
Family:

Publication number	Publication date	Application number	Application date
AT555035 E	20120515	AT20050801635T	20051110
DE602005033901 D1	20120621	DE200560033901T	20051110
EA006731 B1	20060428	EA20050000560	20050428
EA200500560 A1	20060428	EA20050000560	20050428
EP1867576 A1	20071219	EP20050801635	20051110
EP1867576 A4	20111005	EP20050801635	20051110
EP1867576 B1	20120425	EP20050801635	20051110
UA12823 U	20060315	UA20050007470U	20050726
WO06114107 A1	20061102	WO2005EA00007	20051110

Probable Assignee: INOSTRANNOYE UNITARNOYE PROIZV

Assignee(s):^(std): BIRUCOV NICOLAI PETROVICH ; FOREIGN UNITARY PRODUCTION ENT ; INOSTRANNOJE UNITARNOJE PROIZV ; PACHOMOV DMITRIY IVANOVITCH ; INOSTRANNOYE UNITARNOYE PROIZV ; INOSTRANNOYE CHASTNOE PROIZV UNITARNOYE PREDPR SALCOPACKS ; PRIVATE PRODUCTION UNITARY ENTERPRISE BELCAPS BETELIGUNGS GMBH BELCAPS ; INOSTRANNOYE CHASTNOE PROIZV UNITARNOYE PREDPR ALCOPACK

Assignee(s): INOSTRANNOYE CHASTNOE PROIZVODSTVENNOYE UNITARNOYE PREDPRIYATIYE ALCOPACK ; INOSTRANNOJE UNITARNOJE PROIZVODSTVENNOE PREDPRIYATIE COMPANII BELCAPS BETAILINGUS GMBH BELKEPS ; PRIVATE PRODUCTION UNITARY ENTERPRISE BELCAPS BETELIGUNGS GMBH BELCAPS ; INOSTRANNOYE UNITARNOYE PROIZVODSTVENNOYE PREDPRIYATIYE BELKEPS ; INOSTRANNOYE CHASTNOE PROIZVODSTVENNOYE UNITARNOYE PREDPRIYATIYE SALCOPACKS ; FOREIGN UNITARY PRODUCTION ENTERPRISE OF CO BELKAP ; FOREIGN UNITARY PRODUCTION ENTERPRISE OF CO BELKAPS BETAILINHUS GMBH BELKEPS ; FOREIGN UNITARY PRODUCTION ENTERPRISE OF THE COMPA ; FOREIGN UNITARY PRODUCTION ENTERPRISE OF THE COMPANY BELKAPS BETAILINHUS GMBH BELKEPS ; INOSTRANNOJE UNITARNOJE PROIZVODSTVENNOE PREDPRIYJ

Inventor(s):^(std): BIRYUKOV NIKOLAY PETROVICH ; PAKHOMOV DMITRY IVANOVICH ; PAKHOMOV DMITRII IVANOVICH ; BIRIUKOV NIKOLAI PETROVICH ; PACHOMOV DMITRIY IVANOVITCH ; BIRUCOV NICOLAI PETROVICH

Inventor(s): PACHOMOV DMITRIY IVANOVITCH GOMEL ; BIRUCOV NICOLAI PETROVICH GOMEL

Agent(s): BENATOV EMIL GABRIEL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class [B65D49/00](#) [B65D49/02](#) (Advanced/Invention) ;
 (IPC 8-9) [B65D49/00](#) (Core/Invention)

CPC: [B65D47/242](#) [B65D49/02](#) [B65D55/0863](#) [B65D2101/0053](#)

European class: [B65D47/24A1](#) [B65D49/02](#) [B65D55/08C](#) [L65D101/00A3E](#)

[Classification Explorer](#)

Cited documents: WO0007898 A1, RU23290, RU22937, RU2238893, RU2193000 C1, RU2180311 C1, RU2150417, GB2377699 A1, GB1262743 A, EP0627359 A1, EP0356758 A1,

Forward Citations:

Abstract:

The invention relates to closing devices for precious liquid-containing bottles protecting against a repeated filling and indicating the first bottle opening. The inventive closing device for a bottle provided with a sliding pipe comprises a decorative shell, a locking sleeve provided with slots embodied on the internal surface thereof, a pouring plug which is provided with a screw thread and on which a cap comprising a pipe which is used for pouring a liquid and is provided with slots embodied on the external lateral surface thereof. Said decorative shell is provided with a detachable top part weakened by vertical notches, connection straps are embodied on the lateral and end surface at different pitches, wherein the last connection strap arranged on the end face of the shell in a tearing direction is embodied such that it is reinforced and a ratio between the length thereof the weakened strap length is equal to or greater than 2.5, notches and at least two limiting flanges are embodied on the internal surface of the decorative shell and the pouring plug is provided with external ribs interacting with the shell notches. In the second variant of the closing device, an oppositely directed screw thread is embodied on the shell internal surface and on a pouring plug external surface. The invention provides with an additional protection level against a non-authorized opening by the destruction a part of the shell and makes it possible to increase the reliability of a liquid dispensing since the pouring plug is devoid of mechanical parts causing disagreeable effects due to the sealing and seizure thereof.

34) Family number: 2063741 (US4749096A)

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Title: Tamper-evident container cover**Priority:** EP19860308595 19861104 GB19850027598 19851108

Family:	Publication number	Publication date	Application number	Application date
	<u>AT55959 E</u>	19900915	AT19860308595T	19861104
	<u>DE3673776 D1</u>	19901004	DE19863673776	19861104
	<u>EP0226318 A1</u>	19870624	EP19860308595	19861104
	<u>EP0226318 B1</u>	19900829	EP19860308595	19861104
	<u>ES2018160 B3</u>	19910401	ES19860308595T	19861104
	GB8527598 A0	19851211	GB19850027598	19851108
	<u>JP62122958 A2</u>	19870604	JP19860265432	19861107
	<u>PT83696 A</u>	19861201	PT19860083696	19861107
	<u>PT83696 B</u>	19930129	PT19860083696	19861107
	<u>US4749096 A</u>	19880607	US19860926515	19861104
	<u>ZA8608396 A</u>	19870826	ZA19860008396	19861104

Probable Assignee: METAL CLOSURES GROUP PLC**Assignee(s):^(std):** METAL CLOSURES GROUP LTD ; METAL CLOSURES GROUP PLC ; METAL KUROOJIYUAAZU GROUP PLC**Assignee(s):** METAL CLOSURES GROUP PLC WEST BROMWICH WEST MIDLANDS GB ; METAL CLOSURES GROUP PLC BROMFORD LANE WEST BROMWI ; METAL CLOSURES GROUP P L C**Inventor(s):^(std):** THOMAS ANTHONY JOHN ARTHUR ; TILBROOK CHARLES GORDON ; TILBROOK CHARLES G ; THOMAS ANTHONY J A ; CHIYAARUZU GOODON TEIRUBURUTSU ; ANSONII JIYON AASAA TOOMASU**Inventor(s):** THOMAS ANTHONY JOHN ARTHUR LEIGHTON BUZZARD BEDFORDSHIRE GB ; CHARLES GORDON TILBROOK ; ANTHONY JOHN ARTHUR THOMAS ; CHIYAARUZU GOODON TEIRUBURUTSUKU ; THOMAS ANTHONY JOHN ARTHUR LEIGHTON BUZZARD BEDFOR ; TILBROOK CHARLES GORDON DUNSTABLE BEDFORDSHIRE GB**Designated states:** AT BE CH DE ES FR GB IT LI LU NL SE**International class**
(IPC 8-9): B21C23/18 B65D41/14 B65D41/62 (Advanced/Invention);
B21C23/02 B65D41/00 B65D41/02 (Core/Invention)**International class**
(IPC 1-7): B21C23/18 B65D41/00 B65D41/14 B65D41/42 B65D41/62**CPC:** B65D41/14 B21C23/18 B65D41/62**European class:** B21C23/18 B65D41/14 B65D41/62**US class:** 215/256 215/277 215/324 53/410 53/413 53/488 53/88[Classification Explorer](#)**Cited documents:** WO8203612 A1, US4552278 A, US3961719 A, US3191790 A, US3109547 A, US1982567 A, GB195621 A, FR2342216 A1, EP0039298 B1, CH327220 A, AU2725871 A1,**Forward Citations:** WO9218390, WO13150164, US7210592, US6857250, US5662232, US5458251, US2005077263, US2004143541, US2004045927, FR2677333, EP0490779,**Abstract:**

Source: US4749096A A capsule 11 for enclosing a neck portion of a container 17 equipped with a bung, cork, screw-cap or other closure 18 is formed from a crimp-shaped capsule blank. The blank has a top 12 and a depending skirt 13 and is made by impact-extruding a strip of aluminum. The skirt is compressed inwardly into close contact with the neck portion of the container and the exposed laterally-facing surfaces of the closure 18. The skirt of the blank may have an increasing diameter in a direction away from the top and may have formed thereon prior to application of the blank to the container circumferentially-extending lines of weakness 14 and a

tear-tab for facilitating removal of the capsule.

35) Family number: 60268698 (WO17001533A1)

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Title: TAMPER-EVIDENT OVERCAP**Priority:** GB20150011421 20150630

Family:	Publication number	Publication date	Application number	Application date
	GB201511421 A0	20150812	GB20150011421	20150630
	<u>WO17001533 A1</u>	20170105	WO2016EP65228	20160629

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** MCPHERSON ALEXANDER DONALD MEIKLEM ; RICHARDSON DAVID CONWAY**Agent(s):** BRYERS LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D51/18 B65D55/02 (Advanced/Invention)
 (IPC 8-9):

CPC: B65D55/024 B65D51/18 B65D55/026 B65D2101/0053[Classification Explorer](#)**Cited documents:** WO15113851 A1, US5740932 A,**Abstract:**

A tamper-evident overcap (100) for a closure (101) comprises a cap superior part (100A) fixable to an exterior surface of the closure (100), and a co-axial annular inferior part (100B) which is releasably connected to the cap superior part (100A) and comprises at least one inwardly directed projection (6) facing an interior of the overcap and at least one zone of weakness (5). At least one projection (6) of the annular inferior part (100B) is capable of interacting with at least one projection (3C) located on the exterior surface of the closure (101). The torque of the engagement of the projections (6, 3C) of the tamper-evident overcap (101) and the closure (101) causes the annular inferior part (100B) to break at the zone of weakness (5) if an attempt is made to open the closure (101) without the annular inferior part (100B) having been removed from the tamper-evident overcap (100).

36) Family number: 61646005 (WO17093218A1)

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Title: A TAMPER-EVIDENT CLOSURE

Priority: GB20150021303 20151202 GB20160003600 20160302 GB20160004499 20160316

Family:

Publication number	Publication date	Application number	Application date
GB201521303 A0	20160113	GB20150021303	20151202
<u>WO17093218 A1</u>	20170608	WO2016EP79075	20161129

Probable Assignee: OBRIST CLOSURES SWITZERLAND

Assignee(s):^(std): OBRIST CLOSURES SWITZERLAND

Assignee(s): OBRIST CLOSURES SWITZERLAND GMBH

Inventor(s):^(std): WEIR ALLISON

Agent(s): BRYERS LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT HW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): B65D41/34 B65D49/02 B65D55/02 (Advanced/Invention)

CPC: B65D41/34 B65D49/02 B65D55/026 B65D2101/0069 B65D2101/0084

[Classification Explorer](#)

Cited documents: WO14170284 A1, WO06117505 A1, WO05049443 A1, US4723673 A, US2014183195 AA,

Abstract:

A tamper-evident closure (101) comprises a first portion (105, 106) and a second portion (102, 104) comprising a window (103) through which a view of the first portion (105, 106) is visible. The second portion (102, 104) is rotated relative to the first portion (105, 106) upon first opening of the tamper-evident closure (101), from a first position in which the first and second portions (105, 106; 102, 104) are in a first relative relation and a first view of the first portion (105, 106) is visible through the window (103), to a second position in which the first and second portions (105, 106; 102, 104) are in a second relative relation and a second, different view of the first portion (105, 106) is visible through the window (103). A locking mechanism irreversibly locks the first and second portions (105, 106; 102, 104) in the second relative relation.

37) Family number: 31044428 (US2006254448A)

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Title: SAFETY SYSTEM FOR THE IGNITION CHAIN OF A PROJECTILE FUZE
Priority: GB20030001690 20030124 GB20030001691 20030124 US19970001347 19971231
 WO2004GB00312 20040126 WO1998US26929 19981218

Family:	Publication number	Publication date	Application number	Application date
	<u>AR017942 AA</u>	20011024	AR1998P106578	19981221
	<u>AT402392 E</u>	20080815	AT20040705118T	20040126
	<u>AU199919271 A1</u>	19990719	AU19990019271	19981218
	<u>BRPI9814532 A</u>	20001017	BR1998PI14532	19981218
	<u>CA2513671 AA</u>	20050721	CA20042513671	20040126
	<u>CA2513671 C</u>	20120117	CA20042513671	20040126
	<u>CO5070594 A1</u>	20010828	CO19980076693	19981228
	<u>DE19882918 T</u>	20010201	DE19981082918T	19981218
	<u>DE19882918 T1</u>	20010201	DE19981082918T	19981218
	<u>DE602004015244 D1</u>	20080904	DE200460015244T	20040126
	<u>EP1590622 A2</u>	20051102	EP20040705118	20040126
	<u>EP1590622 B1</u>	20080723	EP20040705118	20040126
	<u>ES2312954 T3</u>	20090301	ES20040705118T	20040126
	GB200017704 A0	20000906	GB20000017704	19981218
	GB200301690 A0	20030226	GB20030001690	20030124
	GB200301691 A0	20030226	GB20030001691	20030124
	<u>GB2348814 A1</u>	20001018	GB20000017704	19981218
	<u>GB2348814 B2</u>	20030122	GB20000017704	19981218
	<u>HK1081640 A3</u>	20060519	HK20060101881	20060214
	<u>IL169766 A1</u>	20100531	IL20040169766	20040126
	<u>US2006254448 AA</u>	20061116	US20040543101	20040126
	<u>US6049023 A</u>	20000411	US19970001347	19971231
	<u>US7360486 BB</u>	20080422	US20040543101	20040126
	<u>WO04065245 A1</u>	20040805	WO2004GB00308	20040126
	<u>WO04065891 A2</u>	20040805	WO2004GB00312	20040126
	<u>WO04065891 A3</u>	20040916	WO2004GB00312	20040126
	<u>WO9933423 A1</u>	19990708	WO1998US26929	19981218
	<u>ZA200506220 A</u>	20060726	ZA20050006220	20050803

Probable Assignee: OLYMPIC TECHNOLOGIES LTD

Assignee(s):^(std): ALCOA CSI EUROP LTD ; ALCULUMBRE MICHAEL ; KIMBERLEY CLARK
 WORLDWIDE INC ; KIMBERLY CLARK CO ; HEWLETT PACKARD DEV CO L ;
 ALUMINUM CO OF AMERICA ; OLYMPIC TECHNOLOGIES LTD ; KIMBERLY CLARK
 WORLDWIDW INC ; THOMPSON NIGEL ; OLYMPIC TECHNOLOGIES LTD ; SHARP
 FRED ; KIMBERLY CLARK WORDWIDE INC

Assignee(s): OLYMPIC TECHNOLOGIES LIMITED ; OLYMPIC TECHNOLOGIES LIMITED ; FRED
 SHARP ; MICHAEL ALCULUMBRE ; KIMBERLY CLARK WORLDWIDE INC ; ALCOA CSI
 EUROPE LTD ; ALCOA CSI LTD ; ALCOA CLOSURES SYSTEMS INT EUROPE LIMI ;
 ALCOA CLOSURES SYSTEMS INTERNATIONAL EUROPE LIMITED

Inventor(s):^(std): JENNIFER ELIZABETH POZNIAK ; TIMOTHY JAMES BLENKE ; THOMPSON NIGEL ;
 SHARP FRED ; POZNIAK JENNIFER ELIZABETH ; BLENKE TIMOTHY JAMES ;
 ALCULUMBRE MICHAEL

Inventor(s): MICHAEL ALCULUMBRE ; FRED SHARP

Agent(s):

MOFFAT AND CO; RAMIRO CASTRO DUQUE; PEEBLES KATRINA ET AL; SOROKER AGMON; LAUBSCHER AND LAUBSCHER PC; LAUBSCHER JR LAWRENCE E; LAWRENCE E

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class (IPC 8-9): A61F13/15 B65D41/34 F42C15/188 F42C15/192 F42C15/22 F42C15/24 F42C15/26 F42C15/34 (Advanced/Invention);
A61F13/15 B65D41/34 F42C15/00 (Core/Invention);
F42C (Subclass/Non-invention)

International class (IPC 1-7): A61F13/15 B65D41/34 F42C15/192

CPC: F42C15/188 F42C15/34 A61F13/51478 B65D41/3447

European class: A61F13/15C3 A61F13/514C2 B65D41/34D1 F42C15/188 F42C15/192 F42C15/34

US class: 102/244 102/254 604/358 604/365 604/367 604/368 604/374 604/375 604/385.01

[Classification Explorer](#)

Cited documents: WO9951934 A1, WO9619349 A2, WO9301786 A1, WO03062080 A2, US6112922 A, US5969287 A, US5843056 A, US5833677 A, US5827259 A, US5824004 A, US5800419 A, US5702378 A, US5670736 A, US5490846 A, US5486166 A, US5330598 A, US5226992 A, US4959059 A, US4704116 A, US4655760 A, US4573987 A, US4353762 A, US3769978 A, US3737064 A, US3653382 A, US3620163 A, US3313236 A, US2938463 A, GB2323521 A1, FR2813288 A1, EP0965533 A1, EP0591647 A2, EP0566469 A1, CH648655,

Forward Citations: WO15038110, US9730844, US9464875, US9285198, US8945324, US8920398, US8764721, US8616127, US8516964, US8439888, US8291825, US8245642, US8043273, US7915477, US7887526, US7838724, US7837665, US7749211, US7628778, US7608069, US7527617, US7419562, US7220335, US7211709, US7150733, US7150733, US6979380, US6881205, US6840928, US6827806, US6702801, US6682512, US6635798, US6575950, US6575949, US6552245, US6506186, US6450996, US2017138714, US2011290143, US2010147176, US2009314174, US2009062759, US2007101476, US2006206092, US2006116652, US2005256492, US2005090788, US2005065490, US2004122405, US2004102757, US2004097898, US2004078018, US2004064121, US2004060649, US2003111166, US2002165516, US2002052591, GB2466257, GB2466257,

Abstract:

Source: US2006254448A A small arms projectile for a small arms weapon, which projectile comprises a warhead (116) having an explosive charge (not shown), an initiator (102), and a firing pin (not shown). The initiator has safe and armed conditions and is capable of detonating the explosive charge of the warhead when the initiator is in the armed condition and impacted with sufficient force by the firing pin. The projectile further comprises shielding means (106) positioned between the initiator and the explosive charge of the warhead, which shielding means is slidable from a safety position in which the shielding means shields the explosive charge of the warhead from the initiator, to an armed position in which the initiator is capable of detonating the explosive charge of the warhead. The shielding means is slidable from the safe to the armed position in response to the initiator moving from the safe to the armed condition.

38) Family number: 11478088 (US5292018A)

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Title: Tamper evident seal and system**Priority:** US19920909762 19920707

Family:	Publication number	Publication date	Application number	Application date
	<u>US5292018 A</u>	19940308	US19920909762	19920707

Probable Assignee: TRAVISANO FRANK P**Assignee(s):^(std):** TRAVISANO FRANK P**Inventor(s):^(std):** TRAVISANO FRANK P

International class B65D55/06 B65D55/08 (Advanced/Invention);
^{(IPC 8-9):} B65D55/02 (Core/Invention)

International class B65D41/02
^{(IPC 1-7):}

CPC: B65D55/06 B65D55/0854**European class:** B65D55/06 B65D55/08B3**US class:** 215/246 215/254[Classification Explorer](#)**Cited documents:** US5012940 A, US4652473 A, US4511052 A, US4363421 A, US3873018 A, US3746201 A, US3095103 A, US2790286 A, US2447983 A,

Forward Citations: WO9815469, WO9511168, WO10036416, WO08073859, WO06134030, WO0040474, USD574605, US9463138, US9365314, US9068682, US9027603, US8641665, US8511472, US8152068, US8152067, US8100875, US8051879, US7579061, US7225598, US6164473, US6146729, US6113720, US5566845, US5495944, US2016325895, US2016096670, US2014263341, US2014262898, US2014173867, US2014138274, US2013126462, US2012310219, US2010326868, US2010326560, US2010200098, US2010072163, US2009166438, US2009166401, US2008308444, US2008308443, US2008190883, US2007140921, US2007088300, US2006151414, US2005258634, US2005035081, US2005023173, US2004173613, US2004156667, US2003230577, ITBO20120043, GB2363788, GB2363788, FR2803938, FR2754248, EP2551212, EP1728816, EP1566786, EP1021353, EP0657362, EP0627361, AU767559, AU2006259127,

Abstract:

Source: US5292018A A tamper evident seal and system for use on a variety of container and closure combinations providing a seal across the juncture of the container and closure and positive indication to consumers of tampering with the seal. The seal comprises a heat shrink band to which is applied at least one strip of a heat activated adhesive extending perpendicularly to the band's circumference and along the full length of the band. Perforations are provided along either edge to permit separation of the majority of the band from that portion to which the adhesive is applied. Indicia are provided on the band and on the container to indicate the presence or absence of the band. Application of the band to the container by heating causes the band to shrink into tight conformance with the container and closure obscuring the indicia thereon and bringing the adhesive into engagement with the container and closure. The heat activates the adhesive causing it to adhere that portion of the band to the container and closure across their juncture. Removal of the band will leave the adhered strip in place as a secondary safety seal and will expose indicia on the container to alert the consumer that the outer band has been removed and that the secondary safety seal should still be intact but must be broken to open the container.

0) IN01104DN2006A – CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

39) Family number: 41747944 (IN01104DN2006A)

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Title: CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND

Family:	Publication number	Publication date	Application number	Application date
	<u>IN01104DN2006 A</u>	20070817	IN2006DN01104	20060302

Probable Assignee: ABACUS

Assignee(s): ABACUS

Inventor(s): HIGGINS CHRISTOPHER LYNDON

International class B65D41/34
(IPC 1-7).

Abstract:

Source: IN01104DN2006A This invention relates to closures for containers, and more particularly to tamper-evident closures for containers. One aspect of the invention provides a container and a closure for connection to said container, said closure including: an upper wall (102), a skirt (104) formed integrally with and extending downwardly from said upper wall, said skirt adapted to engage with a neck portion of the container to secure the closure to the container; a tamperevident band (NO) frangibly connected to said skirt; the neck (10) of the container including a plurality of discretely spaced projections (18) extending outwardly from said neck and adapted to engage with tabs (122) on said tamper-evident band to facilitate breaking of the band (MO) from the skirt of the closure.

40) Family number: 42826986 (US2009020530A)

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Title: PLASTIC PLUG WITH OVERCAP**Priority:** US20070879252 20070717

Family:	Publication number	Publication date	Application number	Application date
	BRPI0803517 A2	20090407	BR2008PI03517	20080709
	CA2636958 AA	20090117	CA20082636958	20080707
	EP2017185 A2	20090121	EP20080252261	20080702
	EP2017185 A3	20090415	EP20080252261	20080702
	US2009020530 AA	20090122	US20070879252	20070717

Probable Assignee: RIEKE CORP**Assignee(s):**^(std): BAUGHMAN GARY M ; RIEKE CORP**Assignee(s):** TRIMAS CORP**Inventor(s):**^(std): BAUGHMAN GARY M**Inventor(s):** GARY M BAUGHMAN**Agent(s):** WILLIAMS MICHAEL IAN ET AL; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK TR

International class ^(IPC 8-9): [B23P11/00](#) [B25B13/44](#) [B25B13/48](#) [B25B23/145](#) [B65D17/50](#) [B65D39/08](#) [B65D41/04](#) [B65D50/00](#) [B65D51/18](#) [B67B3/20](#) ^(Advanced/Invention);
[B23P11/00](#) [B25B13/00](#) [B25B23/14](#) [B65D17/00](#) [B65D39/00](#) [B65D41/04](#) [B65D50/00](#) [B65D51/18](#) [B67B3/00](#) ^(Core/Invention)

CPC: [Y10T29/49826](#) [B65D39/082](#) [B65D51/18](#) [B67B3/2073](#) [B67B7/182](#)**European class:** [B65D39/08A](#) [B65D51/18](#) [B67B3/20L](#) [B67B7/18B](#)**US class:** [220/233](#) [220/288](#) [29/428](#) [81/54](#)[Classification Explorer](#)

Cited documents: WO04096656 A1, USD315309 S1, US6968968 BB, US6726048 BB, US6360908 BA, US6247605 BA, US5996833 A, US5971189 A, US5971183 A, US5829611 A, US5823377 A, US5735419 A, US5680953 A, US5215220 A, US4948006 A, US4779766 A, US4416661 A, US4310102 A, US4306357 A, US4271972 A, US4211333 A, US4002259 A, US3987929 A, US3891118 A, US3838785 A, US3817420 A, US3811174 A, US3744654 A, US3684125 A, US3566332 A, US3556332 A, US3187860 A, US3122261 A, US2007158296 AA, US2005258129 AA, US2005133508 AA, US2003071007 AA, GB1245081 A, FR2439721 A1, DE29821764 U1, DE20105917 U1, DE1478847 A1,

Forward Citations: US9670044, US8066139, US8061543, US2014311090, US2012187127, US2012187121, EP2088089, CN106346400, CN104108671,

Abstract:

Source: US2009020530A A closure for a container opening according to one embodiment of the present invention comprises a plug including concave recesses and being constructed and arranged to be received within the container opening and an overcap including inwardly projecting convex forms constructed and arranged for interfit into the recesses of the plug, the overcap being attached to the plug so as to create an assembly, wherein the overcap to plug interfit helps to prevent rotation of the overcap relative to the plug.

41) Family number: 29580954 (US2002121456A)

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Title: SUSPENDED CONTAINERS

Priority: US20010262030P 20010116 US20020052210 20020116 US20020378399P 20020506
 US20020378399P 20020506 US20020397329P 20020718 US20020397329P 20020718
 US20040983975 20041108 US20020399195P 20020729 US20030622005 20030716
 WO2002US01112 20020116 WO2003US14175 20030506

Family:

Publication number	Publication date	Application number	Application date
<u>AT309148 E</u>	20051115	AT20020701052T	20020116
<u>AU2002234250 AA</u>	20020730	AU20020234250	20020116
<u>AU2003234509 AA</u>	20031117	AU20030234509	20030506
<u>AU2003234509 AH</u>	20031117	AU20030234509	20030506
<u>CN1321864 C</u>	20070620	CN20028005725	20020116
<u>CN1633380 A</u>	20050629	CN20028005725	20020116
<u>DE60207205 D1</u>	20051215	DE20026007205	20020116
<u>EP1360119 A1</u>	20031112	EP20020701052	20020116
<u>EP1360119 B1</u>	20051109	EP20020701052	20020116
<u>JP2004521033 T2</u>	20040715	JP20020557844T	20020116
<u>US2002121456 AA</u>	20020905	US20020052210	20020116
<u>US2004105917 AA</u>	20040603	US20030622005	20030716
<u>US2005153026 AA</u>	20050714	US20040983975	20041108
<u>US7086545 BB</u>	20060808	US20030622005	20030716
<u>WO02057154 A1</u>	20020725	WO2002US01112	20020116
<u>WO03093123 A1</u>	20031113	WO2003US14175	20030506
<u>WO03093123 C2</u>	20041223	WO2003US14175	20030506

Probable Assignee: LID LASSO LLC

Assignee(s):^(std): AJAVA PINATA L L C ; AJAVA PINATA LLC ; BEAR CHRISTEN A ; LID LASSO LLC ;
 MANNION JEFFREY T ; WILLIAMS JOHN N ; WILLIAMS SUE A

Inventor(s):^(std): WILLIAMS SUE A ; WILLIAMS JOHN N ; MANNION JEFFREY T ; BEAR CHRISTEN A ;
 WILLIAMS N ; WILLIAMS A ; MANNION T ; BEAR A ; MANNION JEFFREY T BEAR
 CHRISTE ; JOHN N WILLIAMS

Inventor(s): MANNION JEFFREY T BEAR CHRISTEN A WILLIAMS JOHNN W ; WILLIAMS JOHN ;
 MANNION JEFFREY

Agent(s): FISH AND RICHARDSON PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO
 CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW
 HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG
 MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK
 SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
^{(IPC 8-9):} A47F5/00 A47F5/04 B29C45/14 B65D25/20 B65D25/22 B65D43/02 B65D45/18
B65D45/32 B65D51/24 B65D81/38 ^{(Advanced/Invention);}
B29C45/00 B65D85/60 ^{(Advanced/Non-invention);}
A47F5/04 B65D25/20 B65D25/22 B65D43/02 B65D45/00 B65D51/24
B65D81/38 ^{(Core/Invention);}
B65D85/60 ^(Core/Non-invention)

International class
^{(IPC 1-7):} A23B4/00 B65D25/10 B65D25/28 B65D51/24

CPC: B29C45/0081 B29C45/14016 B29C45/14336 B29C45/14344 B29C2045/14967
B29L2031/565 B65D43/0202 B65D51/242 B65D2543/00092 B65D2543/0024
B65D2543/00851 A47F5/04 B65D25/205 B65D25/22 B65D43/0218 B65D43/0231
B65D45/18 B65D81/3869 B65D85/60 B65D2543/00296 B65D2543/00351
B65D2543/00518 B65D2543/00527 B65D2543/00537 B65D2543/00555 B65D2543/00879

European class: A47F5/04 B29C45/14F B65D25/20B B65D25/22 B65D43/02S B65D43/02S5B B65D43/02S7E B65D45/18 B65D51/24B B65D81/38H2 L29C45/00K L29C45/14B2 L29C45/14F2 L29C45/14Z9 L29L31/56B L65D543/00Y10B4 L65D543/00Y10D4 L65D543/00Y1F2C L65D543/00Y1H2 L65D543/00Y1M6 L65D543/00Y2D L65D543/00Y8D1E L65D543/00Y8D1N L65D543/00Y8D3 L65D543/00Y8D5 L65D85/60

US class: 206/806 211/113 211/181.1 211/183 220/257.2 220/319 220/751 220/751S 426/110 426/110P

Classification Explorer

Cited documents: WO9626133, WO02057154, WO0150933, WO0144058, WO0128882, WO0069736 A1, USD469020 S1, USD367818 S1, USD159217 S1, US6209710 BA, US6196451 BA, US6179166 BA, US6179166 B1, US6169451 BA, US6142334 A, US6106261 A, US6070755 A, US6056144 A, US6053353 A, US6015470 A, US5988426 A, US5927496 A, US5911334 A, US5873482 A, US5806710 A, US5725120 A, US5713484 A, US5669549 A, US5660301 A, US5647501 A, US5622208 A, US5609894 A, US5538154 A, US5518314 A, US5511754 A, US5511680 A, US5511360 A, US5454497 A, US5427266 A, US5427259 A, US5398843 A, US5377861 A, US5361935 A, US5305931 A, US5301827 A, US5294015 A, US5246133 A, US5244113 A, US5238135 A, US5205477 A, US5205473 A, US5205430 A, US5167354 A, US5156273 A, US5148973 A, US5137210 A, US5115934 A, US5111961 A, US5072909 A, US5065880 A, US5054642 A, US5037595 A, US5025942 A, US5020686 A, US5007231 A, US5002190 A, US4944415 A, US4899882 A, US4897032 A, US4893771 A, US4854466 A, US4830214 A, US4756442 A, US4712671 A, US4702387 A, US4691832 A, US4529100 A, US4505390 A, US4467938 A, US4456146 A, US4453646 A, US4448345 A, US4438864 A, US4434908 A, US4412624 A, US4360121 A, US4347930 A, US4333569 A, US4331256 A, US4238047 A, US4230659 A, US4211336 A, US4165814 A, US4096963 A, US4093169 A, US3979012 A, US3973689 A, US3949897 A, US3931948 A, US3908948 A, US3752305 A, US3737069 A, US3693808 A, US3635367 A, US3631021 A, US361021 A, US3494500 A, US3434620 A, US3415404 A, US3401827 A, US3397814 A, US3278216 A, US3119541 A, US2980277 A, US2793901 A, US2353853 A, US2262360 A, US2194898 A, US1485852 A, US1095045 A, KR200195745, JP9188338, JP5201465, JP4187111, JP2000296840, JP2000189298, JP11292101, JP11091786, JP11049231, GB2302531, GB2251431 A1, GB2147566, GB2130184, FR2745800, FR2745798, FR2698529 A1, EP0535869, DE3923463, DE3907365, DE3631021, DE3333565, DE3149663, DE29713186 U1, DE29713186,

Forward Citations: WO17168744, WO12025404, WO07100772, WO06000225, USD767388, USD706032, USD703547, USD693120, USD671012, USD666873, USD626790, US9826820, US9809360, US9776098, US9676504, US9676141, US9669963, US9630762, US9474397, US9469445, US9167933, US9079704, US9032698, US8998030, US8991632, US8828170, US8735786, US8729437, US8713898, US8678872, US8651279, US8622208, US8610039, US8511484, US8460053, US8418870, US8415562, US8245873, US8087147, US8009359, US7968033, US7918016, US7918005, US7818866, US7814647, US7704347, US7694843, US7563495, US7552841, US7536767, US7520404, US7520397, US7520394, US7455191, US7086545, US2016029816, US2015298871, US2014318172, US2014194844, US2013045135, US2012223489, US2011228402, US2011154572, US2011117808, US2011091614, US2011000912, US2010308047, US2010147447, US2010140282, US2009302052, US2009223986, US2009126149, US2008142531, US2007221678, US2007210092, US2007163970, US2007051738, US2007024980, US2006280846, US2006124651, US2005240140, US2005189351, JP6033995, ES2370891, EP2142436, CN106426310, CN103079963,

Abstract:

Source: US2002121456A A disposable package for consumable contents includes a container having a surrounding wall of upstanding, generally flexible material extending from a container bottom to a wide mouth defined by a rim formation of greater relative thickness than said surrounding wall, said mouth being of greater than two inch minimum horizontal dimension and being about as wide as the horizontal cross-section of a top of the container. The disposable package further includes a removable lid at least partially closing the mouth, the lid having a rim portion extending over and removably engaged with the rim formation to form at least part of an attachment of the lid to the container, the attachment being constructed to support the container and its contents when suspended by the lid, and a flexible suspending element extending from the lid and arranged to be engaged by a thin support element, the suspending element being sized and arranged, with a length less than about 5 inches, such that when engaged by said support element, the suspending element suspends the container by its lid in a position below the support, for at least one of display and transport. In some embodiments, a single suspending element extends from a rim region of the container, the element being located to suspend the package at a tilted orientation, such that the lid of the container, so suspended, extends at a greater angle to horizontal than does the lid of the container when rested upon said bottom. Also, a display rack is provided for displaying such disposable packages.

42) Family number: 54110480 (WO14170287A3)

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Title: TAMPER-EVIDENT CLOSURE FOR CONTAINER**Priority:** GB20130007008 20130418**Family:**

Publication number	Publication date	Application number	Application date
GB201307008 A0	20130529	GB20130007008	20130418
<u>WO14170287 A2</u>	20141023	WO2014EP57552	20140414
<u>WO14170287 A3</u>	20150219	WO2014EP57552	20140414

Probable Assignee: OBRIST CLOSURES SWITZERLAND**Assignee(s):^(std):** OBRIST CLOSURES SWITZERLAND**Assignee(s):** OBRIST CLOSURES SWITZERLAND GMBH**Inventor(s):^(std):** MCPHERSON ALEXANDER DONALD MEIKLEM**Agent(s):** BRYERS LLP ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D41/62 B65D49/04 B65D55/08 (Advanced/Invention)
(IPC 8-9):

CPC: B65D41/62 B65D49/04 B65D55/0818 B65D2101/0007 B65D2101/003[Classification Explorer](#)**Cited documents:** WO09010722 A1, GB158342 A, GB1376403 A, FR2578783 A1, BE701123 A,**Abstract:**

A tamper-evident closure for a container (2), comprising a shell (1) including a break line (7) and a tearable strip (8) extending across the break line (7), such that upon first opening the strip (8) is torn apart. A closure (10) comprising a first portion (25, 30, 37) including inner (25) and outer (30) parts, and a second portion (20, 36); the first (25, 30, 37) and second (20, 36) portions initially joined by a break line (40) and the outer part (30) movable relative to the inner part (25) from a first position in which at least part of the first (25, 30, 37) and second (20, 36) portions are adjacent each other to a second position in which there is a gap (G) therebetween, and locking means for irreversibly locking the closure (10) in the second position upon first opening so that the gap (G) cannot be closed.

43) Family number: 19244529 (US6089418A)

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Title: Dispensing closure with pressure actuated valve

Priority: US19970880208 19970623 WO1998US12489 19980616

Family:

Publication number	Publication date	Application number	Application date
AU199882571 A1	19990104	AU19980082571	19980616
GR2002140 Y	19990419	GR19980200097U	19980617
IT245858 Y1	20020326	IT1998TO00115U	19980619
ITTO980115 U1	19991220	IT1998TO00115U	19980619
NL1009470 C1	19981224	NL19981009470	19980623
US6089418 A	20000718	US19970880208	19970623
WO9858847 A1	19981230	WO1998US12489	19980616

Probable Assignee: CROWN PACKAGING TECHNOLOGY INC

Assignee(s):^(std): CROWN CORK AND SEAL TECH CORP ; CROWN CORK AND SEAL TECHNOLOGIES CORP ; CROWN CORK AND SEAL TECHNOLOGIES CORP ORATION

Assignee(s): CROWN CORK AND SEAL TECHNOLOGIES ; CROWN OBRIST GMBH ; CROWN PACKAGING TECHNOLOGY INC ; OBRIST CLOSURES SWITZERLAND GMBH ; CROWN HOLDINGS INC ; ZELLER PLASTIC INC ; CHASE MANHATTAN BANK COLLATERAL AGENT AS ; CITICORP NORTH AMERICA INC ; CITICORP NORTH AMERICA INC COLLATERAL AGENT AS

Inventor(s):^(std): GAISER RICK ; HIERZER VALENTIN ; RICK GAISER ; ROBERT SIMPSON ; SIMPSON ROBERT ; VALENTIN HIERZER

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HU ID IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

International class
(IPC 8-9): [B65D47/20](#) (Advanced/Invention);
[B65D47/04](#) (Core/Invention)

International class
(IPC 1-7): [B05C](#) [B65D25/40](#) [B65D35/38](#) [B65D47/20](#) [B65D5/06](#) [B65D5/72](#) [B67B5/00](#) [B67D5/06](#)
[B67D5/33](#)

CPC: [B65D47/2031](#) [B65D2101/0023](#)

European class: [B65D47/20E2](#) [L65D101/00A3](#)

US class: [222/153.06](#) [222/185.1](#) [222/490](#) [222/494](#)

[Classification Explorer](#)

Cited documents: US5743443 A, US5642824 A, US5531363 A, US5456374 A, US5409144 A, US5377877 A, US5271531 A, US5213236 A, US4749108 A, US4728006 A, US2713953 A, US2684789 A, US1989714 A, JP8282703 A2, EP0555623 A1,

Forward Citations: WO03020599, WO0146032, WO0029296, USD671359, US9327882, US9266643, US9010568, US8978939, US8881959, US8827107, US8827106, US8695841, US8579133, US8215344, US8132683, US8113247, US8082956, US7874466, US7861393, US7824545, US7766057, US7708035, US7572113, US7255250, US7128244, US7128244, US6910607, US6726063, US6685061, US6616016, US6474511, US2011036852, US2011000910, US2009302059, US2009267011, US2009018596, US2008302711, US2008277020, US2008185071, US2008142421, US2008083780, US2007295765, US2007251079, US2006208002, US2006113331, US2006037975, US2005279781, US2005269373, US2004195273, GB2451775, EP2523867, EP1131252, AU2005318877, AU2002316715,

Abstract:

Source: US6089418A A valved dispensing closure is adapted to be mounted on a resiliently deformable bottle. The valved closure has a self-sealing dispensing valve mounted internally of the base of the closure by a securement in the form of an internally mounted retaining ring or inner deformable plug. A protective cover is adapted to extend over the side and top of the base to protect the valve from inadvertent activation. A tamper evident part is at the bottom of the base to visually indicate when the closure is removed after having been applied

on the container after it is filled with product to be dispensed.

44) Family number: 30518159 (US6095355A)

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Title: TAMPER EVIDENT SEAL FOR CONNECTOR TYPE CONTAINER ORIFICES**Priority:** DE19961022689 19960605 DE19975002519 19970528

Family:	Publication number	Publication date	Application number	Application date
	AT197139 E	20001115	AT19970108649T	19970528
	DE19622689 A1	19971211	DE19961022689	19960605
	DE59702519 D1	20001130	DE19975002519	19970528
	EP0811560 A2	19971210	EP19970108649	19970528
	EP0811560 A3	19990331	EP19970108649	19970528
	EP0811560 B1	20001025	EP19970108649	19970528
	ES2152053 T3	20010116	ES19970108649T	19970528
	JP10061648 A2	19980306	JP19970141365	19970530
	JP4458561 B2	20100428	JP19970141365	19970530
	US6095355 A	20000801	US19970868777	19970604

Probable Assignee: FRESENIUS MEDICAL CARE DEUTSCHLAND GMBH**Assignee(s):^(std):** FRESENIUS MEDICAL CARE DE GMBH ; FRESENIUS MEDICAL CARE DEUTSCH ; FRESENIUS AG**Assignee(s):** FRESENIUS AG 61440 OBERURSEL DE ; FRESENIUS 61440 OBERURSEL DE AG ; FRESENIUS MEDICAL CARE DEUTSCHE GMBH ; FRESENIUS MEDICAL CARE DEUTSCHLAND GMBH**Inventor(s):^(std):** JESSEN DR ; KUGELMANN DR ; RAHIMY ISMAEL ; LAUER MARTIN ; KUGELMANN FRANZ DR ; KUGELMANN FRANZ ; JESSEN CLAUS DR ; JESSEN CLAUS**Inventor(s):** KUGELMANN FRANZ DR 61250 USINGEN DE ; LAUER MARTIN 66606 ST WENDEL DE ; RAHIMY ISMAEL 61231 BAD NAUHEIM DE ; JESSEN CLAUS DR 66620 NONNWEILER DE**Designated states:** AT CH DE ES FR GB IT LI**International class**
(IPC 8-9): [B65D51/00 B65D51/18 B65D55/02 F16B41/00](#) (Advanced/Invention);
[B65D51/00 B65D51/18 B65D55/02 F16B41/00](#) (Core/Invention)**International class**
(IPC 1-7): [B65D101/00 B65D51/00 B65D51/18 B65D55/02 F16B41/00](#)**CPC:** [Y10S215/03 B65D55/02 A61J1/1406](#)**European class:** [B65D55/02 K61J1/14B](#)**US class:** [215/247 215/274 215/DIG.3](#)[Classification Explorer](#)**Cited documents:** WO8501030 A1, US3612320 A, US3379326 A, US3278063 A, US3193128 A, US2395149 A, EP0614820 A1, EP0330883 A1, DE9306796 U, DE4204242 A1, DE360907 A, DE1938093 A1, CH397456 A,**Forward Citations:** WO10127691, USRE43142, USD623764, USD607118, USD598124, USD585561, USD561908, USD561907, USD533670, USD527463, USD522663, USD505494, US9775777, US9637251, US9630755, US9549874, US9493281, US9382044, US9296498, US9051064, US9017851, US8960242, US8684225, US8684204, US8631838, US8347923, US8272411, US8220507, US7992597, US7980276, US7967034, US7947032, US7875016, US7875015, US7810529, US7798185, US7779609, US7726357, US7726352, US7635357, US7568509, US7290573, US7186241, US7100646, US7077176, US6669681, US6344033, US6261282, US2012115007, US2010236659, US2010236193, US2009229702, US2008017543, US2008004594, US2007084524, US2007000573, US2005178462, US2005069918, US2004141886, US2003088216, JP4871137, EP2186504, EP1773277, EP1621177, EP0925805, DE202008013772,

Abstract:

Source: US6095355A The invention relates to a tamper evident seal for container orifices of the connector type, comprising a closure part. In accordance with the invention, on its bottom side, the closure part has an annular section, whose lower rim area is sealably retained in an annular gap formed in the opening area of the orifice.

45) Family number: 16958107 (US4454954A)

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Title: Ball housing for a nonrefillable pour fitment**Priority:** US19830470477 19830228 US19840597024 19840405

Family:	Publication number	Publication date	Application number	Application date
	ES286909 U	19851116	ES19840286909U	19840227
	ES286909 Y	19860616	ES19840286909U	19840227
	ES286909 Y1	19860715	ES19840286909U	19840227
	US4454954 A	19840619	US19830470477	19830228
	US4540100 A	19850910	US19840597024	19840405

Probable Assignee: ALUMINUM CO OF AMERICA**Assignee(s):^(std):** ALUMINUM CO OF AMERICA**Assignee(s):** ALUMINUM COMPANY OF AMERICA ; ALUMINUM CO**Inventor(s):^(std):** WILLIS W COY ; WILLIS W C

International class
^(IPC 8-9): [B65D49/04](#) (Advanced/Invention);
[B65D49/00](#) (Core/Invention)

International class
^(IPC 1-7): [B65D41/34](#) [B65D49/02](#) [B65D51/14](#)

CPC: [B65D49/04](#)**European class:** [B65D49/04](#)**US class:** [215/21](#) [215/252](#) [215/28](#)[Classification Explorer](#)**Cited documents:** US4205755 A, US3861548 A, US3158278 A, US3073470 A, US2850192 A, US2378919 A, IT659640 A, DE2502271 A1,

Forward Citations: WO9414674, WO17081045, WO13079545, WO08049951, WO02083518, USD634200, USD634199, USD633386, US9038841, US8763830, US8672158, US8231020, US8181803, US7857154, US7441561, US6908013, US6854612, US5972296, US5680965, US5456374, US5360126, US5307662, US2012091134, US2009289027, US2008093363, US2005226753, US2004129729, US2003178442, RU2623910, RU2568180, GB2262250, GB2262250, EP1935801, EP1379441, EP0670271, CN103958361,

Abstract:

Source: US4454954A A housing for a ball in a nonrefillable pour fitment for assembly with a bottle having an open mouth to prevent fraudulent refilling of the bottle. The housing is comprised of a hollow cylinder adapted for assembly with the bottle and a cup-shaped ball enclosure contained within the cylinder, the enclosure having a diameter or greatest dimension across the cup mouth less than the inside diameter of the hollow cylinder. The ball enclosure is coaxially disposed within the cylinder with the cup mouth recessed inwardly from the cylinder end to be directed toward the interior of the bottle when assembled with the bottle. The enclosure is maintained in a spaced relationship between the cylinder wall and the cup wall defining the cup mouth by a plurality of bridges connecting portions of the cylinder wall with portions of the cup wall defining and projecting away from the cup mouth.

46) Family number: 61600946 (WO17081045A1)

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Title: IMPROVEMENTS IN OR RELATING TO A CLOSURE FOR A CONTAINER NECK
Priority: GB20150019787 20151110 GB20150021045 20151130 GB20160010289 20160614
Family:

Publication number	Publication date	Application number	Application date
GB201519787 A0	20151223	GB20150019787	20151110
<u>WO17081045 A1</u>	20170518	WO2016EP77060	20161109

Probable Assignee: OBRIST CLOSURES SWITZERLAND
Assignee(s):^(std): OBRIST CLOSURES SWITZERLAND
Assignee(s): OBRIST CLOSURES SWITZERLAND GMBH
Inventor(s):^(std): MCPHERSON ALEXANDER DONALD MEIKLEM ; RICHARDSON DAVID CONWAY
Agent(s): BRYERS LLP
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D41/62 B65D49/04 B65D55/02 (Advanced/Invention)
 (IPC 8-9):

CPC: B65D49/04 B65D41/62 B65D55/022 B65D55/026 B65D2101/0084

[Classification Explorer](#)

Cited documents: WO13113435 A1, WO09010722 A1, WO09010717 A1, WO06117505 A1, WO05049443 A1, WO02096771 A1, US573823 A, US4540100 A, US2005189355 AA, US2004035817 AA, FR2759351 A1,

Abstract:

A closure (101) for a container neck comprises a first portion (102) comprising a body (104) for fixing to the container neck and a second portion (103) comprising a cap (105) releasably engageable with the body (104). The closure (101) comprises a seal support portion (107) formed from a first plastics material and a seal (106) formed from a second plastics material that is more compliant than the first plastics material, the seal (106) formed integrally with the seal support portion (107). A closure (101) with a bi-injection moulded seal. A method of forming the closure (101) comprising the step of bi-injection moulding the seal support portion (107) and the seal (106). A container comprising a container neck provided with the closure (101).

47) Family number: 3748974 (EP0421590A1)

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Title: TAMPER-EVIDENT CONTAINER.**Priority:** GB19890018541 19890815 CA19902023375 19900815

Family:	Publication number	Publication date	Application number	Application date
	AT117963 E	19950215	AT19900308895T	19900813
	CA2023375 AA	19910216	CA19902023375	19900815
	CA2023375 C	20011211	CA19902023375	19900815
	DE69016556 D1	19950316	DE19906016556	19900813
	DE69016556 T2	19950706	DE19906016556T	19900813
	EP0421590 A1	19910410	EP19900308895	19900813
	EP0421590 B1	19950201	EP19900308895	19900813
	ES2069015 T3	19950501	ES19900308895T	19900813
	GB8918541 A0	19890927	GB19890018541	19890815

Probable Assignee: CONTINENTAL WHITE CAP INC**Assignee(s):^(std):** CAMBRIDGE CONSULTANTS ; CONTINENTAL WHITE CAP INC ; GAYLOR IAN M D ; LIVESLEY DAVID ; LIVESLEY DAVID JOHN ; GAYLOR IAN MICHAEL DAINES**Assignee(s):** LIVESLEY DAVID J ; WHITE CAP INC ; CONTINENTAL WHITE CAP INC DOWNERS GROVE ILL US ; CAMBRIDGE CONSULTANTS LIMITED ; CAMBRIDGE CONSULTANTS LTD**Inventor(s):^(std):** GAYLOR IAN M D ; GAYLOR IAN MICHAEL DAINES ; LIVESLEY DAVID J ; LIVESLEY DAVID JOHN**Inventor(s):** LIVESLEY DAVID JOHN SWAVESEY CAMBRIDGE CB7 5QJ GB ; GAYLOR IAN MICHAEL DAINES NR GRANTHAM LINCOLNSHIRE ; GAYLOR IAN MICHAEL DAINES NR GRANTHAM...**Agent(s):** CALDWELL ROSEANN B**Designated states:** AT BE CH DE ES FR GB IT LI NL SE**International class** [B65D43/04](#) [B65D55/02](#) [B65D79/00](#) ^(Advanced/Invention);
^(IPC 8-9) [B65D43/02](#) [B65D55/02](#) [B65D79/00](#) ^(Core/Invention)**International class** [B65D55/2](#)
^(IPC 1-7)**CPC:** [B65D55/026](#) [B65D79/005](#)**European class:** [B65D55/02G](#) [B65D79/00B](#)[Classification Explorer](#)**Cited documents:** US4747497 A, US4721217 A, EP0148030 A2,**Forward Citations:** WO9513229, WO07129086, US7659816, GB2451402, GB2317882, EP2942307, EP0538410, EP0467619, EP0465134,**Abstract:**

Source: EP0421590A1 Provision is made on a container to indicate whether the container has been tampered with. Release of a vacuum from within the container causes a lid (4) of the container to become convex. This causes a coating (7) on the lid to craze and therefore produce a visible change.

0) GB2385321A – TAMPER EVIDENT CLOSURE

48) Family number: 23272014 (GB2385321A)

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Title: Tamper evident closure
Priority: GB20020003572 20020214

Family:	Publication number	Publication date	Application number	Application date
	GB200203572 A0	20020403	GB20020003572	20020214
	<u>GB2385321 A1</u>	20030820	GB20020003572	20020214

Probable Assignee: DRAGON PLASTICS LTD

Assignee(s):^(std): DRAGON PLASTICS LTD

Inventor(s):^(std): WALDING DEAN

Inventor(s): DEAN WALDING

International class
(IPC 8-9): B65D41/34 B65D41/62 (Advanced/Invention);
B65D41/00 B65D41/34 (Core/Invention)

International class
(IPC 1-7): B65D41/34 B65D50/00

CPC: B65D41/3447 B65D41/62

European class: B65D41/34D1 B65D41/62

[Classification Explorer](#)

Cited documents: US4560076 A, US4550845 A, GB2247452 A1,

Forward Citations: WO08092716, DE102012000891, CN104507821, CN104507821, CH709172,

Abstract:

Source: GB2385321A A tamper evident closure for the screw threaded neck of a container has an inner sleeve (12) comprising upper and lower portions (17,18) connected by frangible webs (19) along a line of weakness (fig 1,23). Two rows of teeth (21,22) are provided on the inside of the lower portion (18). These ensure that the cap is retained when first screwed on, and that the lower portion moves to and remains at a lower position when the cap is first screwed off. An outer sleeve (13) may also be provided. Cam means (fig 1, 20) are provided to urge the upper and lower portions (17,18) apart.

Title: TAMPER EVIDENT CLOSURE WITH TEAR OFF BAND**Priority:** EP20040425749 20041006

Family:	Publication number	Publication date	Application number	Application date
	ES2292317 AA	20080301	ES20050002394	20051004
	ES2292317 BA	20081016	ES20050002394	20051004
	GB200518773 A0	20051026	GB20050018773	20050914
	GB2418910 A1	20060412	GB20050018773	20050914
	GB2418910 B2	20071010	GB20050018773	20050914
	ITMI20051659 A1	20060407	IT2005MI01659	20050908

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):^(std):** GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A**Inventor(s):^(std):** VIALE LUCA ; BATTEGAZZORE PIERO**Inventor(s):** PIERO BATTEGAZZORE ; LUCA VIALE

International class [B65D41/32](#) [B65D41/34](#) [B65D41/62](#) [B65D49/02](#) [B65D49/04](#) [B65D55/06](#) ^(Advanced/Invention);
^(IPC 8-9) [B65D41/00](#) [B65D41/32](#) [B65D41/34](#) [B65D49/00](#) [B65D55/02](#) ^(Core/Invention)

CPC: [B65D41/3409](#) [B65D41/62](#) [B65D49/04](#) [B65D2101/0038](#) [B65D2101/0076](#) [B65D2255/20](#)
[B65D41/32](#) [B65D49/02](#) [B65D55/06](#)

European class: [B65D41/32](#) [B65D41/34A1](#) [B65D41/62](#) [B65D49/02](#) [B65D49/04](#) [B65D55/06](#)
[L65D101/00A3C](#) [L65D101/00A5](#) [L65D255/20](#)

[Classification Explorer](#)**Cited documents:** US5373954 A, GB2285623 A1, ES2208734 T3, EP1526086 A2,

Forward Citations: WO17115193, WO14042885, WO12152404, WO07138191, WO07138191, US9624012, US9346591, US9027793, RU2585568, ITMI20111812, FR2901775, EP2522591, AU2013315946, AU2012252805,

Abstract:

Source: GB2418910A A cap 18 for tamper-evident seals of containers, in particular bottles for luxury beverages and liqueurs, with an opening 3 disposed at the end of a neck 1, the cap being provided with a tubular sleeve 24 extended axially outside the neck of the container and ending in a free end edge 27 facing the body of the container. The cap comprises an annular band 29 connected axially to the free end edge of the tubular sleeve by means of a peripheral weakened line 28, the annular band being discontinued axially by a cut-out 34 forming two ends 35,36 facing one another, and a manual take-up tongue 37 for tearing off and removing the band at the time of first opening of the seal, rigid with one of the facing ends. The annular band is provided with a deformable portion 38, which may be provided by bellows or plurality at bows 39 connected together in the configuration of a letter of the alphabet. A pouring body 7 is provided connected to the neck by a tubular portion 14. Valve means 8a provided by a sphere or ball may present re-filling.

50) Family number: 1887528 (GB2149765A)

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Title: Tamper evident closures
Priority: US19830551599 19831114
Family:

Publication number	Publication date	Application number	Application date
BE901042 A	19850301	BE19840213997	19841113
BE901042 A1	19850301	BE19840213997	19841113
DE3441431 A1	19850829	DE19843441431	19841113
FR2554791 A1	19850517	FR19840017287	19841113
GB2149765 A1	19850619	GB19840028738	19841114
GB2149765 B2	19871014	GB19840028738	19841114
GB8428738 A0	19841227	GB19840028738	19841114
IT1178230 A	19870909	IT19840049156	19841113
IT8449156 A0	19841113	IT19840049156	19841113
JP60172662 A2	19850906	JP19840238727	19841114
LU85640 A	19850604	LU19840085640	19841113
NL8403450 A	19850603	NL19840003450	19841112

Probable Assignee: ANCHOR HOCKING CORP

Assignee(s):^(std): ANCHOR HOCKING CORP

Assignee(s): ANCHOR HOCKING TE LANCASTER OHIO VER ST V AM CORP

Inventor(s):^(std): NIXDORFF F S ; NIXDORFF FRANK S ; FURANKU ESU NIKUSUDORUFU

Inventor(s): S NIXDORFF FRANK ; F S NIXDORFF ; FRANK S NIXDORFF ; FS NIXDORFF

International class
(IPC 8-9): [B29C45/44](#) [B65D41/34](#) [B65D55/02](#) (Advanced/Invention)

International class
(IPC 1-7): [B29C33/00](#) [B29C33/76](#) [B29C43/02](#) [B29C51/00](#) [B29D1/00](#) [B29L1/00](#) [B65D41/34](#) [B65D41/38](#) [B65D55/02](#) [B65D55/12](#)

CPC: [B29C45/4407](#) [B29L2001/00](#) [B29L2031/565](#) [B65D41/3409](#) [B65D55/022](#)

European class: [B29C45/44B](#) [B65D41/34A1](#) [B65D55/02D](#) [L29L1/00](#) [L29L31/56B](#)

[Classification Explorer](#)

Cited documents: GB2131344 A1, GB2125382 A1, GB2116155 A1, GB2108892 A1, GB1159029 A, GB1035476 A, FR2503672 A1,

Forward Citations: WO08002249, US8256632, GB2225778, FR2600629, EP0261037, DE9210306, DE9014858, DE4134741, DE4134741, DE4126015, DE102007005594,

Abstract:

Source: GB2149765A A tamper evident moulded closure cap (1) for sealing containers has an integrally moulded tamper indicating band (4) with a flared portion at the line of weakness (13) between the cap skirt and the tamper indicating band. The flare facilitates the cap moulding. As the container is sealed, the indicating band passes over a bead on the container having several outwardly projecting stops. When the cap is unscrewed the stops engage cooperating stops on the indicating band causing it to be torn loose. Each of the stops has one inclined flank to permit the cap to be screwed on to the container and one radial flank to resist rotation of the indicating band when the cap is unscrewed. The cap is moulded in moulding means comprising a cavity (17) and a complementary core (16) and sleeve portion (18), the sleeve portion having a shaping portion (20) to form the inner surface of the indicating band. A flared outer edge (22) of the sleeve portion (18) produces the line of weakness.

51) Family number: 12707644 (US5544770A)

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Title: TAMPER EVIDENT SEAL AND SYSTEM**Priority:** US19930057809 19930507

Family:	Publication number	Publication date	Application number	Application date
	<u>US5544770 A</u>	19960813	US19930057809	19930507

Probable Assignee: TRAVISANO FRANK P**Assignee(s):^(std):** TRAVISANO FRANK P**Inventor(s):^(std):** TRAVISANO FRANK P

International class B65D55/02 B65D55/08 (Advanced/Invention);
 (IPC 8-9): B65D55/02 (Core/Invention)

International class B65D39/00
 (IPC 1-7):

CPC: Y10S206/807 B65D55/0854 B65D55/026**European class:** B65D55/02G B65D55/08B3**US class:** 206/807 215/230 215/232 215/246 215/250 215/253 215/254 215/347 215/349[Classification Explorer](#)

Cited documents: US5197618 A, US5082702 A, US4998666 A, US4890763 A, US4652473 A, US4545494 A, US4538740 A, US4511052 A, US4454956 A, US4004705 A, US3955699 A, US3095103 A, US2790286 A, US2447983 A,

Forward Citations: WO9921773, WO9920497, WO10036416, WO08156921, US9782326, US9637264, US9624008, US9463138, US9278506, US9221573, US8703265, US8584882, US8535464, US8522990, US8464749, US8282754, US8201385, US8141578, US7829163, US7690533, US7681587, US7596927, US7579061, US7350656, US7225598, US7014039, US7004341, US6655553, US6649259, US6581972, US6305541, US6302301, US6164473, US6161711, US5996849, US5990791, US5833928, US5718347, US2017297797, US2016325895, US2016166473, US2016009468, US2014299598, US2013026129, US2011210134, US2011177268, US2011138742, US2010326868, US2010200582, US2010072163, US2009166378, US2009021026, US2008308557, US2008308444, US2008308443, US2008233424, US2008231922, US2008210892, US2008190883, US2008066809, US2007158225, US2007108236, US2007084545, US2007017940, US2006150579, US2006016777, US2005258634, US2005258131, US2005035081, US2005023173, US2004256253, US2004156667, US2004118904, US2004118802, US2003230577, US2002161635, EP1728816, EP1027263, DE102004052163, AU2011346625,

Abstract:

Source: US5544770A A tamper evident seal and system for use on a variety of container and closure combinations providing a seal across the juncture of the container and closure or across the container opening and positive indication to consumers of tampering with the seal. The seal system comprises the combination of indicia specifically placed on the container and a seal means in the form of a heat shrink band or a foil sheet applied to the container in a manner so as to temporarily obscure the indicia. In a first embodiment the indicia is applied to the container in an area below the neck and the seal means comprises an opaque band adhered to the container and closure over the juncture of thereof and over the indicia. In a second embodiment, the indicia is applied to the lip around the container mouth and the seal means comprises a foil sheet adhered to the lip and covering the mouth. A third embodiment combines the two individual forms into a double seal system comprising the inner foil sheet and indicia and the outer opaque band and indicia.

52) Family number: 67326021 (WO17183952A1)

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Title: SECURITY CLOSURE SYSTEM AND DEVICES FOR CONTAINERS**Priority:** MX20160005037 20160419

Family:	Publication number	Publication date	Application number	Application date
	<u>WO17183952 A1</u>	20171026	WO2016MX50006	20160513

Probable Assignee: SALCIDO PINERA JUAN FRANCISCO**Assignee(s):^(std):** SALCIDO PINERA JUAN FRANCISCO**Inventor(s):^(std):** SALCIDO PINERA JUAN FRANCISCO**Agent(s):** BELTRAN GARCIA JORGE OMAR

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D41/00 B65D41/28 B65D41/32 B65D41/34 B65D41/40 B65D50/00 (Advanced/Invention)
(IPC 8-9):

CPC: B65D41/00 B65D41/28 B65D41/32 B65D41/34 B65D41/40 B65D50/00

[Classification Explorer](#)

Abstract:

The present invention relates to a security closure system and devices for containers, which can be used in any type of container and can be validated by means of simple sight and touch, thereby being tamper-resistant and preventing any adulteration by means of the non-authorized re-use of the original container. The system and devices are preferably used in containers made from vitreous materials such as ceramics, plastics and thermoplastics, owing to the properties of stiffness. The devices of the invention can be used for any product and any type of container, such as bottles for alcoholic and non-alcoholic drinks, containers for cosmetics, perfumes, drugs, food and valuable items such as watches, electronics or fine jewellery.

53) Family number: 8437910 (AU199229951A)

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Title: TAMPER EVIDENT INDICATOR FOR CAP CLOSURE**Priority:** AU19920029951 19921204

Family:	Publication number	Publication date	Application number	Application date
	<u>AU199229951 A1</u>	19940616	AU19920029951	19921204

Probable Assignee: RHEEM AUSTRALIA PTY LTD**Assignee(s):^(std):** RHEEM AUSTRALIA PTY LTD**Assignee(s):** RHEEM AUSTRALIA LIMITED ; RHEEM AUSTRALIA LTD**Inventor(s):^(std):** MAXWELL KENNETH A**Inventor(s):** KENNETH A MAXWELL**Agent(s):** SOUTHCORP LTD

International class B65D41/62 B65D51/18 (Advanced/Invention);
 (IPC 8-9): B65D41/00 B65D51/18 (Core/Invention)

International class B65D41/62 B65D51/18
 (IPC 1-7):

[Classification Explorer](#)**Abstract:**

Source: AU199229951A A tamper evident overcap formed as a plastics moulding for use in conjunction with a screw cap type closure on a container. Capable of manual application over an already positioned threaded closure cap, the overcap is snapped downwardly over the cap after the latter has been tightened to provide a loose but retained engagement with the cap. The overcap includes breakable means to enable radial removal when authorised removal of the cap is required. The overcap has a gripping tongue and lines of weakness to enable a portion of a wall of the overcap to be torn away to enable authorised removal. The overcap has a downwardly depending wall to surround the cap and has a circumferentially extending radially inwardly directed rim to engage the lower portion of the downwardly depending skirt of the screw cap. The overcap is sufficiently rigid to resist tight conformance with the cap and functions by slipping on the cap if one attempts to unscrew the overcap and cap without first parting the annular wall to remove the overcap. O

54) Family number: 30939042 (WO04078613A1)

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Title: TAMPER EVIDENT CLOSURE FOR BOTTLES, PARTICULARLY FOR BOTTLES CONTAINING VALUABLE DRINKS**Priority:** WO2003IT00143 20030307

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2003219523 AA</u>	20040928	AU20030219523	20030307
	<u>WO04078613 A1</u>	20040916	WO2003IT00143	20030307

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):^(std):** BATTEGAZZORE PIERO ; GUALA CLOSURES S P A ; GUALA CLOSURES SPA**Inventor(s):^(std):** BATTEGAZZORE PIERO**Inventor(s):** PIERO BATTEGAZZORE

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class B65D41/08 B65D41/34 B65D55/08 (Advanced/Invention);
 (IPC 8-9): B65D41/04 B65D41/34 B65D55/02 (Core/Invention)

International class B65D41/08 B65D41/34 B65D55/08
 (IPC 1-7):

CPC: B65D41/08 B65D41/3447 B65D55/0827**European class:** B65D41/08 B65D41/34D1 B65D55/08B1[Classification Explorer](#)**Cited documents:** WO02083518 A1, EP1127803 A1, EP0427009 A1,**Forward Citations:** US8132685, EP2942307, EP1659071, EP1659071, CN106458380, AU2005209675,**Abstract:**

The invention relates to a tamper evident closure for a bottle having a neck (3) which extends axially along the axis (X-X) from the bottle (2), the neck (3) has an opening (4) at a free end, and the closure comprises means of stoppering (6, 7) the opening (4) of the neck (3) and a sleeve (15) arranged axially along the outer surface of the neck (3) and has axial locking means (15E) and angular locking means (17, 18) capable of engaging with said neck (3) having the characteristic that the sleeve (15) has a first (15A) and second (15B) connected to each other by means of breakable connecting means (16), the first (15A) and second portion (15B) of said sleeve (15s) facing towards each other, at least one of said surfaces of said first (15A) and second portion (15B) being inclined relative to the longitudinal axis (X-X) of said neck (3) so that, as a result of axial movement of the second portion (15B) towards said opening in said neck (3), breakage of said breakable means (16) occurs and consequent radial movement of at least a circumferential zone of the second portion (15B).

0) IN01828DE2011A – A TAMPER EVIDENT SECURITY CLOSURE DEVICE

55) Family number: 52672269 (IN01828DE2011A)

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Title: A TAMPER EVIDENT SECURITY CLOSURE DEVICE

Family:	Publication number	Publication date	Application number	Application date
	<u>IN01828DE2011 A</u>	20130104	IN2011DE01828	20110628

Probable Assignee: KSHITIJ JAIN

Assignee(s): KSHITIJ JAIN

Inventor(s): KSHITIJ JAIN

International class B65D (Advanced/Invention)
(IPC 8-9).

[Classification Explorer](#)

Abstract:

Source: IN01828DE2011A A tamper evident security closure device A tamper evident security closure device for bottles and bottle like containers comprising an outer top (1), an inner top (2), a security ring (8), a cylindrical bottom (3), a pourer body (4) and a stopper body (5). The pourer body comprises extended sleeve (22) with inwardly projected locking teeth (23). Multiple teeth (23) on the sleeve (22) result in a jaw like structure to irreversibly lock the pourer body on the neck of the bottle/ bottle like container. Due to the locking teeth (23) on the skirt (22) of the pourer body (4), it gets locked on the bottle neck which cannot be removed from the bottle. Whereas, in any effort of opening the device, the security ring (8) irreversibly breaks and falls apart therefore, the security closure device makes the opening of bottle and refilling it with counterfeited drinks nearly impossible.

56) Family number: 31880334 (EP1529741A1)

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Title: CONTAINER, WITH ADDITIONAL RESERVOIR AND METHOD FOR PACKAGING A SUBSTANCE**Priority:** EP20030078620 20031107 EP20040078046 20041105

Family:	Publication number	Publication date	Application number	Application date
	<u>EP1529741 A1</u>	20050511	EP20030078620	20031107
	<u>EP1529742 A1</u>	20050511	EP20040078046	20041105

Probable Assignee: CAMPINA BV**Assignee(s):**^(std): CAMPINA B V ; CAMPINA BV**Inventor(s):**^(std): BIENCOURT VINCENT BRUNO**Designated states:** AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LU MC NL PL PT RO SE SI SK TR

International class
^(IPC 8-9): B31B1/84 B31B17/00 B65D5/74 B65D81/32 (Advanced/Invention);
B31B1/74 B31B17/00 B65D5/74 B65D81/32 (Core/Invention)

International class
^(IPC 1-7): B65D5/74 B65D81/32

CPC: B65D81/3211 B65B1/02 B65B3/02 B65D5/746 B65D81/3205 B31B50/84 B31B2105/00 B31B2120/00**European class:** B31B1/84 B31B17/00 B65D5/74D B65D81/32B B65D81/32B1 L31B201/90J L31B217/00 L65B1/02 L65B3/02[Classification Explorer](#)**Cited documents:** WO03043898 A1, JP3098871, JP11113503, GB873706 A, EP1072530 A1,**Forward Citations:** WO10045071, WO09092685, WO08051283, WO08051283, WO08011916, US8439189, US8109385, TWI468158, DE102007017464,**Abstract:**

Source: EP1529741A1 The invention pertains to a container (1), in particular for food such as dairy products. The container according to the invention comprises: a liquid-tight first reservoir (11) for containing a liquid first substance, which first reservoir is at least partly made out of coated cardboard, and which first reservoir is delimited by reservoir walls including at least one flat panel (16), at least one second reservoir (12) for containing a second substance, the second reservoir being attached to the first reservoir and having a smaller volume than the first reservoir, at least one seal (13), each seal being associated with a respective second reservoir, each seal being adapted to provide a barrier between the first reservoir and a second reservoir, which barrier can be eliminated to release the second substance into the first reservoir, opening means for dispensing the contents of the container. The container according to the invention is characterised in that a flat panel of the first reservoir is provided with an aperture or a weakened area facilitating the formation of an aperture, and in that the second reservoir is attached to said flat panel of the first reservoir, covering said aperture or weakened area.

57) Family number: 4455897 (US4465205A)

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Title: Fragile opening means for a container lid
Priority: GB19810034493 19811116 GB19820032610 19821115 US19820440175 19821108
Family:

Publication number	Publication date	Application number	Application date
AU1532283 A1	19840524	AU19830015322D	19830602
AU198315322 A1	19840524	AU19830015322	19830602
GB2110654 A1	19830622	GB19820032610	19821115
US4465205 A	19840814	US19830552853	19831117

Probable Assignee: ALCOA INC

Assignee(s):^(std) SUTCH B L C ; SUTCH BRIAN L C ; SUTCH BRIAN LEO CHUDLEIGH

Assignee(s): SUTCH BLC ; ALCOA INC ; BRIAN LEO CHUDLEIGH SUTCH

Inventor(s):^(std) SUTCH BRIAN L C ; SUTCH BRIAN LEO CHUDLEIGH

Inventor(s): BRIAN LEO CHUDLEIGH SUTCH

Agent(s): PHILLIPS ORMONDE FITZPATRICK

International class
^{(IPC 8-9):} [B65D17/40](#) [B65D43/02](#) [B65D45/20](#) [B65D45/30](#) [B65D55/06](#) [B65D55/08](#) (Advanced/Invention);
[B65D17/28](#) [B65D43/02](#) [B65D45/00](#) [B65D55/02](#) (Core/Invention)

International class
^{(IPC 1-7):} [B65D17/40](#) [B65D45/30](#) [B65D55/06](#) [B65D55/08](#)

CPC: [B65D43/0295](#) [B65D45/20](#) [B65D2101/0023](#) [B65D2101/0038](#) [B65D2543/00092](#)
[B65D2543/00296](#) [B65D2543/00509](#) [B65D2543/00537](#) [B65D2543/00546](#) [B65D2543/00555](#)
[B65D55/06](#)

European class: [B65D43/02T9E6](#) [B65D45/20](#) [B65D55/06](#) [L65D101/00A3](#) [L65D101/00A3C](#)
[L65D543/00Y1F2C](#) [L65D543/00Y1M6](#) [L65D543/00Y8D1C](#) [L65D543/00Y8D3](#)
[L65D543/00Y8D3N](#) [L65D543/00Y8D5](#)

US class: [220/270](#) [220/276](#) [220/306](#) [220/309](#)

[Classification Explorer](#)

Cited documents: US4387820 A, US4376493 A, US4212409 A,

Forward Citations: USRE32927, USD638704, USD637489, US9771187, US8955712, US8678212,
US7052078, US6817473, US6604647, US5979690, US5667092, US5474199,
US5348181, US5145088, US5114068, US4934557, US4890759, US4793510,
US4632271, US4574975, US2016311582, US2012248130, US2008230507,
US2007023434, US2005076604, US2005035128, US2005006390, US2002166857,
GB2236099, EP1466834, EP0853050, EP0829393, DE3229081, BE1010847,

Abstract:

Source: US4465205A A tamper evident retainer to hold a closure and container in closed condition, the retainer having a displaceable extension flange carrying retaining means, in the initial condition of the retainer, before application of the closure to the container, the retainer having the extension flange and retaining means out of the path of relative movement of the closure and container during closing and being displaceable to position the retaining means in the path of relative movement of the closure and container during opening, the retainer having a weakened zone so that access can be had to the container by rupturing the weakened zone to release the retaining means and thereby allow the closure to be removed from the container.

58) Family number: 13272944 (GB9500758A)

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Title: CLOSURE ASSEMBLY FOR LIQUID CONTAINER**Priority:** GB19940000726 19940115 GB19950000758 19950116

Family:	Publication number	Publication date	Application number	Application date
	GB2285623 A1	19950719	GB19950000758	19950116
	GB2285623 B2	19980121	GB19950000758	19950116
	GB9400726 A0	19940316	GB19940000726	19940115
	GB9500758 A0	19950308	GB19950000758	19950116

Probable Assignee: MONTGOMERY DANIEL AND SON LTD**Assignee(s):^(std):** MONTGOMERY DANIEL AND SON LTD**Assignee(s):** DANIEL MONTGOMERY AND SON LIMITED ; DANIEL MONTGOMERY AND SON LTD**Inventor(s):^(std):** BLAIR ANDREW ROBERT ; CHRISTMAS PAUL MICHAEL**Inventor(s):** PAUL MICHAEL CHRISTMAS ; ANDREW ROBERT BLAIR

International class [B65D41/62](#) [B65D49/04](#) (Advanced/Invention) ;
^(IPC 8-9) [B65D41/00](#) [B65D49/00](#) (Core/Invention)

International class [B65D41/62](#) [B65D49/02](#)
^(IPC 1-7)

CPC: [B65D2101/0038](#) [B65D41/62](#) [B65D49/04](#)**European class:** [B65D41/62](#) [B65D49/04](#)[Classification Explorer](#)**Cited documents:** US4633922 A, GB1473482 A,

Forward Citations: WO9921773, WO9623704, WO17115193, WO13132384, WO09098347, WO05092731, WO04089776, WO0007898, WO0007898, GB2436560, GB2418910, GB2418910, GB2403201, GB2377699, GB2377699, GB2375532, GB2375532, GB2302867, GB2302867, FR2722478, FR2722478, ES2333569, ES2292317, ES2133063, EP2088091, EP1526086, EP1027263, EP0807585, EP0706952,

Abstract:

Source: GB2285623A A closure assembly for use with a mouth of a container, for example a spirits bottle, comprises a pouring outlet device 16, which may incorporate a one way valve 2, a skirt member 24 permanently engaging the container neck exterior, a closure cap 22, and a surrounding hood 30 incorporating a tear strip and having an inner flange 36 engaging in a permanent manner with the skirt member 24. The tear strip in the hood may be formed by a part helical line of weakness extending between upper and lower lines of weakness 50 and 52. After the tear strip is removed an annular portion of the hood remains in place as a tamper evident device, due to a flange 36 permanently engaging under a shoulder 38 on the skirt member. The flange is initially downwardly projecting on release of the hood from its mould (figure 7), the flange being caused to inturn on application of the hood onto the closure cap and skirt member. The inturning action is assisted by discontinuities 56 on its free lower edge or by moulding the flange in separate arcuate portions.

59) Family number: 15337110 (US4909434A)

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Title: MOISTURE IMPERVIOUS CARTON HAVING ONE-PIECE POURING SPOUT SEALED TO INNERMOST AND OUTERMOST SURFACES

Priority: CA19890600237 19890519 EP19890201087 19890427 US19880196418 19880520

Family:

Publication number	Publication date	Application number	Application date
<u>AT96107 E</u>	19931115	AT19890201087T	19890427
<u>CA1330550 A1</u>	19940705	CA19890600237	19890519
<u>DE68910002 D1</u>	19931125	DE19896010002	19890427
<u>DE68910002 T2</u>	19940511	DE19896010002T	19890427
<u>DK243489 A</u>	19891121	DK19890002434	19890519
<u>DK243489 A0</u>	19890519	DK19890002434	19890519
<u>EG18736 A</u>	19931230	EG19890000248	19890518
<u>EP0342729 A1</u>	19891123	EP19890201087	19890427
<u>EP0342729 B1</u>	19931020	EP19890201087	19890427
<u>ES2046446 T3</u>	19940201	ES19890201087T	19890427
<u>FI892429 A</u>	19891121	FI19890002429	19890519
<u>FI892429 A0</u>	19890519	FI19890002429	19890519
<u>JP2127243 A2</u>	19900515	JP19890127724	19890520
<u>MA21558 A1</u>	19891231	MA19890021809	19890519
<u>PT90612 A</u>	19891130	PT19890090612	19890519
<u>PT90612 B</u>	19940531	PT19890090612	19890519
<u>US4909434 A</u>	19900320	US19880196418	19880520

Probable Assignee: BEVERAGES HOLDINGS LLC

Assignee(s):^(std): PROCTER AND GAMBLE COMPANY THE ; PROCTER AND GAMBLE CO ; PROCTOR AND GAMBLE CO ; PROCTER AND GAMBLE ; THE PROCTER AND GAMBLE COMPANY

Assignee(s): UBS STAMFORD BRANCH AG ; THE PROCTER AND GAMBLE CO CINCINNATI OHIO US ; SD IP HOLDINGS CO ; PROCTER AND GAMBLE CO THE ; BEVERAGES HOLDINGS LLC ; BROWN MICHAEL THOMAS ; COMERICA BANK ADMINISTRATIVE AGENT AS ; COMERICA BANK AS ADMINISTRATIVE AGENT ; ELATIONS CO LLC ; SUNNY DELIGHT BEVERAGES CO ; THE PROCTER AND GAMBLE CO ; JONES DONALD EDWARD ; UBS AG

Inventor(s):^(std): BROWN MICHAEL THOMAS ; JONES DONALD EDWARD ; JONES DONALD E ; BROWN MICHAEL T ; MAIKERU TOOMASU BURAUN ; DONARUDO EDOWAADO JIYOONZU

Inventor(s): BROWN MICHAEL THOMAS CINCINNATI OHIO 45216 US ; JONES DONALD EDWARD CLEVELAND OHIO 45002 US

Agent(s): KIRBY EADES GALE BAKER

Designated states: AT BE CH DE ES FR GB GR IT LI LU NL SE

International class
(IPC 8-9): B29C65/08 B31B1/84 B65D5/74 B65D53/00 (Advanced/Invention) ;
B29C65/08 B31B1/74 B65D5/74 B65D53/00 (Core/Invention)

International class
(IPC 1-7): B31B1/84 B31B15/74 B31B7/74 B65D47/06 B65D5/74 B65D53/00 B65D7/12

CPC: B29C65/222 B65D5/746 B29C65/08 B29C65/38 B29C66/349 B29C66/3494 B29C66/53245 B29C66/81811 B29C66/0044 B29C66/8122 B29C66/53247 B29C66/8322 B29C66/81821 B29C65/568 B29C66/12441 B29C66/12464 B29C66/12469 B29C66/131 B29C66/72328 B29C66/81431 B29C66/81427 B29C65/18 B29C65/32 B29L2031/7166 B29C66/7392 B29C66/73921 B29C66/7379 B29C66/71 B29C66/61 B29C65/72

European class: B29C65/08 B29C66/349 B29C66/532 B29C66/53245 B29C66/81811 B65D5/74D L29C65/38 L29C66/3494 L29C66/53247 L29K711/12B

US class: 220/258 220/258.2 220/288 220/359 229/125.15 493/133 493/87

[Classification Explorer](#)

Cited documents: US4830273 A, US4813578 A, US4753832 A, US4733786 A, US4730769 A, US4723689 A, US4705197 A, US4669640 A, US4624391 A, US4605136 A, US4604850 A, US4595116 A, US4588105 A, US4582216 A, US4570826 A, US4555037 A, US4553693 A, US4533071 A, US4526287 A, US4520940 A, US4498588 A, US4488661 A, US4483464 A, US4448326 A, US4397401 A, US4363420 A, US4344472 A, US4244491 A, US4241855 A, US4231488 A, US4227629 A, US4214675 A, US4174051 A, US4141477 A, US4122970 A, US3998354 A, US3990603 A, US3977591 A, US3968872 A, US3933297 A, US3924777 A, US3923203 A, US3756448 A, US3659756 A, US3642047 A, US3608771 A, US3481515 A, US3458080 A, US3412919 A, US3334797 A, US3300106 A, US3282477 A, US3239112 A, US3029009 A, US3016168 A, US2946478 A, US2820581 A, US2690861 A, US2687831 A, US2670885 A, US2543909 A, US2418659 A, US2400716 A, US2198564 A, US2185284 A, US2156366 A, US2142293 A, US2104744 A, US1357304 A, US1165229 A, GB984756 A, GB964860 A, FR1395697 A, FR1349783 A, FR1191109 A, EP0018325 A1, DE2659275 A1, DE1093722 B, CA534911 A,

Forward Citations: WO9905029, WO9712813, WO9503976, WO9408858, WO9407691, WO9315970, WO9313930, WO9313930, WO9310967, WO9108957, WO12012686, WO12012686, WO04110882, WO0240360, WO0128634, USRE36729, US9511559, US9051078, US8468635, US8336758, US7261216, US7069931, US7007695, US6959709, US6958033, US6776301, US6626315, US6612466, US6604524, US6554182, US6454161, US6205746, US6185906, US6158197, US6090029, US6079185, US6056142, US6045004, US6006984, US6003728, US6003712, US5992668, US5934496, US5927549, US5853109, US5851630, US5851072, US5770009, US5759143, US5725121, US5715652, US5653832, US5636784, US5624528, US5601669, US5597082, US5573134, US5498225, US5429699, US5372300, US5348184, US5348182, US5304265, US5303837, US5271519, US5249695, US5244520, US5219320, US5199635, US5174465, US5169374, US5152438, US5145083, US5133497, US5125886, US5110041, US5110040, US5108029, US5088643, US5076493, US5060804, US5058360, US5052568, US5038954, US2013056468, US2011119843, US2009261154, US2008296299, US2006051491, US2005252839, US2004256346, US2004245262, US2004045967, US2004035883, US2004035426, US2003146216, JP4634653, JP2009234600, JP2002284156, JP2002142910, JP2002052627, GR1003038, FR2657844, FR2645502, EP1853485, EP1284223, EP1190951, EP0807581, EP0751073, EP0572566, EP0572566, EP0460394, EP0448329, EP0405072, DE4023274, DE4016655, DE102005010547, DE102005010547, AU680172,

Abstract:

Source: US4909434A A liquid-containing paperboard laminate carton including a one-piece plastic spout (1) having a pair of opposing flanges (4,6) sealed about an aperture (5) in one of the carton walls to both the innermost (26) and outermost (2a) surfaces of the carton wall. The double flange configuration not only forms a mechanically positive innerlock between the plastic spout and the carton wall, but even more importantly, isolates the cut edges of the aperture from exposure to liquid either from within the container or from the environment through which the carton must pass from the point of manufacture until it is ready for disposal after its contents have been consumed. The spout preferably includes a liquid passageway having a membrane-type seal (1c) across its discharge orifice to provide evidence of tampering and a resealable closure member (1b) such as a screw cap or a snap-on closure held in place by means of a mating ring or groove on the spout. The cross-sectional area and configuration of the liquid passageway and discharge orifice in the spout are designed to prevent to complete blockage by liquid when the package contents are being dispensed during a normal dispensing cycle, i.e., when the package is not being held completely upside down. Method and apparatus for securing said one-piece spout in sealed liquid type relation of both surfaces of the carton wall either sequentially or simultaneously are also disclosed.

60) Family number: 34367540 (US2008219885A)

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Title: METHOD AND DEVICE FOR COLLECTION AND TRANSPORT OF A BIOLOGICAL SAMPLE**Priority:** AU20050905377 20050929 AU20060297061 20060925 WO2006AU01398 20060925

Family:	Publication number	Publication date	Application number	Application date
	<u>AU2006297061 AA</u>	20070405	AU20060297061	20060925
	<u>US2008219885 AA</u>	20080911	US20060088692	20060925
	<u>WO07035984 A1</u>	20070405	WO2006AU01398	20060925

Probable Assignee: ORYX HOLDINGS PTY LTD**Assignee(s):**^(std): HORSTMAN TONY ; ORYX HOLDINGS PTY LTD**Inventor(s):**^(std): HORSTMAN TONY**Inventor(s):** TONY HORSTMAN**Agent(s):** CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; STOUT UXA BUYAN AND MULLINS LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
^(IPC 8-9): B01L3/00 B65D27/00 B65D6/02 B65D77/04 B65D81/22 B65D81/26 B65D85/50
G01N1/00 ^(Advanced/Invention);
B01L3/00 B65D27/00 B65D6/00 B65D77/04 B65D81/18 B65D81/26 B65D85/50
G01N1/00 ^(Core/Invention)

CPC: A61B90/98 A61B10/0096 G01N2001/005**European class:** A61B10/00S K61B19/44H S01N1/00B3**US class:** 422/102 422/102S 422/400 422/400P 422/61 422/61P[Classification Explorer](#)**Cited documents:** WO06066804, WO0039579 A1, US7611670 BB, US7516847 BB, US6447463 BA, US6103518 A, US5543115 A, US5190049 A, US5088502 A, US4903842 A, US2008093363 AA, US2007207549 AA, US2006147349 AA, US2006086640 AA, US2005242963 AA, US2005227269 AA, US2005196318 AA, US2005181517 AA, US2003012701 AA, US2002165673 AA, US2002055176 AA, US2002002344 AA, JP8043271, JP2001221721, EP0717283 A2,**Forward Citations:** WO13192607, WO11156267, WO09146450, WO09146450, US9751668, US9402389, US9357766, US8802370, US8613711, US2016011191, US2015314927, US2014017659, US2013340582, US2013325492, US2011275954, ITRM20130331, ITPD20080333, EP2737951, EP2294530, EP2294530,**Abstract:**

Source: US2008219885A A device for the collection and transport of biological material, the device including a container having at least two parts temporarily attached together and adapted for storage of biological collection indicia on an outbound leg of the transport and the safe transport of a biological sample on an inbound leg wherein the biological sample is rendered benign during transport and transported in one of the container parts.

61) Family number: 7080590 (GB2255083A)**Title:** CLOSURES**Priority:** GB19910008694 19910417

Family:	Publication number	Publication date	Application number	Application date
	<u>GB2255083 A1</u>	19921028	GB19920008278	19920415
	<u>GB2255083 B2</u>	19951115	GB19920008278	19920415
	GB9108694 A0	19910612	GB19910008694	19910417
	GB9208278 A0	19920603	GB19920008278	19920415
	<u>ZA9202805 A</u>	19921230	ZA19920002805	19920416

Probable Assignee: JAYCARE LTD**Assignee(s):^(std):** JAYCARE LTD**Assignee(s):** JAYCARE LIMITED**Inventor(s):^(std):** STUBBS PETER**Inventor(s):** PETER STUBBS

International class [B65D47/18 B65D51/18](#) (Advanced/Invention);
 (IPC 8-9): [B65D47/06 B65D51/18](#) (Core/Invention)

International class [B65B B65D51/18 B67B](#)
 (IPC 1-7):

CPC: [B65D47/185 B65D51/18 B65D2251/0015 B65D2251/0087](#)**European class:** [B65D47/18A B65D51/18 L65D251/00Y2D L65D251/00Y6J](#)[Classification Explorer](#)**Cited documents:** GB701766 A, GB1316163 A, GB1225889 A,**Forward Citations:** WO12034175, US8827094, US8573423, US7963409, US5938054, GB2416535, GB2416535, GB2343444, FR2693176, EP1256524, EP0906869, EP0788975,**Abstract:**

Source: GB2255083A A closure comprises a cap 16A, 16B and a plug 40 loosely located inside the cap so that when the closure is applied by push fitting, the plug is forced into a mouth 42 of a container and the cap fits over the mouth. A tear band (18, fig 1) may be provided part of the way round the cap, enabling the top of the cap 16A to be hinged open to expose the plug which may have apertures 62 enabling the container's contents to be dispensed by being sprinkled through the apertures. The plug may be retained in the mouth by circumferential ribs 58, and the cap may have a retention band 52 which snaps under a ring 48 on the container. The band may also serve to retain the plug in the cap before the closure is applied.; The top part 60 of the plug may have a smaller radius than the outside of the container mouth (fig 8), to allow removal of the top of the cap without interfering with the top of the plug.

62) Family number: 20651484 (WO9840284A1)

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Title: CONTAINER WITH TAMPER EVIDENT CLOSURE
Priority: GB19970005080 19970312 WO1998GB00583 19980225
Family:

Publication number	Publication date	Application number	Application date
<u>AU199863032 A1</u>	19980929	AU19980063032	19980225
<u>EP0968120 A1</u>	20000105	EP19980907046	19980225
<u>EP0968120 B1</u>	20011121	EP19980907046	19980225
GB9705080 A0	19970430	GB19970005080	19970312
<u>WO9840284 A1</u>	19980917	WO1998GB00583	19980225

Probable Assignee: AUDUS NOBLE LTD

Assignee(s):^(std): AUDUS NOBLE LTD ; THOMPSON DAVID NOBLE

Assignee(s): AUDUS NOBLE LIMITED

Inventor(s):^(std): THOMPSON DAVID NOBLE

Inventor(s): DAVID NOBLE THOMPSON

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HU ID IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

International class
 (IPC 8-9): B65D55/02 (Advanced/Invention);
B65D55/02 (Core/Invention)

International class
 (IPC 1-7): B65D55/02

CPC: B65D55/024

European class: B65D55/02F

[Classification Explorer](#)

Cited documents: WO9314001 A1, US5090583 A, US3604596 A, US2077977 A, GB2239866 A1, FR2212276 A1,

Forward Citations: WO13139352, FR2785262,

Abstract:

A container having a hollow body portion (2) closed by a cap portion (6) has a tamper evident closure thereon which comprises at least one plug (12) carried by one of the body portion (2) and the cap portion (6) and which, with the cap portion (6) in a closed position on the body portion (2), is located in, to be a tight friction fit in, a corresponding recess (10) formed in the other of the body portion (2) and the cap portion (6), a region of weakness (18) being provided between the plug (12) and the component on which it is mounted, the arrangement being such that, on movement of the cap portion (6) from its closed position on the body portion (2), said region of weakness (18) is broken whereby, on return of the cap portion (6) to its closed position, evidence of tampering is immediately visually apparent.

Title: CONTAINER WITH SECURE AUDIBLE CLOSURE
Priority: US20130785378P 20130314 US20150848952 20150909 WO2014US21042 20140306
Family:

Publication number	Publication date	Application number	Application date
AU2014241474 AA	20141002	AU20140241474	20140306
AU2014241474 BB	20170706	AU20140241474	20140306
CA2904880 AA	20150909	CA20142904880	20140306
CN105228910 A	20160106	CN201480013775	20140306
EP2969790 A1	20160120	EP20140775442	20140306
EP2969790 A4	20161102	EP20140775442	20140306
JP2016515073 T2	20160526	JP20160500703T	20140306
KR20150130320 A	20151123	KR20157026066	20140306
MX2015012169 A1	20160415	MX20150012169	20140306
NZ712475 A	20170929	NZ20140712475	20140306
US2015375891 AA	20151231	US20150848952	20150909
US9481486 BB	20161101	US20150848952	20150909
WO14158945 A1	20141002	WO2014US21042	20140306

Probable Assignee: GRAPHIC PACKAGING INT INC

Assignee(s):^(std): BROCK TRACY ; BURKE BRADLEY J ; GRAPHIC PACKAGING INT INC ; KRAFT FOODS GLOBAL BRANDS LLC ; WERTS III RONALD R ; RUHBUSCH TODD ; NAMETH TRACY L ; KRAFT FOODS GROUP BRANDS LLC

Assignee(s): WERTS RONALD R III

Inventor(s):^(std): BROCK TRACY ; BURKE BRADLEY J ; NAMETH TRACY L ; RUHBUSCH TODD ; WERTS III RONALD R ; WERTS RONALD R III ; TRACY L NAMETH ; TRACY BROCK ; TODD RUHBUSCH ; RONALD R WERTS III ; BRADLEY J BURKE

Inventor(s): BRADLEY J ; RONALD R ; WERTS RONALD R

Agent(s): PHILLIPS ORMONDE FITZPATRICK; BERESKIN AND PARR LLP SENCRL SRL; FINNIE PETER JOHN; FOLEY AND LARDNER LLP; LAZARUS JOHN M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D17/00](#) [B65D17/28](#) [B65D5/20](#) [B65D5/54](#) [B65D5/66](#) (Advanced/Invention)
 (IPC 8-9):

CPC: [B65D5/54](#) [B65D17/00](#) [B65D5/2057](#) [B65D5/2076](#) [B65D5/5425](#) [B65D2203/12](#) [B65D5/5435](#)

US class: [229/123.3](#)

[Classification Explorer](#)

Cited documents: WO11071774 A1, USRE26471 E, US7669755 BB, US5553773 A, US5515996 A, US5505374 A, US5373960 A, US5314114 A, US5203495 A, US4863035 A, US4688677 A, US4314643 A, US4310093 A, US4284197 A, US4198900 A, US4141449 A, US4113104 A, US3900158 A, US3338505 A, US3310222 A, US3294309 A, US3283991 A, US3206102 A, US3191848 A, US3125280 A, US3078030 A, US3073501 A, US2963214 A, US2906444 A, US2396310 A, US2369385 A, US2011253776 AA, US2009001145 AA, US2007108263 AA,

Abstract:

Source: US2015375891A A re-closeable folded container includes a hexahedral base including a front panel and a rear panel, a cover pivotally connected with an upper edge of a rear panel for movement between an open

position and a closed position, and a locking panel hingedly connected with an upper edge of the front panel. The front panel includes a tear-away portion defined by a score line. The locking panel includes a first tab, a second tab, and a tear-away portion defined by score lines. The tear-away portion of the locking panel is fixedly attached to both the front portion of the cover and the tear-away portion of the front panel such that initial movement of the cover from the closed position toward the open position causes the locking panel and the front panel to tear along the score lines and causes both tear-away portions to pivotally move with the cover.

64) Family number: 32133451 (WO05072941A1)

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Title: TAMPER EVIDENT CLOSURE FOR BOTTLES**Priority:** WO2004IT00031 20040130

Publication number	Publication date	Application number	Application date
<u>WO05072941 A1</u>	20050811	WO2004IT00031	20040130

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):^(std):** BATTEGAZZORE PIERO ; GUALA CLOSURES SPA**Assignee(s):** GUALA CLOSURES S P A**Inventor(s):^(std):** BATTEGAZZORE PIERO**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class**
(IPC 8-9): B29D29/00 B65D55/02 (Advanced/Invention);
B29D29/00 B65D55/02 (Core/Invention)**International class**
(IPC 1-7): B29D29/00**CPC:** B65D55/026 B65D2101/0084**European class:** B65D55/02G L65D101/00A6[Classification Explorer](#)**Cited documents:** WO9924329 A1, WO03095326 A1, US5265744 A, US4480760 A, US2002195413 AA,**Forward Citations:** WO16159923, WO09010717, US8453856,**Abstract:**

Closure with an optical tampering indicator for containers of fluid particularly for liquor bottles provided with an opening (15) bounded by the free end of a neck (3) which extends axially from the body (4) of the bottle along a longitudinal axis (X-X) coinciding with the central axis of the closure, which neck (3) is provided with an outer surface (6) comprising –a cap (1) –a tubular sleeve (10) –means (14,46,48) for opening and closing the interior of the bottle as a consequence of screwing up and unscrewing the cap (1), –a plate-like body (20).

0) ZA9605194A – CARTON CLOSURE.

65) Family number: 20666801 (ZA9605194A)

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Title: CARTON CLOSURE.

Priority: GB19950013009 19950619 WO1996GB01451 19960618

Family:	Publication number	Publication date	Application number	Application date
	AU199661304 A1	19970115	AU19960061304	19960618
	EP0842093 A1	19980520	EP19960918747	19960618
	GB2316938 A1	19980311	GB19970026061	19960618
	GB9513009 A0	19950830	GB19950013009	19950619
	GB9726061 A0	19980204	GB19970026061	19960618
	WO9700206 A1	19970103	WO1996GB01451	19960618
	ZA9605194 A	19971219	ZA19960005194	19960619

Probable Assignee: REXAM PKL LIMITED

Assignee(s):^(std): BOWATER PKL LTD ; HALL JAMES ; MICHAEL MICHAEL JAMES ; REXAM PKL LTD ; REXAM PKL LIMITED

Assignee(s): BOWATER PKL LIMITED

Inventor(s):^(std): HALL JAMES ; JAMES HALL ; MICHAEL JAMES MICHAEL ; MICHAEL MICHAEL JAMES

Designated states: AL AM AT AU AZ BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GR HU IE IL IS IT JP KE KG KP KR KZ LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN

International class
(IPC 8-9): [B65D5/70](#) (Advanced/Invention);
[B65D5/70](#) (Core/Invention)

International class
(IPC 1-7): [B65D B65D5/70](#)

CPC: [B65D5/708](#)

European class: [B65D5/70E](#)

[Classification Explorer](#)

Cited documents: US4770325 A, US4732315 A, EP0558946 A1, EP0444862 A1, EP0407746 A1, EP0367092 A1,

Forward Citations: WO12052678, WO02072439, US9096353, FR2966444, EP1262413, DE10126742, DE10126742, CN103228551, CN103228551,

Abstract:

Various container closures are made from one or more planar members so as to be substantially flat against the container, e.g. carton, wall. Separately formed closures (10) generally comprise first (16) and second members (20), one of which is pivotable with respect to the carton (12) to replace a plug (22) in a hole (28) in the carton or the second member.

66) Family number: 61599977 (WO17063928A1)

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Title: CONTAINER WITH FRANGIBLE WEAKENED PORTION AND MANUFACTURE THEREOF**Priority:** GB20150018363 20151016

Family:	Publication number	Publication date	Application number	Application date
	GB201518363 A0	20151202	GB20150018363	20151016
	<u>GB2543495 A1</u>	20170426	GB20150018363	20151016
	<u>WO17063928 A1</u>	20170420	WO2016EP73771	20161005

Probable Assignee: GR8 ENGINEERING LTD**Assignee(s):**^(std): GR8 ENG LTD ; GR8 ENGINEERING LTD**Inventor(s):**^(std): CLARKE PETER REGINALD ; PETER REGINALD CLARKE**Agent(s):** JENKINS PETER DAVID

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B29C59/16 B65D17/00 B65D43/02 B65D50/00 B65D6/00 (Advanced/Invention)
 (IPC 8-9):

CPC: B65D17/24 B65D43/0235 B29C59/16 B29C2791/009 B65D11/00 B65D50/00 B65D2101/0015 B65D2555/02

[Classification Explorer](#)**Cited documents:** US6427420 BA, US2013077898 AA, US2012288660 AA,**Abstract:**

A container comprising a part, in the form of a container body or container closure, optionally a lid, having a frangible weakened portion formed in a layer of polyethylene terephthalate forming a wall of the container, the weakened portion comprising a groove (20) cut into a first surface of the layer, a first portion (24) of the layer surrounding the groove having a crystallinity of from 35 to 45 percent, and a second portion (26) of the layer, which second portion is adjacent to the first portion on opposite sides of the groove and remote from the groove, the second portion having a crystallinity at least 5 percent less than the crystallinity in the first portion, wherein the layer has a thickness of from 200 to 700 μ m and the groove has a depth of from 200 to 500 μ m.

67) Family number: 65134434 (WO17037551A1)

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Title: CONTAINER AND RECYCLABLE TAMPER EVIDENT CLOSURE ASSEMBLY**Priority:** IT201510000048435 20150903 IT2015UB03398 20150903

Family:	Publication number	Publication date	Application number	Application date
	<u>WO17037551 A1</u>	20170309	WO2016IB54347	20160721

Probable Assignee: GUALA CLOSURES SPA**Assignee(s):**^(std): GUALA CLOSURES SPA**Inventor(s):**^(std): GIOVANNINI MARCO ; VIALE LUCA**Agent(s):** BONVICINI DAVIDE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D1/02 B65D41/34 (Advanced/Invention)
(IPC 8-9):

CPC: B65D41/348 B65D1/023 B65D2101/0023[Classification Explorer](#)**Cited documents:** LU49121 A, GB2078689 A1, EP0047854 A1, DE1432248 A1,**Abstract:**

An assembly (100) comprises a container (1) with a neck (2) and a tamper-evident closure (10) coupled with the neck (2). The neck (2) has a projection (7) with a neck (8) and a ramp (9). The closure (10) comprises a skirt (15) with two portions (17, 18) engaged with the groove (8) and the ramp (9). The skirt (15) may be rotated relative to the neck (2) to enlarge its diameter and disengage the skirt (15) from the neck (2).

68) Family number: 17910096 (DE6904544U)

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Title: SCHIEBESCHACHTEL MIT ORIGINALITAETSVERSCHLUSS SLIDING BOX OF ORIGINALITAETSVERSCHLUSS (Machine translation)**Priority:** DE19690004544U 19690206

Family:	Publication number	Publication date	Application number	Application date
	<u>AT301446 B</u>	19720911	AT19700001013	19700204
	<u>DE6904544 U</u>	19690619	DE19690004544U	19690206

Probable Assignee: HEINRICH NICOLAUS GES MIT BESC**Assignee(s):**^(std): HEINRICH NICOLAUS GES MIT BESC ; UNILEVER NV**Assignee(s):** HEINRICH NICOLAUS GESELLSCHAFT MIT BESCHRAENKTER H ; HEINRICH NICOLAUS GESELLSCHAFT MIT BESCHRAENKTER HAFTUNG ; UNILEVER N V**Inventor(s):**^(std): SCHRAEGLE WALTER**Inventor(s):** WALTER SCHRAEGLE**International class**
^{(IPC 8-9):} B65D5/38 B65D5/43 (Advanced/Invention);
B65D5/00 B65D5/42 (Core/Invention)**International class**
^{(IPC 1-7):} B65D5/26 B65D5/38[Classification Explorer](#)**Abstract:**

Source: DE6904544U (Claim 1) S o h u t z a n s p r U c h e S c h u t z a n s p r u e c h e –

----- 1.) Schiebeschachtel mit Originalitaetsverschluss, beste- hend aus einer schlauchfoermigen Huelse und einem in diese eingeschobenen, aus Boden und senkrechten Waenden gebildeten Schieber dadurch gekennzeichnet, dass an ei- nem der offenen Enden der Huelse ueber eine Schwaechung- linie (22) eine zwischen der Bodenseite (12) der Huelse und dem Boden (30) des Schiebers eingesteckte Verlaen- gerung (16, 17) mit einer auf die Teilflaeche (17a) umgelegten Verriegelungsklappe (18) angelenkt und in dem Boden (30) des Schiebers eine Ausnehmung (38) angeordnet ist, welche nach Lage und Groesse so ausge- bildet ist, dass die Verriegelungsklappe (18) in, ssle einrastet. 2.

Machine translation: (claim 1) S ohutzanspr U S che che above chutzanspr

----- 1) cardboard box with tamper-evident closure, consisting of consisting of a tubular sleeve and characterized an inserted into, from bottom and vertical walls formed slider in that on egg-NEM of the open ends of the sleeve via a weakening line (22) one (12) between the bottom side is the sleeve and the bottom (30) of the slide inserted exten-delay (16, 17) with an articulated on the partial surface (17a) folded locking flap (18) and in the soil (30) of the slider has a recess (38), which according to location and size-out Sun makes is that the locking flap (18) ssle engages. Second

69) Family number: 5513262 (EP0127704A1)

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Title: Improvements in lids and containers.**Priority:** EP19830303131 19830601

Family:	Publication number	Publication date	Application number	Application date
	<u>EP0127704 A1</u>	19841212	EP19830303131	19830601

Probable Assignee: SUTCH BRIAN LEO CHUDLEIGH**Assignee(s):^(std):** SUTCH BRIAN LEO CHUDLEIGH**Inventor(s):^(std):** SUTCH BRIAN LEO CHUDLEIGH**Designated states:** AT BE CH DE FR GB IT LI LU NL SE**International class** B65D43/02 (Advanced/Invention)
(IPC 8-9):**International class** B65D55/06
(IPC 1-7):**CPC:** B65D43/0295 B65D2101/0023 B65D2101/0038 B65D2543/00092 B65D2543/00296
B65D2543/00509 B65D2543/00537 B65D2543/00546 B65D2543/00555**European class:** B65D43/02T9E6 L65D101/00A3 L65D101/00A3C L65D543/00Y1F2C L65D543/00Y1M6
L65D543/00Y8D1C L65D543/00Y8D3 L65D543/00Y8D3N L65D543/00Y8D5[Classification Explorer](#)**Cited documents:** US3831798 A, GB895191 A, GB568935 A, FR2443978 A1, FR2395909 A1, FR2187629 A1,**Forward Citations:** EP0727136,**Abstract:**

Source: EP0127704A1 A tamper evident retainer to hold a closure and container in closed condition, the retainer having a displaceable extension flange (22) carrying retaining means (26), in the initial condition of the retainer, before application of the closure to the container, the retainer having the extension flange and retaining means out of the path of relative movement of the closure and container during closing and being displaceable to position the retaining means in the path of relative movement of the closure and container during opening, the retainer having a weakened zone (25, 28) so that access can be had to the container by rupturing the weakened zone to release the retaining means and thereby allow the closure to be removed from the container.

0) FR1511382A – VERSEUR ET FERMETURE, NOTAMMENT EN PLASTIQUE PO...

70) Family number: 25493995 (FR1511382A)

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Title: Verseur et fermeture, notamment en plastique pour bouteilles et recipient equipe d'un tel verseur et d'une telle fermeture Spout and closure, including plastic bottles and container equipped with a spout and as of such closing (Machine translation)

Priority: DE1966B086578 19660407

Family:	Publication number	Publication date	Application number	Application date
	CH447851 A	19671130	CH19670000031	19670103
	DE1532390 A1	19700205	DE19661532390	19660407
	FR1511382 A	19680126	FR19670094883	19670214

Probable Assignee: BENDER WERKE GMBH

Assignee(s):^(std) BENDER WERKE G M B H ; BENDER WERKE GMBH

Inventor(s):^(std) HARDY LOEHRER

Inventor(s): LOEHRER HARDY

International class
^{(IPC 8-9):} [B65D47/06](#) [B65D47/10](#) [B65D47/12](#) [B65D51/18](#) [F16K31/385](#) [F24D19/10](#) ^(Advanced/Invention);
[B65D47/06](#) [B65D47/12](#) [B65D51/18](#) [F16K31/36](#) [F24D19/00](#) ^(Core/Invention)

International class
^{(IPC 1-7):} [B65D47/06](#) [B65D47/36](#) [B67B](#)

CPC: [B65D47/043](#) [B65D47/06](#) [B65D47/103](#) [B65D47/128](#) [B65D51/18](#) [B65D2251/0025](#)
[B65D2251/0087](#) [F16K31/385](#) [F24D19/1066](#)

European class: [B65D47/04A](#) [B65D47/06](#) [B65D47/10A](#) [B65D47/12D1](#) [B65D51/18](#) [F16K31/385](#)
[F24D19/10C4](#) [L65D251/00Y2J](#) [L65D251/00Y6J](#)

[Classification Explorer](#)

Forward Citations: WO0155003, US6851586, FR3019801, FR2804089, FR2749565, EP2489603, EP1250270,

Abstract:

Source: FR1511382A (Claim 1) **ATTENTION** debut du champ CLMS peut contenir fin de DESC **. aussi que le fond 62 du bouchon creux 61 ne vient pas en contact avec les parties du fond du verseur, en particulier avec la calotte 47.

Machine translation: (Claim 1) ** WARNING ** start of CLMS field may contain the end of DESC **. so that the bottom 62 of the hollow plug 61 does not come into contact with parts of the bottom of the spout, especially with the cap 47.

71) Family number: 28522949 (WO04018308A2)

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Title: ARTICLE FOR CONTAINING A SUBSTANCE
Priority: GB20020019424 20020820 GB20030006455 20030320 WO2003GB03656 20030820
Family:

Publication number	Publication date	Application number	Application date
<u>AU2003259337 AA</u>	20040311	AU20030259337	20030820
GB200219424 A0	20020925	GB20020019424	20020820
GB200306455 A0	20030423	GB20030006455	20030320
<u>WO04018308 A2</u>	20040304	WO2003GB03656	20030820
<u>WO04018308 A3</u>	20040527	WO2003GB03656	20030820

Probable Assignee: BRANCH K

Assignee(s):^(std): BRANCH K ; BRANCH KAREN

Inventor(s):^(std): BRANCH KAREN

Inventor(s): KAREN BRANCH

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
^{(IPC 8-9):} B65D5/02 B65D5/42 B65D77/04 (Advanced/Invention);
B65D5/02 B65D5/42 B65D77/04 (Core/Invention)

International class
^{(IPC 1-7):} B65D5/02 B65D5/10 B65D5/42 B65D5/46 B65D5/50 B65D5/62 B65D77/04

CPC: B65D5/0209 B65D5/4204 B65D5/4208 B65D5/422 B65D77/0486

European class: B65D5/02A B65D5/42B B65D5/42D B65D5/42E1B B65D77/04F1

[Classification Explorer](#)

Cited documents: US5232087 A, US1943074 A,

Abstract:

An article (10) for containing a substance, which comprises a receptacle (13) for containing the substance and an integral dedicated data, input surface (22, 22') which has accessible and non-accessible positions. The receptacle (13) contains the substance directly or contains a separate container (11) within which the substance is contained. Also disclosed is display apparatus for displaying display articles.

Title: CLOSURE ARRANGEMENT**Priority:** WO2009IB53600 20090814 ZA20080006667 20080817

Family:	Publication number	Publication date	Application number	Application date
	<u>WO10020926 A1</u>	20100225	WO2009IB53600	20090814
	<u>ZA201101195 A</u>	20120425	ZA20110001195	20110215

Probable Assignee: MCG IND PTY LTD**Assignee(s):^(std):** BODE KENNETH TREVOR ; GUALA CLOSURES SOUTH AFRICA PROPRIETARY LTD ; MCG IND PTY LTD ; NAIDOO NEELIN ; STONE MARK ERIC**Assignee(s):** MCG INDUSTRIES PTY LIMITED**Inventor(s):^(std):** BODE KENNETH TREVOR ; NAIDOO NEELIN ; STONE MARK ERIC**Agent(s):** D M KISCH INC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class
(IPC 8-9): B65D B65D41/34 (Advanced/Invention);
B65D41/34 (Core/Invention);
B65D (Subclass/Invention)

CPC: B65D41/348**European class:** B65D41/34F[Classification Explorer](#)**Cited documents:** US3823841 A, US3664536 A, US3088615 A, US2326480 A, GB947043 A, GB2073159 A1, EP1695917 A1,**Abstract:**

Source: ZA201101195A This invention relates to a closure arrangement 10 for closing and sealing the opening of a bottle 12 with a threaded neck finish. The closure arrangement 10 comprises an inner metal cap 14 having threading 20 for engaging complementary threading of bottle 12 and an outer metal cap 28 secured to the inner cap 14. The outer surface of the outer cap 28 is substantially uniformly smooth to conceal the inner threaded profile of the inner cap 14.

73) Family number: 64783099 (WO17014637A1)

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Title: PACKAGE WITH TWO-PART HINGE**Priority:** WO2015NL50536 20150722

Family:	Publication number	Publication date	Application number	Application date
	WO17014622 A1	20170126	WO2015NL50536	20150722
	WO17014637 A1	20170126	WO2016NL50549	20160722

Probable Assignee: N V NUTRICIA**Assignee(s):^(std):** N V NUTRICIA**Assignee(s):** NUTRICIA NV**Inventor(s):^(std):** PEREK FRANCK**Agent(s):** NEDERLANDSCH OCTROOIBUREAU

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D43/16](#) [B65D43/24](#) (Advanced/Invention)
(IPC 8-9):

CPC: [B65D43/164](#) [B65D43/24](#)[Classification Explorer](#)

Cited documents: WO14129887 A1, WO0185551 A2, US6761279 BA, US4787526 A, US2797840 A, US2014137522 AA, US2008041861 AA, EP1000577 A1, DE8308128 U,

Abstract:

A package for a powdered nutritional product comprises a container for receiving the nutritional product, having a base and a peripheral wall. A lid assembly comprises a circumferential rim (10), defining an access opening, for connection to the container and a lid (12), pivotably attached to the rim by at least one hinge having a hinge axis. The lid has an open position and a closed position in which it closes the access opening. The hinge comprises a rim portion, integral with the rim, and a lid portion, integral with the lid, that can be engaged to each other to join the lid to the rim. The hinge is arranged such that the lid portion can only be engaged with the rim portion in the open position of the lid. In the closed position of the lid, the lid portion is locked to the rim portion, preventing separation of the lid portion from the rim portion. The hinge is also arranged to prevent opening of the lid beyond a point at which the package is unstable.

Title:	Closures			
Priority:	GB19880021128 19880909		GB19880026419 19881111	
Family:	Publication number	Publication date	Application number	Application date
	<u>GB2223748 A1</u>	19900418	GB19890019821	19890901
	GB8821128 A0	19881012	GB19880021128	19880909
	GB8826419 A0	19881214	GB19880026419	19881111
	GB8919821 A0	19891018	GB19890019821	19890901

Probable Assignee: METAL CLOSURES GROUP LTD

Assignee(s):^(std): METAL CLOSURES GROUP LTD ; METAL CLOSURES LTD

Assignee(s): MCG CLOSURES LIMITED

Inventor(s):^(std): THOMPSON NIGEL

Inventor(s): NIGEL THOMPSON

International class B29C45/44 B65D41/34 (Advanced/Invention)
(IPC 8-9).

International class B65D41/34
(IPC 1-7).

CPC: B29C45/44 B29C45/4407 B29L2031/565 B65D41/3428 B65D41/3447 B65D2101/0046 B65D2101/0053

European class: B29C45/44 B29C45/44B B65D41/34C1 B65D41/34D1 L29L31/56B L65D101/00A3D L65D101/00A3E

[Classification Explorer](#)

Cited documents: US4529096 A, EP0290720 A2, EP0052167 A1,

Forward Citations: WO9815468, WO9411267, WO9411267, WO06013439, US8925764, US5819965, JP2003026203, GB2295143, GB2295143, FR2659065, EP2546166, DE102012005039,

Abstract:

Source: GB2223748A A moulded closure has a tamper-evident ring 13 connected to the bottom edge of a skirt 11 by frangible bridges 14. Ring 13 has circumferentially spaced upward protrusions 17 which are inclined inwardly and which may be accommodated within slots 18 in the bottom edge of the skirt. The outwardly facing surfaces of the ring 13, including the protrusions preferably have a substantial upward inclination to enable them to be moulded by an annular mould part (37 Fig 5) from which the ring can be disengaged by a relative axial movement of the ring and mould part.

75) Family number: 55481858 (US2015298883A)

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Title: CONTAINER WITH SCOOP TRAY**Priority:** WO2012NL50454 20120627

Family:	Publication number	Publication date	Application number	Application date
	CN104603018 A	20150506	CN201280075424	20120627
	EP2867133 A1	20150506	EP20120733232	20120627
	US2015298883 AA	20151022	US20120411232	20120627
	WO14003542 A1	20140103	WO2012NL50454	20120627

Probable Assignee: NUTRICIA NV**Assignee(s):**^(std) NUTRICIA NV ; VAN PUIJENBROEK ALEXANDER JOSEPHUS MARICUS**Inventor(s):**^(std) VAN PUIJENBROEK ALEXANDER JOSEPHUS MARICUS**Agent(s):** NEDERLANDSCH OCTROOIBUREAU; CLARKSON PAUL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class ^(IPC 8-9) [A23L1/29](#) [A23L2/39](#) [A23L33/00](#) [B65D51/20](#) [B65D51/24](#) [B65D77/04](#) [B65D77/24](#) [B65D83/06](#) ^(Advanced/Invention)

CPC: [B65D2251/0021](#) [B65D2251/0093](#) [B65D2543/0024](#) [B65D2543/00296](#) [B65D2543/00842](#) [B65D77/0413](#) [B65D2543/00194](#) [B65D2543/00537](#) [B65D2543/00648](#) [B65D2543/00685](#) [B65D2543/0074](#) [B65D2543/00796](#) [B65D83/06](#) [A23L2/39](#) [A23V2002/00](#) [B65D77/245](#) [B65D51/20](#) [A23L33/40](#)

US class: [206/229](#) [426/106](#)[Classification Explorer](#)

Cited documents: WO10071424 A1, WO0051910 A1, US8727149 BA, US6612482 BB, US4456146 A, US2010236966 AA, US2009294454 AA, US2008156808 AA, US2008041861 AA, US2007102061 AA, NL8601653 A, GB2302532 A1, GB2218962 A1, EP2130776 A1, EP1318010 A1, DE19627374 A1, CN2774970 Y, CN2576647 Y, CN201793135 U, CN201023743 Y, CN102282079 A, CN101670909 A,

Forward Citations: EP2966001, CN104918866, CN104918866,**Abstract:**

Source: US2015298883A A package for a powdered nutritional product includes a container defining a powder compartment for receiving the nutritional product, having a base and a peripheral wall. A scoop tray defining a scoop recess containing an elongate scoop is provided within the container. A circumferential rim for connection to the container defines a wide access opening. A lid is hingedly attached to the rim for reclosing the access opening and covering the scoop tray. The powder and scoop are sealed at their respective locations by at least one foil arranged to seal the container prior to use by independently sealing the powder compartment and the scoop tray.

76) Family number: 2922011 (EP0439268A2)

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Title: TAMPER–EVIDENT DRUM CONTAINERS.**Priority:** GB19900001489 19900123

Family:	Publication number	Publication date	Application number	Application date
	<u>EP0439268 A2</u>	19910731	EP19910300251	19910114
	<u>EP0439268 A3</u>	19911030	EP19910300251	19910114
	GB9001489 A0	19900321	GB19900001489	19900123

Probable Assignee: FERRY PICKERING SALES LTD**Assignee(s):^(std):** FERRY PICKERING SALES LTD**Assignee(s):** FERRY PICKERING SALES LIMITED**Inventor(s):^(std):** NIXON PHILIP GRAHAM**Designated states:** AT BE CH DE DK ES FR GB IT LI LU NL SE

International class [B65D47/26](#) (Advanced/Invention);
 (IPC 8–9): [B65D47/04](#) (Core/Invention)

International class [B65D43/04](#) [B65D47/24](#) [B65D47/26](#)
 (IPC 1–7):

CPC: [B65D47/265](#)**European class:** [B65D47/26D4](#)[Classification Explorer](#)**Cited documents:** US4792054 A, US4567995 A, US4375969 A, GB2217694 A1, GB1141246 A, EP0304387 A2,**Forward Citations:** US5402921, FR2701457, EP2592014,**Abstract:**

Source: EP0439268A2 The invention relates to tamper–evident drum containers. A first aspect of the invention provides a drum container (1) in which a plug top (7) is provided with a continuous unbroken web (12) overlying the whole of the top of the container without any apertures. A fracture zone (14) is formed therein to define a frangible portion (15) which when broken away defines a dispensing hole through the web. A closure disc (8) is rotatably mounted on the plug top by having a cylindrical depending flange portion (23) received in an annular depression in the web defined by a pair of spaced cylindrical wall portions (16,17) of the web, with an undercut portion (24) around the inner cylindrical face of the flange portion receiving and retaining an annular retention bead (19) on the innermost one of the cylindrical portions of the web. A second aspect of the invention provides a drum container (1) having a plug top (7) comprising a depending outer annular wall for insertion into the top of the drum container, and moulded thereon a continuous outwardly directed barb or snatch (10) which in use engages beneath an intumed roll or bead (4) around the inside of the top of the drum container.

77) Family number: 52438793 (WO12165952A1)

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Title: CONTAINER WITH ADDITIONAL SCOOP COMPARTMENT**Priority:** EP20110167930 20110527

Family:	Publication number	Publication date	Application number	Application date
	EP2527265 A1	20121128	EP20110167930	20110527
	WO12165952 A1	20121206	WO2012NL50373	20120525

Probable Assignee: NUTRICIA NV**Assignee(s):^(std):** BRINKERHOF JAN DIRK FRITS ; NUTRICIA NV ; SUKSOMJIN ADAWAN ; VAN PUIJENBROEK ALEXANDER JOSEPHUS MARICUS**Assignee(s):** N V NUTRICIA**Inventor(s):^(std):** VAN PUIJENBROEK ALEXANDER JOSEPHUS MARICUS ; SUKSOMJIN ADAWAN ; BRINKERHOF JAN DIRK FRITS**Agent(s):** KETELAARS MAARTEN F J M; KETELAARS MAARTEN FJM; BOTTEMA HANS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D21/02](#) [B65D43/16](#) [B65D51/24](#) [B65D77/24](#) (Advanced/Invention)
(IPC 8-9):

CPC: [B65D51/20](#) [B65D21/0204](#) [B65D21/0223](#) [B65D21/0237](#) [B65D25/36](#) [B65D43/169](#)
[B65D51/247](#) [B65D77/245](#) [B65D2251/0018](#) [B65D2251/0021](#) [B65D2251/0093](#)
[B65D2251/20](#) [B65D2543/0012](#) [B65D2543/0024](#) [B65D2543/00296](#) [B65D2543/00435](#)
[B65D2543/00462](#) [B65D2543/0049](#) [B65D2543/00842](#)

[Classification Explorer](#)

Cited documents: WO11067585 A1, WO10113196 A1, WO10071424 A1, US2010236966 AA, US2008041861 AA, US2006076260 AA, EP2130776 A1, EP1787919 A1, EP1357048 A2, EP0609650 A1, DE3242257 A1,

Forward Citations: WO16178904, WO16075027, WO16030395, WO15187016, WO15187004, WO14129902, WO14129887, US2016000269, CN106414259, CN105143058, CN105143057,

Abstract:

A container (2) for a powdered nutritional product has a product containing portion (4) and a scoop containing recess (6) for storing an elongate scoop (16), at least partially separated from the product containing portion by a separating wall (54). A circumferential rim (8) for connection to the product containing portion defines an access opening (38) to the product containing portion and is closed by a lid (10). The separating wall may serve to prevent powder dropping from the scoop during storage from falling into the product containing portion. The separate recess can receive the scoop prior to first use of the container and also thereafter

78) Family number: 53671913 (WO13066183A1)

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Title: CONTAINER WITH SCOOP RECESS**Priority:** EP20110187718 20111103

Family:	Publication number	Publication date	Application number	Application date
	<u>EP2589544 A1</u>	20130508	EP20110187718	20111103
	<u>WO13066183 A1</u>	20130510	WO2012NL50770	20121102

Probable Assignee: NUTRICIA NV**Assignee(s):^(std):** NUTRICIA NV**Assignee(s):** N V NUTRICIA**Inventor(s):^(std):** CRUSIUS SJORS FLORIS ; SUKSOMJIN ADAWAN ; VAN PUIJENBROEK ALEXANDER JOSEPHUS MARICUS**Agent(s):** SWINKELS BART WILLEM; DE BOER HENK

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D43/16 B65D51/20 B65D51/24 B65D77/24 (Advanced/Invention)
(IPC 8-9):

CPC: B65D2101/0015 B65D2251/0021 B65D2251/0093 B65D2251/1016 B65D2577/205 B65D77/245 B65D43/169 B65D51/20 B65D51/247 B65B7/164

[Classification Explorer](#)**Cited documents:** WO10071424 A1, US6412653 BA, US2010236966 AA, US2008041861 AA, FR2806710 A1,**Forward Citations:** WO17074180, NL2015661, CN105000248,**Abstract:**

A package (1) for a powdered nutritional product has a container (2) and a scoop containing recess (6) for storing an elongate scoop (16). A circumferential rim (8) for connection to the container defines an access opening (22) and is closed by a lid (10). The recess is at one side of the access opening and has a length that is at least substantially equal to a minor dimension of the opening. It can receive the scoop prior to first use of the container and also thereafter

79) Family number: 54629827 (WO13125941A1)

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Title: CONTAINER WITH SEALING LID CONSTRUCTION**Priority:** WO2012NL50101 20120221

Family:	Publication number	Publication date	Application number	Application date
	<u>WO13125941 A1</u>	20130829	WO2012NL50101	20120221

Probable Assignee: NUTRICIA NV**Assignee(s):^(std):** NUTRICIA NV ; VAN PUIJENBROEK ALEXANDER JOSEPHUS MARICUS**Inventor(s):^(std):** VAN PUIJENBROEK ALEXANDER JOSEPHUS MARICUS**Agent(s):** SWINKELS BART

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class B65D43/16 B65D51/20 (Advanced/Invention)
(IPC 8-9).

CPC: B65D51/20 B65D43/169 B65D2251/0021 B65D2251/0093[Classification Explorer](#)**Cited documents:** WO08083141 A2, WO0212086 A1, US2008041861 AA, GB2052455 A1, FR2949444 A1, EP1914175 A1,**Forward Citations:** WO17097890, USD742222, EP3085636,**Abstract:**

A packaging (1) for a powdered material (17) comprising a container (2) for receiving the material, the container having a base (5) and a peripheral wall (7) with a top edge (6), a membrane (9) being attached at the top edge of the peripheral wall for separating the powdered material in the container from the environment, a lid assembly comprises circumferential rim (3) for connection over the top edge of the peripheral wall of the container and defining a wide access opening (8), and a lid (4), hingedly attached to the rim for reclosing the access opening. The lid assembly comprises a circumferential lip (13) extending inwardly of the peripheral wall and downwardly into the container to beyond the top edge thereof, such that the membrane is stretched by the lip in order to form a seal between the lip and the peripheral wall. The membrane further comprises an opening region (21) lying inwardly of the lip.

0) WO07049959A2 – CONTAINER, PROVIDED WITH A CLOSABLE FILL OPENIN...

80) Family number: 34447555 (WO07049959A2)

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Title: CONTAINER, PROVIDED WITH A CLOSABLE FILL OPENING, COMPRISING A CLOSING MEMBER AND A CAPSULE MOUNTED ON TOP THEREOF

Priority: NL20051030269 20051026

Family:	Publication number	Publication date	Application number	Application date
	NL1030269 C1	20070427	NL20051030269	20051026
	WO07049959 A2	20070503	WO2006NL00539	20061025
	WO07049959 A3	20071004	WO2006NL00539	20061025

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Assignee(s): DE HAAGSCHE OLIFANT B V ; DE HAAGSCHE OLIFANT BV

Inventor(s):^(std): VOS RODERICK

Inventor(s): RODERICK VOS

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class [B65D39/00](#) [B65D39/16](#) [B65D41/58](#) [B65D41/60](#) [B65D41/62](#) (Advanced/Invention);
(IPC 8-9): [B65D39/00](#) [B65D41/00](#) [B65D41/32](#) (Core/Invention)

CPC: [B65D39/0029](#) [B65D51/18](#) [B65D2251/0015](#) [B65D2251/0075](#) [B65D2539/003](#)

European class: [B65D39/00F4](#) [B65D51/18](#) [L65D251/00Y2D](#) [L65D251/00Y6B](#) [L65D539/00Y2](#)

[Classification Explorer](#)

Cited documents: US2280724 A, US2056253 A, FR2705645 A1, FR2267952 A1,

Abstract:

The invention relates to containers (1) having a closable fill opening (2), the fill opening being adapted for receiving a closing member (3), the closing member being protected against tampering and unauthorized opening of the fill opening with a removable capsule (4) provided with at least one tear line (5). According to the invention the portion of the capsule 4 below the tear line – or between the tear lines (5', 5'') – constitutes a crew ring (11), which ring is detachable from the capsule (4) by means of a helical motion over screw thread (9) provided upon the container so that as a result the closing member (3) will be unlocked and released and may be removed from the fill opening (2).