

1) Family number: 3311202 (US4744480A)

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Title: TAMPER-EVIDENT CONTAINER-CLOSURE

Priority: US19850810923 19851219 CA19860525475 19861216 US19870139275 19871229
US19870139467 19871229 US19880236408 19880825

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): LUCH DANIEL ; PHARMA GUMMI WIMMER WEST GMBH ; WEST CO ; WIMMER PHARMA GUMMI GMBH

Assignee(s): WEST CO INC ; WEST PHARMACEUTICAL SERVICES INC ; WEST CO PHOENIXVILLE PA A CORP OF PA ; WEST CO INC THE ; PHARMA GUMMI WIMMER WEST GMBH 5180 ESCHWEILER DE ; THE WEST CO ; THE WEST COMPANY ; BABCOCK DAVID E

Inventor(s):(std): LUCH DANIEL ; BABCOCK DAVID E ; BABCOCK DAVID E

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 (IPC 8-9): B26F1/18 B26F1/20 B65D41/34 (Advanced/Invention);
B26F1/00 B65D41/34 (Core/Invention)

International class (IPC 1-7): B29C53/02 B65D1/02 B65D41/34

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

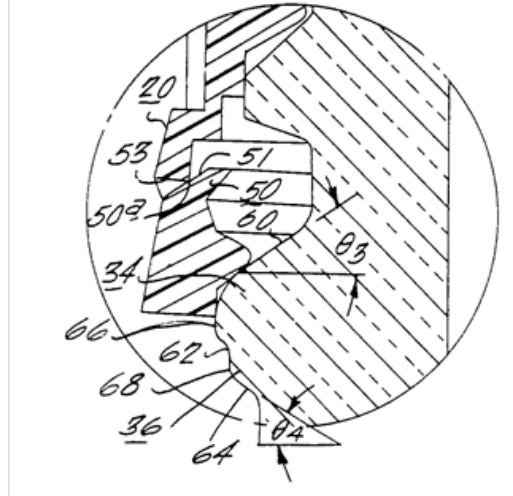
[Classification Explorer](#)

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, US10232985, RU2494026, JP6204621, JP4949161, JP2018150056, JP2009524561, JP2009029483, FR2813288, FR2798363, FR2788254, FR2686574, EP2792610, EP2792610, EP2331426, EP1976779, EP1976779, EP1976778, EP1976778, EP1311439, EP0621114, EP0533633, EP0533633, EP0371920, EP0371920, BE1009511, AU710291, AU679964,

Abstract:

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.


2) Family number: 15221983 (US5676269A)

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Title: Tamper-evident closure with captive band
Priority: US19950408078 19950322 WO1996US03927 19960320 US19960665063 19960515
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	19960320
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
NO974201 L	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
RO118745 B1	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 SERVICE LTD ; CLOSURE AND PACKAGING SERVICES ; CLOSURES AND PACKAGING SERVICE ; KLOZHURES EHND PEHKEHDZHING SE ; CLOSURES AND PACKAGING SERV LTD ; CLOSURES AND PACKAGING SERVICES LTD ; CLOSURES AND PACKAGING SERVICES SUBSTITUT LTD ; CLOSURE AND PACKAGING SERVICES LTD ; PRECISION VALVE CORP ; KLOZHURES EHND PEHKEHDZHING SERVISIS LTD

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): BLAKE R ; BLAKE ROBERT R ; CHALRES M TANSEY ; CHARL Z MTEHNSI ; CHARLES M TANSEY ; CHARLESM TANSEY ; ROBERT R BLAKE ; ROBERT RBLEJK ; ROBERTR BLAKE ; TANSEY CHALRES M ; TANSEY CHARLES M ; TANSEY M ; TANSEY M CHARLES ; TANSEY CHARLES MARTIN ; ROBERT R BLEJK ; CHARL Z M TEHNSI ; 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

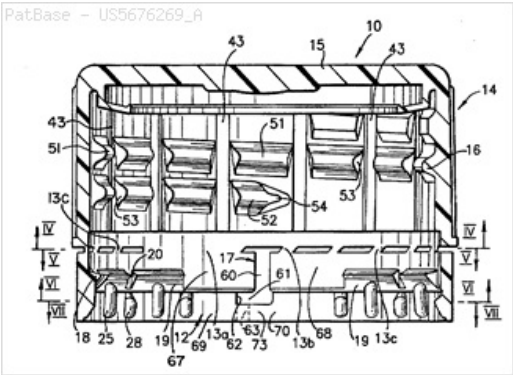
US class: 215/252

[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, WO18055429, WO18055428, 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:
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.



3) Family number: 4726333 (US5040692A)

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Title: TAMPER INDICATING CLOSURE

Priority: US19900628395 19901217

Family:

Publication number	Publication date	Application number	Application date
DE4127243 A1	19920625	DE19914127243	19910817
FR2670465 A1	19920619	FR19910010409	19910819
GB2250981 A1	19920624	GB19910017560	19910814
GB9117560 A0	19911002	GB19910017560	19910814

IT1250287 B	19950407	IT1991TO00644	19910809
ITTO910644 A0	19910809	IT1991TO00644	19910809
ITTO910644 A1	19920618	IT1991TO00644	19910809
US5040692 A	19910820	US19900628395	19901217

Probable Assignee: SUNBEAM PLASTICS CORP
Assignee(s):(std): SUNBEAM PLASTICA CORP ; SUNBEAM PLASTICS CORP
Assignee(s): SUNBEAM PLASTICS CORP EVANSVILLE IND US
Inventor(s):(std): JULIAN RANDALL K ; JULIAN RANDAL K
Inventor(s): JULIAN RANDALL K EVANSVILLE IND US ; RANDALL K JULIAN

International class (IPC 8-9): B65D41/34 (Advanced/Invention);
B65D41/34 (Core/Invention);
B65D (Subclass/Invention)

International class (IPC 1-7): B65D B65D41/32 B65D41/34 B65D41/38 B65D51/24 B65D55/02

CPC: B65D41/3409 B65D2101/0046 B65D2101/0053 B65D55/16

European class: B65D41/34A1 L65D101/00A3D L65D101/00A3E

US class: 215/252 215/258

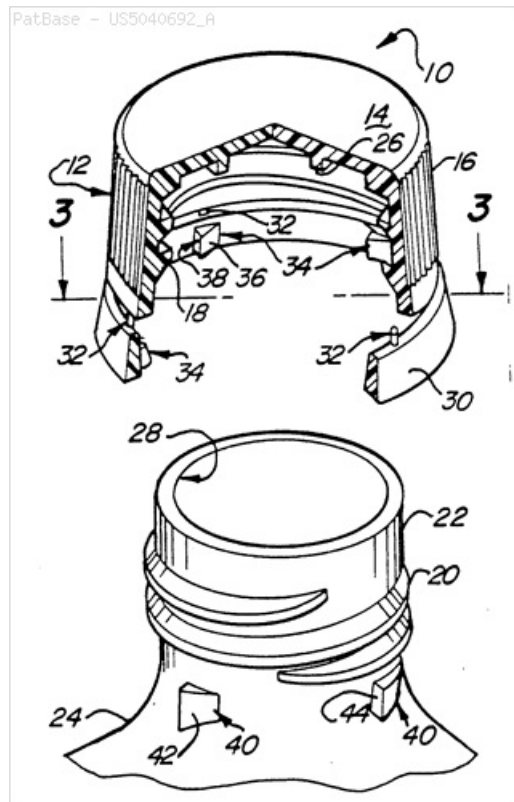
[Classification Explorer](#)

Cited documents: US4915244 A, US4666053 A, US4592476 A, US4550845 A, US4534480 A, US4534479 A, US4530436 A, US4448318 A, US4062466 A, US3902621 A, US3504818 A, GB2125382 A1,

Forward Citations: WO09095297, WO04048220, WO0151375, USD791591, USD790344, USD760081, USD756777, USD538654, USD508204, USD507745, US9981785, US9938050, US9850019, US9796265, US9738409, US9643762, US9586738, US9533802, US9522759, US9403310, US9309032, US9187217, US8528759, US8528757, US8424705, US8302792, US8292102, US7975863, US7905369, US7891510, US7753233, US7645414, US7637384, US7581652, US7527160, US7451898, US7235207, US6988642, US6871752, US6659297, US6279766, US5992657, US5853095, US5575967, US5501349, US5346082, US5318192, US5244107, US5215204, US2015232237, US2011088505, US2010288765, US2010206877, US2009320590, US2009230080, US2009223963, US2009084751, US2009057260, US2008314856, US2008264894, US2008135513, US2007181525, US2007034591, US2006278599, US2006163192, US2006151423, US2005167389, US2005103741, US2005072751, US2004168999, US2004155006, US2004124169, US2004079765, US2004045925, US2003146183, US10351315, US10266299, US10232985, US10214312, US10214311, US10023345, GB2323593, GB2277080, FR2803830, EP2088090, DE102007029541,

Abstract:

A tamper indicating closure for application to a container neck. The closure includes a cap having a top and an internally threaded skirt. A tamper indicating band depends from the bottom of the cap skirt by circumferentially spaced frangible connections. The band has ratchet teeth which engage ratchet teeth on the container neck one at a time during threading-on and unthreading of the cap from the container neck.



4) Family number: 12272665 (US5472106A)

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Title: Tamper resistant closure cap and a method of operation therefor

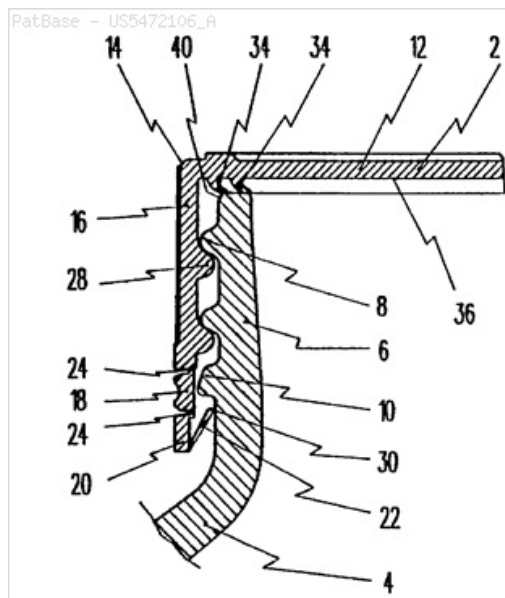
Priority: CA19912055210 19911108 US19910794043 19911119 US19930152127 19931116

Family:

Publication number	Publication date	Application number	Application date
CA2055210 AA	19930509	CA19912055210	19911108
CA2055210 C	19940111	CA19912055210	19911108
US5472106 A	19951205	US19930152127	19931116

Probable Assignee: PANO CAP CANADA LIMITED**Assignee(s):(std):** PANO CAP CANADA LIMITED**Assignee(s):** PANO CAP CANADA LTD ; NOFER KARL H**Inventor(s):(std):** NOFER KARL H**Agent(s):** SCHNURR DARYL W**International class (IPC 8-9):** B65D41/34 B65D55/08 (Advanced/Invention)**International class (IPC 1-7):** B65D41/34 B65D55/08**CPC:** B65D41/3428**European class:** B65D41/34C1**US class:** 215/256 215/321[Classification Explorer](#)**Cited documents:** US4984701 A, US4905852 A, US4848614 A, US4732289 A, US4597500 A, US4478343 A, US4470513 A, US4449639 A, US4417666 A, US4342400 A, US4199071 A,**Forward Citations:** WO08129696, WO04106174, US7775389, US6968966, US6659297, US6622460, US6382443, US6381928, US6341707, US6152316, US6119883, US6116442, US5967309, US5964363, US2017152078, US2008173611, US2007228001, US2005194343, US2005127023, US2003192854, US10150595, JP2008265788, JP2006526547, EP1633639,**Abstract:**

A tamper resistant closure and a method of installing and removing that closure relative to a container where the container has a neck with external threads thereon and a ring located beneath the threads. The closure has a central portion with a periphery and a skirt extending from the periphery, a tear strip extending from the skirt, a tamper evident band extending from the tear strip and a movable flange extending from the band. The tear strip is affixed between the skirt and the band by a plurality of severable tabs. The flange is hinged to the tamper evident band and has equally spaced windows in it to make it flexible so that it can be stretched over the ring. When the closure is installed on the container, the flange is forced against an interior of the band and overrides the ring. Once the flange has overridden the ring, a free edge of the flange moves inward to rest against an outer surface of the neck beneath the ring. The closure can then not be removed from the container without first severing the tabs as the flange will not override the ring during removal of the closure. When the tear strip is removed, there is a relatively large gap between the skirt and the band, making it readily apparent that the contents of the container may have been tampered with. Once the tear strip has been removed, the closure functions in a conventional manner for opening and closing the container. The screw thread on the closure is made up of elongated bubbles located end to end.

**5) Family number: 30319677** (US2004069738A)

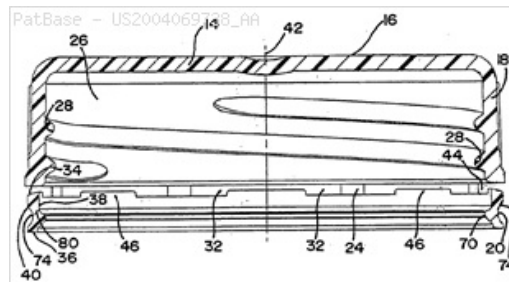
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Title: REDUCED APPLICATION ENERGY CLOSURE**Priority:** US20020401544P 20020807 US20030636049 20030807 WO2003US24902 20030807**Family:**

Publication number	Publication date	Application number	Application date
AU2003265391 AA	20040225	AU20030265391	20030807
AU2003265391 AH	20040225	AU20030265391	20030807
CA2494897 AA	20050207	CA20032494897	20030807
MXPA05001263 A1	20051018	MX2005PA01263	20030807
US2004069738 AA	20040415	US20030636049	20030807
WO04014742 A2	20040219	WO2003US24902	20030807
WO04014742 A3	20040513	WO2003US24902	20030807

Probable Assignee: SILGAN CLOSURES
Assignee(s):(std): SILGAN CLOSURES LLC
Assignee(s): BARANOWSKI THOMAS R ; BRADY CATHERINE D ; KRAS STEPHEN J ; NEPUTY DARREN R ; ORTH KEVIN WILLIAM ; SILGAN CLOSURES
Inventor(s):(std): ORTH KEVIN WILLIAM ; NEPUTY DARREN R ; KRAS STEPHEN J ; BARANOWSKI THOMAS R ; BRADY CATHERINE D
Inventor(s): STEPHEN J KRAS ; THOMAS R BARANOWSKI ; CATHERINE D BRADY ; KEVIN WILLIAM ORTH ; DARREN R NEPUTY
Agent(s): 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 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 UZ VC VN YU ZA ZM ZW
International class (IPC 8-9): B65D39/00 B65D41/34 (Advanced/Invention); B65D (Subclass/Invention)
International class (IPC 1-7): B65D39/00 B65D41/34
CPC: B65D41/3447
European class: B65D41/34D1
US class: 215/252
[Classification Explorer](#)
Cited documents: USD312044 S1, US6382444 BA, US6382443 BA, US6325225 BA, US6179139 BA, US5975321 A, US5913436 A, US5836468 A, US5819965 A, US5755346 A, US5680945 A, US5676269 A, US5648037 A, US5609263 A, US5570798 A, US5413235 A, US5402901 A, US5282540 A, US5137163 A, US5074425 A, US5027964 A, US4907709 A, US4890754 A, US4878589 A, US4848614 A, US4846361 A, US4828127 A, US4784280 A, US4775064 A, US4669623 A, US4667838 A, US4598475 A, US4576298 A, US4564113 A, US4549667 A, US4534480 A, US4352436 A, US4227618 A, US4171236 A, US3974008 A,
Forward Citations: WO15185465, US8596477, US8470230, US2018134462, US2006231445, US2005284837, EP3152122, CN106414263, CN106414263, CN104627504,

Abstract:
Closure caps having a tamper evident band are disclosed. The tamper-evident band includes an angled top surface and an outer surface with notch therein. The closure cap allows for a reduction in the energy required for application to the container and reduced likelihood of premature bridge breakage.



6) Family number: 31517864 (US2007131641A)

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Title:	CLOSURE WITH FRANGIBLE TAMPER-EVIDENT BAND			
Priority:	AU20030900141 20030114	AU20030900678 20030217	AU20030904044 20030804	
	AU20030904196 20030808	AU20030904359 20030815	AU20030904527 20030822	
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	AU20060203297 20060801			

Family:	Publication number	Publication date	Application number	Application date
	AU2003900141 A0	20030130	AU20030900141	20030114
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	CN1863710 A	20061115	CN200480028971	20040804

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EP1660379 A1	20060531	EP20040737650	20040804
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GB2420114 B2	20070718	GB20060004470	20040804
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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 C I COMO FIDEI COMISSARIO DO FIDE LTD ; ABACUS C I LTD ; 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 ; ABACUS ; ABACUS C I LTD TRUSTEE OF T AS ; CTECH EQUIPMENT PTY LTD ; WOOLFORD L ; RBC TRUSTEES CI LTD AS TRUSTEE ; HIGGINS CHRISTOPHER LYNDON ; CTECH CLOSURES PTY LTD

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

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

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

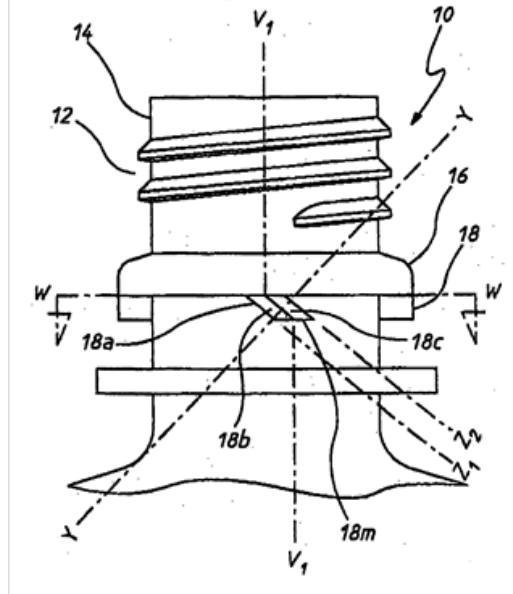
[Classification Explorer](#)

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: WO18025593, WO16009192, WO15004352, WO12130916, WO09154666, WO09154666, WO08061766, WO07082322, WO06013443, WO06013443, WO05077777, USRE47156, US9943998, US9828146, US9731869, US9382044, US9061801, US8851310, US8807360, US8684225, US8684204, US8356711, US7775386, US2013313287, US2012292321, US2011024423, US10259617, US10138035, RU2507137, KR100951526, FR3008393, EP3019411, EP2691311, EP2268554, EP1778555, CN109219565,

Abstract:

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.

**7) Family number: 30359630** (US2004045925A)

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Title: TAMPER EVIDENT CLOSURE WITH LOCKING BAND

Priority: EP20010306874 20010813 EP20020794765 20020809 US20020486658 20020809
 WO2002EP08948 20020809 US20020241416 20020911 WO2003EP10028 20030910
 US20040771614 20040204 US20040775885 20040209 US20040486658 20040811
 US20040957924 20041004

Family:	Publication number	Publication date	Application number	Application date
	AR036260 AA	20040825	AR2002P103047	20020813
	AT286478 E	20050115	AT20020794765T	20020809
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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): BOSL U ; HABERSAAT P ; PRICE MICHAEL L ; BOESL UDO ; HABERSAAT PATRICK ; PATRICK HABERSAAT ; UDO BOSL ; SEJDITA TOMAS M ; SEIDITA THOMAS M ; BOSL UDO

Inventor(s): THOMAS M SEIDITA ; U BOSL ; P HABERSAAT ; 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 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](#)

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Forward Citations: WO13131773, WO13044669, WO12050759, WO08092903, WO08092716, WO07085896, WO07085896, WO07033722, WO05014414, USRE47156, USD723919, USD538654, USD508204, US9840354, 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, US10336507, US10308400, US10287065, JP6207394, JP2013542894, FR2987607, FR2987607, EP2822868, EP2627570, EP1953091, EP1757528, EP1654165, DE102005040745, CN105398665, CN104709580, CN104627504, CN103097254, CN103097254, CN102310970, AU2003292243,

Abstract:
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.

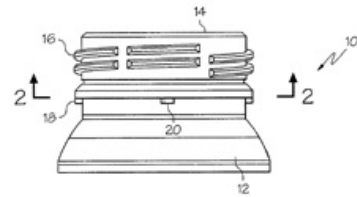


FIG. 1

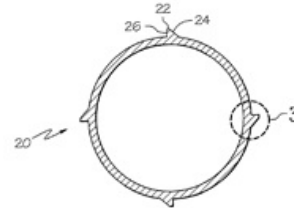


FIG. 2

8) Family number: 10059994 (US5542556A)

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Title: Plastic closure with structural thread formation**Priority:** JP19940103026 19940517**Family:**

Publication number	Publication date	Application number	Application date
■ CN1043133 C	19990428	CN19951005437	19950516
■ CN1113203 A	19951213	CN19951005437	19950516
■ DE69504239 D1	19981001	DE19956004239	19950327
■ DE69504239 T2	19990311	DE19956004239T	19950327
■ EP0684186 A1	19951129	EP19950104477	19950327
■ EP0684186 B1	19980826	EP19950104477	19950327
■ JP3298057 B2	20020702	JP19940103026	19940517
■ JP7309357 A2	19951128	JP19940103026	19940517
■ KR100187609 B1	19990601	KR19950009028	19950418
■ KR19950031803 A	19951220	KR19950009028	19950418
■ KR950031803 A	19951220	KR19950009028	19950418
■ TH13194 B	20020712	TH19951000593	19950322
■ TH24921 A	19970429	TH19951000593	19950322
■ TW260650 B	19951021	TW19950102721	19950321
■ US5542556 A	19960806	US19950407607	19950321

Probable Assignee: JAPAN CROWN CORK CO LTD**Assignee(s):(std):** CROWN CORK CO LTD ; CROWN CORK JAPAN ; NIPPON CROWN CORK KK**Assignee(s):** JAPAN CROWN CORK CO ; JAPAN CROWN CORK CO LTD ; JAPAN CROWN CORK CO LTD TOKIO TOKYO JP ; Japan Crown Cork Co. ; Ltd.**Inventor(s):(std):** KUBA KENO ; KUBO TAKEO ; KUBO TATEO C O HIRATSUKA KOUJO ; IGARASHI TOMOYA ; IGARASHI TOMOYA C O HIRATSUKA ; OHMI HIDEHIKO C O HIRATSUKA KO ; OMI HIDEHIKO ; SHINE HIDEHIKO ; OHMI HIDEHIKO ; KUBO TATEO ; CHIKAE HIDEHIKO**Inventor(s):** Igarashi ; HIDEHIKO SHINE ; Hidehiko ; Kubo ; KENO KUBA ; IGARASI TOMOYA. ; IGARASHI TOMOYA C O HIRATSUKA KOUJOU OF... ; IGARASHI TOMOYA C O HIRATSUKA KOUJOU OF HIRATSUKA ; Ohmi ; KUBO TATEO C O HIRATSUKA KOUJOU OF HIRATSUKA... ; KUBO TATEO C O HIRATSUKA KOUJOU OF HIRATSUKA SHI K ; TOMOYA IGARASHI ; Tomoya ; Tateo ; OHMI HIDEHIKO C O HIRATSUKA KOUJOU OF... ; OHMI HIDEHIKO C O HIRATSUKA KOUJOU OF HIRATSUKA SH ; KUBO TATEO C O HIRATSUKA KOUJOU OF**Designated states:** DE GB**International class (IPC 8-9):** B65D41/04 B65D41/32 B65D41/34 B65D53/04 H01C1/148 H01C17/00 H01C3/00 H01C7/00 (Advanced/Invention);

B65D41/00 (Advanced/Non-invention);

B65D41/04 B65D41/34 B65D53/00 H01C1/14 H01C17/00 H01C3/00 H01C7/00 (Core/Invention)

International class (IPC 1-7): B65D41/00 B65D41/04 B65D41/06 B65D41/32 B65D41/34 B65D53/04**CPC:** B65D41/04 B65D41/0435 B65D41/3423**European class:** B65D41/04 B65D41/04D B65D41/34C

US class: 215/252 215/307 215/329 215/349

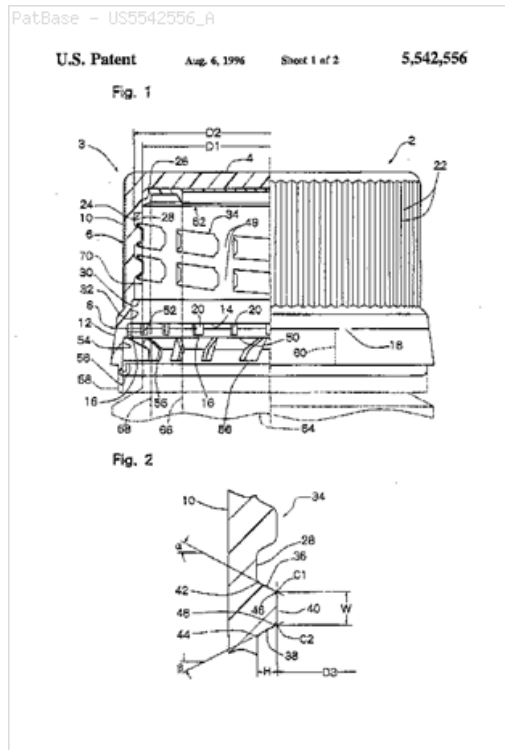
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Cited documents: WO8100838 A1, US5289931 A, US5265747 A, US5257705 A, US5207341 A, US5205426 A, US4978017 A, US4674643 A, US4497765 A, US4418828 A, US4369889 A, LU56001 A, JP63044627 A2, JP62119030, JP61217358, JP61022743 U, JP58051116 A2, JP54025475 B1, JP4311461 A2, JP4006053, GB2034289 A1,

Forward Citations: USRE38399, US7703617, US6769559, US6116443, US6102223, US5967352, US2011089133, US2007267384, US2003127421, JP6418720, JP6128831, JP2014122062, JP2014122061, JP2009501681, JP2008068901, JP2008013179, JP2006052000, ES2296481,

Abstract:

An internal thread is formed on the inner peripheral surface of a skirt wall in a container closure of a plastic. The cross-sectional shape of the internal thread is defined by an upper side edge extending radially inwardly in an axially downwardly inclined manner, a lower side edge extending radially inwardly in an axially upwardly inclined manner, a front edge extending substantially vertically, two concave arcs, and two convex arcs.



9) Family number: 29502100 (US2005056613A)

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Title: USER-FRIENDLY BOTTLE AND CLOSURE THREAD ASSEMBLY

Priority: GB20010027836 20011120 WO2002GB05183 20021119 WO2002GB05184 20021119

Family:	Publication number	Publication date	Application number	Application date
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EP1446331 B1	20051026	EP20020777555	20021119
EP1446332 A1	20040818	EP20020779692	20021119
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GB2382071 B2	20050629	GB20010027836	20011120
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HK1053098 B	20051202	HK20030105475	20030729
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HK1066510 A1	20060407	HK20040109431	20041130
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HK1066510 B	20060407	HK20040109431	20041130
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NO20033105 L	20030718	NO20030003105	20030707
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RU2004118497 A	20050420	RU20040118497	20021119
RU2307054 C2	20070927	RU20040118494	20021119
RU2307055 C2	20070927	RU20040118497	20021119
US2005056613 AA	20050317	US20020496054	20021119
US2005082249 AA	20050421	US20020496050	20021119
US7182213 BB	20070227	US20020496050	20021119
US7246713 BB	20070724	US20020496054	20021119
WO03045805 A1	20030605	WO2002GB05183	20021119
WO03045806 A1	20030605	WO2002GB05184	20021119

Probable Assignee: BEESON AND SONS LTD

Assignee(s):(std): BEESON AND SONS LTD ; KING ROGER MILNER ; BISAN EHND SANZ LTD

Assignee(s): BEESON AND SONS LTD RICKMANSWORTH ; BEESON AND SONS LTD STOKE POGES ; BISAN EHND SANZ LIMITED ; BEESON AND SONS HERTFORD HOUSE DENHAM WAY LTD ; BEESON AND SONS HERTFORD PLACE DENHAM WAY LTD ; BEESON AND SONS HERTFORD PLACE DENHAM WAY RICKMANSWORTH HERTS LTD ; BEESON AND SONS LIMITED

Inventor(s):(std): KING ROGER M ; MILNER KING ROGER ; ROGER MILNER KING ; KING RODZHER MILNER ; KING ROGER MILNER

Inventor(s): KING ROGER

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; OGILVY RENAULT LLP SENCRL SRL; NORTON ROSE OR SENCRL SRL LLP; CHINA PATENT AGENT HK LTD 22 F GREAT EAGLE CENTRE 23 HARBOUR ROAD WANCHAI; CHINA PATENT AGENT HK LTD 22 F GREAT EAGLE CENTRE 23 HARBOUR ROAD; CHINA PATENT AGENT HK LTD; STEPHEN B SALAI ESQ HARTER SECREST AND EMERY LLP; BRIAN B; STEPHEN B; HARTER SECREST AND EMERY 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 US UZ VC VN YU ZA ZM ZW

International class (IPC 8-9): A47G A47G19/22 B65D B65D41/04 B65D41/34 B65D51/16 (Advanced/Invention); A47G19/22 B65D41/04 B65D41/34 B65D51/16 (Core/Invention)

International class (IPC 1-7): A47G A47G19/22 B65D B65D41/04 B65D41/34 B65D41/36 B65D51/16

CPC: B65D41/045 B65D41/0471 B65D41/3428 B65D51/1688

European class: B65D41/04D2 B65D41/04E B65D41/34C1 B65D51/16E3

US class: 215/307 215/329 215/330 220/196 220/296

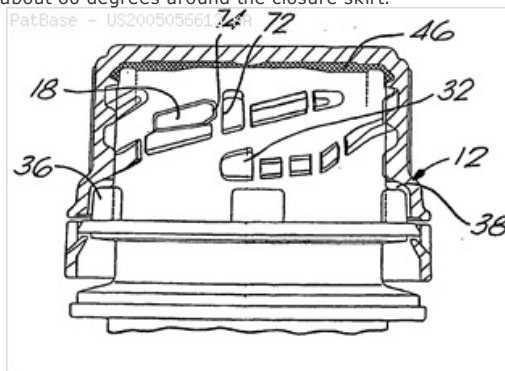
[Classification Explorer](#)

Cited documents: US6227391 BA, US6015054 A, US6006930 A, US5967352 A, US4953728 A, US4739890 A, US4032028 A, US3880314 A, US3612324 A, US1612449 A, US1158073 A, GB2330133 A1, GB2319513 A1, GB2318574 A1, GB2311285 A1, GB2138574 A1, GB1343572 A,

Forward Citations: WO15186153, WO14033619, WO14033619, WO11123219, WO11070326, WO06018660, WO06018660, WO05049439, USRE47156, USD835235, USD798419, USD770593, USD768820, USD758537, USD740393, US9878336, US9782785, US9782784, US9764877, US9764102, US9623996, US9533317, US9409197, US9327301, US9126726, US8925836, US8714380, US8672159, US8608009, US8528759, US8141793, US8091724, US7942287, US2013319968, US2013248530, US2012298682, US2011309105, US2011024420, US2011024382, US2011011947, US2009084751, US2008308555, US2007267384, US10189037, US10138037, JP6201048, JP4836953, JP2016509897, JP2015503936, JP2015186153, JP2011502889, JP2008510662, JP2008184219, GB2417240, GB2417240, GB2409200, GB2409200, FR2951702, EP3075677,

Abstract:

The invention provides a threaded container closure assembly includes: a container neck having an opening; a closure for said neck, the closure having a base portion and a skirt portion; a first screw thread on the neck, said first screw thread comprising one or more first thread segments; a second screw thread on an inner surface of the skirt of the closure, said second screw thread comprising one or more second screw thread segments; said first and second screw threads being configured to enable a user to secure, remove and resecure the closure into a sealing position on the neck by rotation of the closure on the neck; and wherein said first thread segments are shorter than said second thread segments; and wherein the second thread segments are each made up of one or more radially spaced projecting portions, each said portion extending radially no more than about 60 degrees around the closure skirt.



10) Family number: 34899792 (US2010187233A)

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Title: CLOSURE FOR A CONTAINER

Priority: GB20070008626 20070504 WO2008GB01567 20080506

Family:	Publication number	Publication date	Application number	Application date
	EP2150469 A1	20100210	EP20080737174	20080506
	GB200708626 A0	20070613	GB20070008626	20070504
	US2010187233 AA	20100729	US20080598865	20080506
	WO08135761 A1	20081113	WO2008GB01567	20080506

Probable Assignee: THREADLESS CLOSURES LTD

Assignee(s):(std): FRASER ANTHONY HENRY JOSEPH ; HEIN JOHN ; MEADWESTVACO CORP ; THREADLESS CLOSURES LTD

Inventor(s):(std): HEIN JOHN ; FRASER ANTHONY HENRY JOSEPH

Agent(s): UNWIN STEPHEN GEOFFREY; DICKSTEIN SHAPIRO LLP; UNWIN STEPHEN GEOFFREY 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): B65D41/04 B65D41/08 (Advanced/Invention);

B65D41/04 (Core/Invention)

CPC: B65D41/08 B65D2101/0023

European class: B65D41/08 L65D101/00A3

US class: 220/288

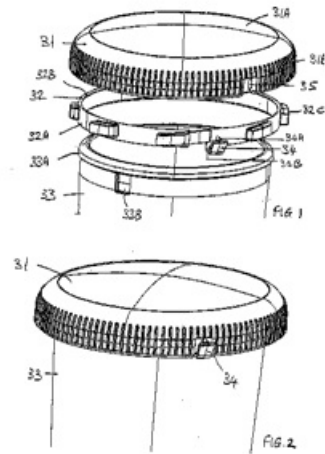
[Classification Explorer](#)

Cited documents: WO08012539 A1, WO06000774 A1, WO06000773 A1, US3904061 A, US3603472 A, NL6913888 A, FR1039970 A,

Forward Citations: WO14177854, WO12007708, WO12007707, US2015239621, US2013134123, US2009184086, GB2513730, GB2482048,

Abstract:

A closure comprising a cap (31) and a collar (32) by means of which the cap (31) can be secured to the container (33), the collar (32) comprising a ring (32A) and being moveable between a contracted configuration and an expanded configuration such that parts of the collar (32) are radially moveable between inner and outer positions. The cap (31) and collar (32) having mutually engageable parts (32c, 42c) providing for rotatable engagement between the cap (31) and collar (32) between a first position in which the collar (32) is in the expanded configuration (so the closure can be fitted to and removed from the container (33)) and a second position in which the collar (32) is in the contracted configuration so said radially moveable parts are held in engagement with the container (33) (whereby the closure is secured to the container). Furthermore, the closure has a tamper-evident feature (34, 35).

**11) Family number: 28849932** (US5782369A)

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Title: LINERLESS CLOSURE FOR CONTAINER

Priority: AU1993PM00705 19930819 AU1994PM04717 19940325 AU19940074544 19940819
 WO1994AU00486 19940819

Family:	Publication number	Publication date	Application number	Application date
	AT186886 E	19991215	AT19940924166T	19940819
	AU199474544 A1	19950314	AU19940074544	19940819
	AU678044 B2	19970515	AU19940074544	19940819
	BRPI9407354 A	19961008	BR1994PI07354	19940819
	CA2169725 AA	19960216	CA19942169725	19940819
	CN1041396 C	19981230	CN19941008171	19940818
	CN1104167 A	19950628	CN19941008171	19940818
	CN2250321 Y	19970326	CN19942018126U	19940818
	DE69421818 D1	19991230	DE19946021818	19940819
	DE69421818 T2	20000309	DE19946021818T	19940819
	DK0714367 T3	20000403	DK19940924166T	19940819
	EP0714367 A1	19960605	EP19940924166	19940819
	EP0714367 A4	19980121	EP19940924166	19940819
	EP0714367 B1	19991124	EP19940924166	19940819
	ES2140549 T3	20000301	ES19940924166T	19940819
	GR3032472 T3	20000531	GR20000400166T	20000125
	HU74492 A2	19970128	HU19960000284	19940819
	HU9600284 A0	19960429	HU19960000284	19940819
	IL110654 A0	19941111	IL19940110654	19940814
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	IN181348 A	19980523	IN1994CA00663	19940818
	JP3521203 B2	20040419	JP19950506653T	19940819
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	KR19960703774 A	19960831	KR19960700839	19960217
	KR19967003774 A	19960831	KR19967000839	19940819
	MY127856 A	20061229	MY19940002184	19940819
	NZ271041 A	19970526	NZ19940271041	19940819
	PL177645 B1	19991231	PL19940313035	19940819
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	RU2125958 C1	19990210	RU19960105413	19940819
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	US5782369 A	19980721	US19960602754	19960215
	WO9505321 A1	19950223	WO1994AU00486	19940819
	ZA9406320 A	19950317	ZA19940006320	19940819

Probable Assignee: BERRY PLASTICS CORP

Assignee(s):(std): CLOSURES AND PACKAGING SERV LTD ; PRECISION VALVE AUSTRALIA ; PRECISION VALVE TRALIA CO LTD ; PRESIZHN VEHLV AUSTREHLIA PTI LIMITED ; PRECISION VALVE AUSTRALIA PTY LTD ; PREC VALVE AUSTRALIA PTY LTD ; PREC VALVE AUSTRALIA PTY LTD ; VALVE AUSTRALIA PTY LTD ; TANSEY CHARLES MARTIN

Assignee(s): REXAM CLOSURE SYSTEMS LLC ; PRECISION VALVE AUSTRALIA PTY LTD ; PRECISION VALVE TRALIA CO ; PRECISION VALVE AUSTRALIA PTY LTDAU ; Precision Valve Australia Pty Limited. ; 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 CHARLES MARTIN ; CHARL Z MARTIN TEHNZI ; TRANSEY CHARLES MARTIN ; CHARLES MARTIN TANSEY ; TANSEY CHARLES M ; CHARLES MARTIN TRANSEY ; TANSEY CHARLES ; TANSY C M ; TANSEY C M

Inventor(s): C M TANSY ; CHARL'Z MARTIN TEHNZI ; Charles Martin ; Tansey ; C M TANSEY

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

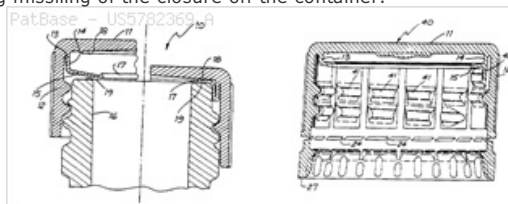
US class: 215/252 215/331 215/344 215/345 215/DIG.1

[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, WO17212454, WO11057111, WO11057111, WO09154666, WO09154666, WO06024550, WO04007296, WO04007296, WO0200521, WO0064774, USRE47156, 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, US10293993, RU2507137, JP2011519330, JP2003276758, EP2268554, EP2065314, EP2065314, EP1799573, EP1354811, EP1354811, EP1028900, EP1028900, DE10297200, CN102700823, CN102700822, AU2009260868,

Abstract:
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 form 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 missiling of the closure off the container.



12) Family number: 28185285 (US2002033374A)

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Title: Tamper evidencing closure

Priority: US19970904878 19970801 WO1998US15527 19980723 US19990323571 19990601
WO2000US12283 20000505 KR20007000005U 20000522 US20000653679 20000901
US20010900505 20010705 US20010955844 20010918 US20020266091 20021004
EP20030770468 20030924 WO2003US30350 20030924 US20050250249 20051011
US20080203992 20080904

Family:	Publication number	Publication date	Application number	Application date
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	AU200191356 A5	20030123	AU20010091356	20011115
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	AU2003278956 AH	20040504	AU20030278956	20030924

AU785404 B2	20070419	AU20010091356	20011115
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CN1275114 A	20001129	CN19988007824	19980723
CN1701028 A	20051123	CN20038025129	20030924
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DE69837713 D1	20070614	DE19986037713T	19980723
DE69837713 T2	20080110	DE19986037713T	19980723
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MXPA05003566 A1	20050603	MX2005PA03566	20030924
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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 SUBORDINATED CREDITORS) ; 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

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

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

Agent(s): DAVIES COLLISON CAVE PTY LTD; DAVIES COLLISON CAVE; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL; DAVID J BREZNER DORSEY AND WHITNEY LLP; ADAM K SACHAROFF MUCH SHELIST 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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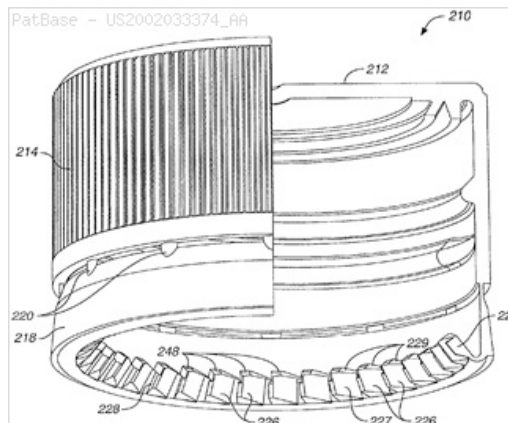
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Forward Citations:

WO18236659, WO18142294, WO17212454, WO17183952, WO15046889, WO13001454, WO13001454, WO11070326, WO09095297, WO08092716, WO08092716, WO07081656, WO07033722, WO04048220, WO03050033, WO03016161, WO03004369, USRE47156, USD838171, USD836442, USD833278, USD824257, USD805899, 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, US9975669, US9850019, 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, US10287065, US10266299, US10214312, US10214311, US10028725, US10023345, TWI498258, KR200462672, JP4932710, JP2008508151, JP2007501169, ITMI20111912, GB2476089, FR2911584, ES2321471, EP2586721, EP2223656, EP2123569, EP2088090, EP1953091, EP1660379, EP1660379, EP1445207, EP1445207, EP1288133, DE102010039036, CN103857599, CN103857599, AU2003302391, AU2002333387, AT519129, AT519129,

Abstract:

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.



NO178997 B	19960409	NO19900000407	19900129
NO178997 C	19960717	NO19900000407	19900129
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Probable Assignee: CLOSURE SYSTEMS INT INC

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 ; CLOSURE SYSTEMS INT INC ; CREDIT SUISSE SYDNEY BRANCH ; ALCOA CLOSURE SYSTEMS INT ; H C IND INC ; H C IND ; H C INDUSTRIES INC ; HC IND INC ; H C INDUSTRIES INC CRAWFORDSVILLE IND US ; H C INDUSTRIES INC CRAWFORDSVILLE IND ; H C IND INC A CORP OF IN ; H C IND INC AN IN CORP ; WILDE SHELDON L ; MCBRIDE STEPHEN W

Inventor(s):(std): WILDE SHELDON L ; MCBRIDE STEPHEN W ; SHELDON L WILDE ; WILDE SNELDON L ; STEPHEN W MCBRIDE ; SHIERUDON ERU WAIRUDO ; SUCHIIBUN DABURYU MATSUKUBURAI ; SUCHIIBUN DABURIYU MATSUKUBURA

Inventor(s): WILDE SHELDON L CRAWFORDSVILLE IN 47933 US ; MCBRIDE STEPHEN W BROWNSBURGE IN 46112 US ; WILDE SHELDON L CRAWFORDSVILLE IN 47933 ; MCBRIDE STEPHEN W BROWNSBURGE IN 46112 ; SUCHIIBUN DABURIYU MATSUKUBURAI DO

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 (IPC 8-9): B65D41/34 B65D55/02 B65D55/08 (Advanced/Invention); B65D55/02 (Advanced/Non-invention); B65D41/34 B65D55/02 (Core/Invention)

International class (IPC 1-7): B65D41/00 B65D41/34 B65D55/02 B65D55/06 B65D55/08 B65D55/12

CPC: B65D41/3428 B65D41/3447

European class: B65D41/34C1 B65D41/34D1

US class: 215/252 215/258

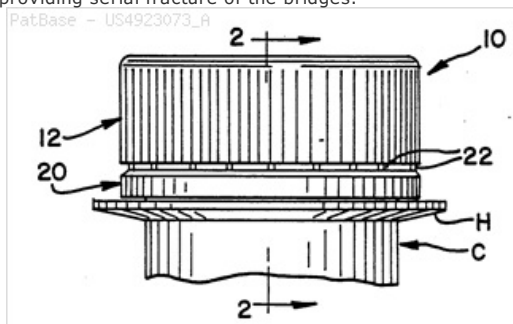
[Classification Explorer](#)

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Forward Citations: WO9902417, WO9815465, WO9718139, WO9700209, WO9604180, WO9222464, WO9203350, WO9203349, WO14017893, WO09154666, WO0224542, WO0115988, USRE47156, 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, US2017305615, 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, EP3388358, EP2268554, EP1683732, EP1243520, EP1092640, EP0931001, EP0916587, EP0879180, EP0861792, EP0752373, EP0593396, EP0508702, EP0508396, DE4214151, DE4201997, CN106494740, AU730107, AU649118,

Abstract:

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.



Title: Tamper-indicating closure with lugs on a stop flange for spacing the flange from the finish of a container
Priority: US19990301065 19990428 CA20002306272 20000419 US20020054431 20020122
US20030446411 20030528

Family:	Publication number	Publication date	Application number	Application date
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	AU761956 B2	20030612	AU20000030159	20000427
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	CA2306272 C	20070220	CA20002306272	20000419
	CL2000000992 A1	20010514	CL20000000992	20000424
	CN1271681 A	20001101	CN20001018066	20000427
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	EP1048585 B1	20051102	EP20000303388	20000420
	ES2250078 T3	20060416	ES20000303388T	20000420
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	JP2000355353 A2	20001226	JP20000169745	20000428
	KR20010049278 A	20010615	KR20000021213	20000421
	MXPA00003985 A1	20020308	MX2000PA03985	20000425
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	PL196557 B1	20080131	PL20000339893	20000426
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Probable Assignee: BERRY PLASTICS CORP

Assignee(s):(std): OWENS ILLINOIS CLOSURE INC

Assignee(s): OWENS ILLINOIS CLOSURE INC TOLEDO ; REXAM CLOSURE SYSTEMS INC ; REXAM CLOSURE SYSTEMS LLC ; US BANK NATIONAL ASSOCIATION COLLATERAL AGENT AS ; BANK OF AMERICA ; BERRY PLASTICS CORP ; CREDIT SUISSE CAYMAN ISLANDS BRANCH AG ; GREGORY JAMES L

Inventor(s):(std): JAMES L GREGORY ; GREGORY JAMES LEWIS ; J L GRAGORRIE ; GRAGORRIE J L ; GREGORY JAMES L

Inventor(s): GREGORY JAMES

Agent(s): SHELSTON IP PTY LTD; SHELSTON IP; GOWLING LAFLEUR HENDERSON LLP; JOHANSSON; RAMIRO CASTRO DUQUE

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

International class (IPC 8-9): B65B7/28 B65D41/04 B65D41/32 B65D41/34 B65D47/10 B65D50/00 B65D50/08 B65D55/02 (Advanced/Invention); B65D41/34 B65D55/02 (Advanced/Non-invention)

International class (IPC 1-7): B29D1/00 B65B7/28 B65D17/50 B65D41/04 B65D41/32 B65D41/34 B65D47/08 B65D50/00 B65D50/08 B65D55/02

CPC: B65D41/045 B65D41/0471 B65D41/3428

European class: B65D41/04D2 B65D41/04E B65D41/34C1

US class: 215/252 215/258 215/331 215/341 264/268 264/268S 53/317 53/331.5 53/420 53/471 53/471P 53/485 53/485S 53/490 534/900

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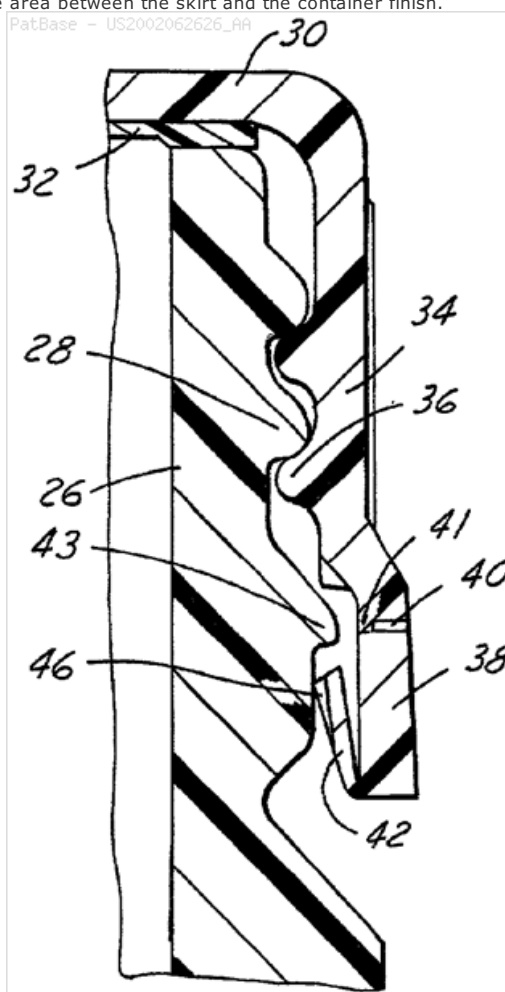
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Forward Citations: WO12050759, WO05049439, WO03011703, USD710712, US9790005, US9327878, US8944265, US8911479, US8650839, US8528761, US8353413, US8251236, US8117807, US8100277, US7819264, US7798359, US7780024, US7775386, US7766178, US7645414, US7644902, US7637384, US7527159, US7445130, US7198170, US6974046, US6968966, US6913158, US6877624, US6622460, US2016023813, US2011278299, US2011174767, US2011174766, US2011174757, US2011174756, US2011168664, US2011168663, US2011168658, US2011113734, US2010102023, US2010084364, US2009298383, US2008264958, US2008164235, US2008017646, US2006267193, US2006021959, US2005199572, US2005167879, US2005145629, US2005121406, US2005000931, US2004069738, US2004045926, US2003192854, US2003150833, US2003121880, US10336507, FR2951702, FR2813280, EP2627570, EP2197758, EP2197758, CN104386348, CN104386348, CN102834332,

Abstract:

A tamper-indicating closure of integrally molded plastic construction that includes a base wall having a peripheral skirt with internal threads for engaging external threads on a container finish. A tamper-indicating band is connected to the edge of the skirt by a plurality of circumferentially spaced integral frangible bridges. A stop flange extends axially outwardly and radially inwardly from an edge of the band remote from the skirt for inversion and engagement with a bead on the container finish. The stop flange is in the form of a circumferentially continuous base of uniform thickness circumferentially of the band, and either uniform or increasing thickness radially and axially of the band. A plurality of circumferentially spaced lugs are integral with and extend from the base. The lugs widen uniformly from zero thickness at the band to a maximum thickness at the free edge of the flange. The lugs are thus disposed for opposed abutting engagement with the A1 diameter of the container finish beneath the A bead on the container finish. The channels or serrations between the lugs permit drainage of liquid from the area between the skirt and the container finish.



15) Family number: 10928653 (WO9903747A1)

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Title: PUSH-ON CLOSURE SYSTEME DE FERMETURE PAR PRESSION
Priority: AU1997PO07886 19970714 AU19980080945 19980703 WO1998AU00511 19980703
Family:

Publication number	Publication date	Application number	Application date
AU199880945 A1	19990210	AU19980080945	19980703
AU731348 B2	20010329	AU19980080945	19980703
AU788697 A0	19970807	AU1997PO07886	19970714

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Probable Assignee: CLOSURES AND PACKAGING SERV LTD

Assignee(s):(std): CLOSURES AND PACKAGING SERVICE ; KLOZHERS EHND PEHKEDZHING SERV ; DRUITT RODNEY MALCOLM ; FURLONG PATRICK MICHAEL ; CLOSURES AND PACKAGING SERV LTD

Assignee(s): CLOSURES AND PACKAGING SERVICES LIMITED ; CLOSURES AND PACKAGING SERVICES LTD ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT GUERNSEY ; CLOSURES AND PACKAGING SERVICES LTD ST PETER PORT GUERNSEY CHANNEL ISLANDS ; BUSWELL CLIVE ; KLOZHERS EHND PEHKEDZHING SERVISIZ LTD ; KLOZHERS EHND PEHKEDZHING SERVISIZ LIMITED ; CLOSURES AND PACKAGING SERVICES LIMITED ; FURLONG MICHAEL PATRICK ; CLOSURES AND PACKAGING SERVICES LTD

Inventor(s):(std): BASWERE KLEF ; BASVELL KLAJV ; FERLONG PATRIK MAJKL ; DRUITT RODNEY MALKOLM ; FURLONG P M ; DRUITT R M ; BUSWEL CLIVE ; FURLONG PATRICK M ; DRUITT RODNEY M ; FURLONG PATRICK MICHAEL ; BUSWELL CLIVE ; FURLONG MICHAEL PATRICK ; DRUITT RODNEY MALCOLM ; FORLONG PATRICK MICHAEL

Inventor(s): PATRICKM FURLONG ; RODNEYM DRUITT ; PATRICK MICHAEL FURLONG ; RODNEY M DRUITT ; PATRICK M FURLONG ; KLEF BASWERE ; CLIVE BUSWELL ; MICHAEL PATRICK FURLONG ; RODNEY MALCOLM DRUITT ; R M DRUITT ; P M FURLONG ; PM FURLONG ; RM DRUITT ; DRUITT RODNEY MALCOLM DRUITT RODNEY MALCOLM ; BUSWEL CLIVE BUSWEL CLIVE ; FURLONG PATRICK MICHAEL FURLONG PATRICK MICHAEL

Agent(s): FB RICE ; FB RICE PTY LTD ; KIRBY EADES GALE BAKER

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): B65D41/17 B65D41/46 B65D41/47 (Advanced/Invention); B65D41/17 (Advanced/Non-invention); B65D41/02 B65D41/32 (Core/Invention)

International class (IPC 1-7): B05D B65D B65D41/17 B65D41/46 B65D41/47

CPC: B65D41/47

European class: B65D41/47

[Classification Explorer](#)

Cited documents: WO9420380 A1, US4562930 A, GB2311285 A1, GB2273493 A1, GB2063226 A1,

Forward Citations: WO14182687, US8403181, US8393483, US7431877, US6805252, RU2554010, KR101121833, EP3225565, EP1985549, EP1927553, EP1789336, DE102005004484, DE102005004484, CN107000908,

Abstract:

A push-on closure (10) that can be pushed on to a container (12) and then screwed off. The container (12) has a neck (11) that is provided with a multi-start thread comprising alternating ridges (25) and grooves (26). The closure (10) includes a substantially circular top (13) and a depending skirt (14) with the skirt having a number of lugs (21) that are spaced apart circumferentially by distances corresponding to the spacing of the grooves (26) of the thread. When the closure (10) is attached to the neck (11) of the container (12), each of the lugs (21) engages with one of the recesses (27) formed in the neck (11). A ramp member (29) is also located adjacent each recess (27) so that upon relative rotation of the closure (10) at least some of the lugs (21) will bear against at least some of the ramp members (29) and be directed by the ramp members (29) into the grooves (26) in the thread to allow the closure (10) to be unscrewed from the neck (11) of the container (12).

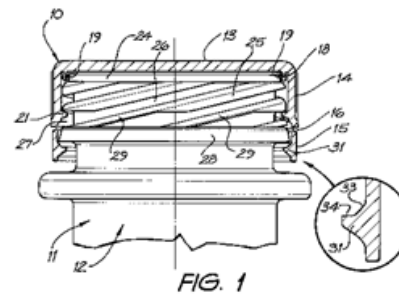


FIG. 1

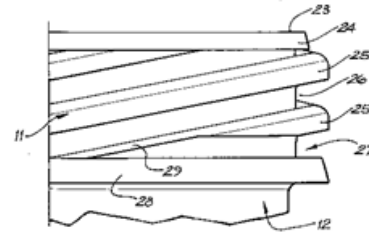


FIG. 2

16) Family number: 8380493 (US5258191A)

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Title: Vacuum-sealed food container having press-on, pry-off closure

Priority: US19910694149 19910501 US19910694903 19910502 WO1991US03028 19910502
 US19920819462 19920110 US19920820445 19920113 WO1991US03028 19920502
 WO1993US00222 19930108 US19930015284 19930208 US19940256242 19940701

Family:

Publication number	Publication date	Application number	Application date
AU199179019 A1	19921221	AU19910079019	19910502
AU199335824 A1	19930803	AU19930035824	19930108
AU660614 B2	19950706	AU19910079019	19910502
BRPI9107304 A	19940614	BR1991PI07304	19910502
CA2109097 AA	19931022	CA19912109097	19910502
CA2127693 AA	19940708	CA19932127693	19930108
EP0583240 A1	19940223	EP19910910049	19910502
EP0583240 A4	19941109	EP19910910049	19910502
HU67206 A2	19950228	HU19930002978	19910502
HU9302978 A0	19940128	HU19930002978	19910502
JP7500795 T2	19950126	JP19910509396T	19910502
KR19947000264 A	19940221	KR19937003297	19920502
RU93057880 A	19960610	RU19930057880	19931029
US5258191 A	19931102	US19920820445	19920113
US5341949 A	19940830	US19930015284	19930208
US5443853 A	19950822	US19940256242	19940701
WO9219506 A1	19921112	WO1991US03028	19910502
WO9313990 A1	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 ; CHASE MANHATTAN BANK COLLATERAL AGENT AS ; 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 ; HAYES THOMAS H ; CROWN PACKAGING TECHNOLOGY INC

Inventor(s):(std): HAYES THOMAS H**Inventor(s):** THOMAS H HAYES ; HAYES THOMAS H US**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: 215/253 215/274 215/321 219/734 426/107 426/113 426/234 426/243 426/401 426/405 426/407

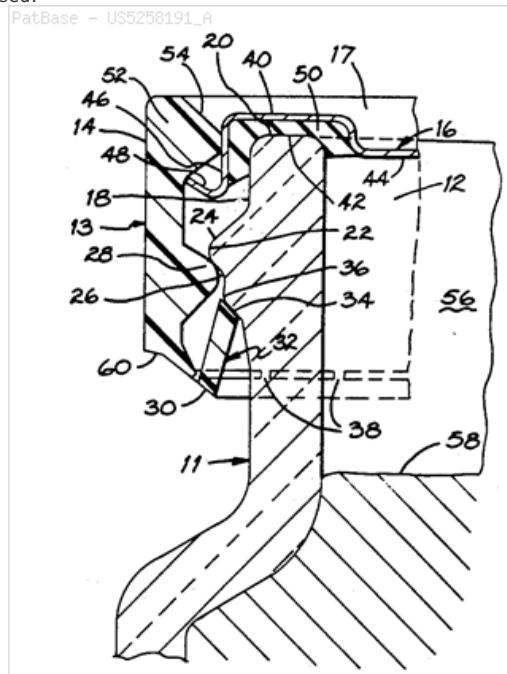
[Classification Explorer](#)

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, WO18106960, WO16014825, WO15153952, WO14145569, WO14088781, WO11112285, WO06045196, WO05092730, WO04106174, WO04085257, WO02068285, USD668555, USD626790, USD592954, USD587115, USD584145, US9994379, US9919848, US9908670, US9839072, 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, US10086963, JP5442850, JP5442850, JP2011513150, JP2011118551, JP2006526547, FR2897043, ES2187341, EP3089925, EP2605975, EP1857372, EP1732818, EP1633639, EP0949156, EP0949156, DE102005019291, DE102005019291, CN102448842,

Abstract:

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.



17) Family number: 20458404 (US6056136A)

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Title: Lug closure for press-on application to, and rotational removal from, a threaded neck container

Priority: US19950565002 19951130 WO1996US03048 19960305

Family:

Publication number	Publication date	Application number	Application date
AT218472 E	20020615	AT19960908677T	19960305
AU199651842 A1	19970619	AU19960051842	19960305
AU738312 B2	20010913	AU19960051842	19960305
BRPI9612110 A	19990217	BR1996PI12110	19960305
CA2239178 AA	19980601	CA19962239178	19960305
CA2239178 C	20030513	CA19962239178	19960305
CN1082479 C	20020410	CN19961098734	19960305

CN1203561 A	19981230	CN19961098734	19960305
DE69621646 D1	20020711	DE19966021646	19960305
DE69621646 T2	20021219	DE19966021646T	19960305
DK0871585 T3	20021007	DK19960908677T	19960305
EP0871585 A1	19981021	EP19960908677	19960305
EP0871585 A4	19990324	EP19960908677	19960305
EP0871585 B1	20020605	EP19960908677	19960305
ES2177773 T3	20021216	ES19960908677T	19960305
HU9901676 AB	19990928	HU19990001676	19960305
HU9901676 AC	20031028	HU19990001676	19960305
JP2000502308 T2	20000229	JP19970520446T	19960305
JP3957755 B2	20070815	JP19970520446	19960305
KR100449355 B1	20041214	KR19980704014	19960305
KR19990071736 A	19990927	KR19980704014	19960305
PL184502 B1	20021129	PL19960326976	19960305
PL326976 A1	19981109	PL19960326976	19960305
TR9800966 T2	19980821	TR19960000966T	19960305
TR9800966 T2	19980821	TR19980000966T	19960305
US6056136 A	20000502	US19950565002	19951130
WO9719864 A1	19970605	WO1996US03048	19960305

Probable Assignee: SILGAN HOLDINGS INC

Assignee(s):(std): WHITE CAP ; WHITE CAP INC DOWNERS GROVE ; WHITE CAP INC DOWNERS GROVE ILLINOIS ; WHITE CAP INC

Assignee(s): TABER JAMES ; AMCOR WHITE CAP INC ; MANN BENJAMIN ; PETERSEN MARK ; SILGAN HOLDINGS INC

Inventor(s):(std): BEGLEY DOUGLAS G ; BENJAMIN MANN ; BENJEMING MAN ; JAMES TABER ; MAN BENJEMING ; MARK PETERSEN ; MARK PETERSON ; MARSHALL F PAUL ; MARSHALL FPAUL ; PETERSON MARK ; TABER JAMES ; PETERSEN MARK ; MANN BENJAMIN

Agent(s): WRAYS; WRAYS PTY LTD; OSLER HOSKIN AND HARCOURT 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 LI LK LR LS 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 TR TT UA UG UZ VN

International class (IPC 8-9): B65D1/02 B65D41/04 B65D41/17 B65D41/34 B65D41/47 B65D51/14 (Advanced/Invention); B65D41/04 B65D41/34 (Advanced/Non-invention); B65D41/04 B65D41/32 B65D41/34 B65D51/00 (Core/Invention)

International class (IPC 1-7): B65D1/02 B65D39/00 B65D41/04 B65D41/17 B65D41/34 B65D45/02

CPC: B65D41/47 B65D51/145

European class: B65D41/47 B65D51/14B

US class: 215/252 215/318 215/330

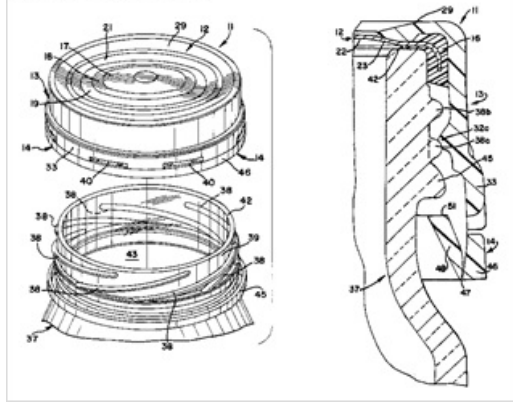
[Classification Explorer](#)

Cited documents: US5685443 A, US5320233 A, US5307946 A, US5267661 A, US5240131 A, US5135124 A, US5062538 A, US4993572 A, US4989740 A, US4863030 A, US4813561 A, US4739890 A, US4721219 A, US4717034 A, US4579238 A, US4552279 A, US4485932 A, US4478343 A, US4444327 A, US4434903 A, US4346809 A, US4325487 A, US4298129 A, US4275817 A, US4223795 A, US4202462 A, US4000825 A, US3917906 A, US3913771 A, US3888383 A, US3794200 A, US3756445 A, US3741423 A, US3608764 A, US3555606 A, US3344942 A, US3270904 A, US3069040 A, US1548459 A, GB2063226 A1,

Forward Citations: WO16050027, WO11039400, WO06007988, USD811226, USD798720, USD793235, USD791586, USD783400, USD769719, USD769715, USD766716, USD766080, USD761103, USD457433, US9428292, US9221586, US9188003, US8893906, US8844770, US8806968, US8757407, US8672159, US8668097, US8650839, US8596477, US8544666, US8365933, US8308005, US8281945, US8251236, US8100277, US8071004, US7958703, US7946438, US7854106, US7831638, US7798359, US7784629, US7780024, US7766178, US7731050, US7703617, US7674061, US7651292, US7644902, US7624701, US7621413, US7613733, US7543183, US7320410, US7299939, US7198170, US7175039, US7156264, US7134565, US6988642, US6974046, US6913157, US6912552, US6786179, US6760708, US6659297, US6606716, US6598223, US6564220, US6563698, US6560726, US6557714, US6539499, US2015121807, US2012132014, US2011024382, US2010213159, US2010058574, US2010024197, US2009188888, US2009134116, US2008296309, US2008179335, US2008105641, US2007284331, US2007187352, US2007175852, US2007151521, US2007151520, US2007108155, US2007095781, US2006213861, US2006018704, US2006018702, US2005284837, US2005263477, US2005145629, US2004231609, US2004149676, US2004139130, US2004128496, US2004079765, US2003160020, US2003150833, EP2918652, EP2562095, EP2223984, EP2209722, EP1618809, DE102010000743, CN105008234,

Abstract:

A closure for press-on application to, and rotational removal from, a container having a cylindrical neck which includes a plurality of vertically spaced helical threads formed in the outer surface thereof in generally parallel relationship to each other. A flexible cylindrical skirt, preferably composed of a polyolefin such as polypropylene, includes a plurality of radially inwardly projecting spaced lugs that are circumferentially disposed around the inner cylindrical skirt surface and axially spaced therefrom for engagement with the threads on the cylindrical neck of the container. The lugs are composed of a deformable plastic material and are sized so that when the closure is applied to the container, an interference fit is provided between at least some of the lugs and at least some of the threads. The flexible skirt and lugs are sized to permit the closure to be applied to the container by a direct axial, press-action without requiring rotation thereof to effect the desired sealing of the closure on the container. When the closure is to be removed from the container, a rotational movement thereof causes at least some of the lugs which are at least partially received within helical grooves defined by the vertically spaced helical threads to engage upwardly inclined surfaces on the threads, thereby providing an upward camming action to the closure.

**18) Family number: 11557525** (US6119883A)

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Title: Tamper-indicating closure and method of manufacture
Priority: US19980206214 19981207 CA19992291413 19991202
Family:

Publication number	Publication date	Application number	Application date
AU199963078 A1	20000608	AU19990063078	19991203
AU199963078 A5	20000608	AU19990063078	19991203
AU757519 B2	20030220	AU19990063078	19991203
BRPI9907401 A	20000815	BR1999PI07401	19991207
BRPI9907401 B1	20090113	BR1999PI07401	19991207
CA2291413 AA	20000607	CA19992291413	19991202
CA2291413 C	20060808	CA19992291413	19991202
CN1258625 A	20000705	CN19991027762	19991206
DE69935897 D1	20070606	DE19996035897	19991201
DE69935897 D1	20070606	DE19996035897T	19991201
DE69935897 T2	20080110	DE19996035897T	19991201
EP1008530 A1	20000614	EP19990309635	19991201
EP1008530 B1	20070425	EP19990309635	19991201
JP2000168810 A2	20000620	JP19990347717	19991207
US6119883 A	20000919	US19980206214	19981207
ZA9907500 A	20000606	ZA19990007500	19991206

Probable Assignee: BERRY PLASTICS CORP
Assignee(s):(std): OWENS ILLINOIS CLOSURE INC
Assignee(s): REXAM CLOSURE SYSTEMS INC ; REXAM CLOSURE SYSTEMS LLC ; KELLOGG SHAWN E ; TOLLIVER ROGERS LOLETA T ; WEBSTER CHARLES A ; BERRY PLASTICS CORP ; GRAHAM PAUL R ; HOCK MARK R
Inventor(s):(std): HOCK MARK R ; HECK M R ; WEYBST C A ; CLOGG S E ; WEBSTER CHARLES A ; KELLOGG SHAWN E ; GRAHAM PAUL R ; TOLLIVER ROGERS LOLETA T ; HOCK MARK RONALD
Inventor(s): PAUL R GRAHAM ; MARK RONALD HOCK ; LOLETA T TOLLIVER ROGERS ; CHARLES A WEBSTER ; SHAWN E KELLOGG ; S E CLOGG ; M R HECK ; C A WEYBST ; MARK R HOCK
Agent(s): SHELSTON IP PTY LTD; SHELSTON IP; GOWLING LAFLEUR HENDERSON LLP
Designated states: DE FR GB IT
International class (IPC 8-9): B65D25/20 B65D41/32 B65D41/34 (Advanced/Invention); B65D25/20 (Advanced/Non-invention); B65D25/20 B65D41/32 B65D41/34 (Core/Invention)
International class (IPC 1-7): B65D B65D25/20 B65D41/32 B65D41/34 B65D55/02
CPC: B65D41/3428
European class: B65D41/34C1
US class: 215/252 264/328.1 53/485

[Classification Explorer](#)

Cited documents: WO9627532 A1, USRE33265, US5947311 A, US5775527 A, US5755347 A, US5727705 A, US5725115 A, US5685443 A, US5678714 A, US5650113 A, US5570798 A, US5564319 A, US5554327 A, US5522293 A, US5488888 A, US5472106 A, US5462187 A, US5451360 A, US5400913 A, US5295600 A, US5282540 A, US5058755 A, US5007545 A, US4984703 A, US4981230 A, US4978016 A, US4895266 A, US4875594 A, US4801031 A, US4576298 A, US4506795 A, US4478343 A, US4470513 A, US4458822 A, US4458821 A, US4432461 A, US4418828 A, US4407422 A, US4401227 A, US4394918 A, US4322009 A, US4305516 A, US4291813 A, US4206851 A, US4196818 A, US4157144 A, US4147268 A, US4126240 A, US3861551 A, US3858743 A, US3784041 A, US3484012 A, US3438528 A, US3374913 A, US3329295 A, US33265 A, US3297184 A, JP9226790 A2, JP62146162 A2, JP61244757 A2, JP4215964 A2, JP1107557 A2, JP10119999 A2, GB2034674 A1, FR2421812 A1, FR2291915 A2, EP0801005 A1, EP0049876 A1, DE3025751 A1, DE2213773 A1,

Forward Citations: WO0214170, USD833278, USD747201, USD737679, USD736634, USD727730, USD723919, USD632958, US9975669, US9359117, US8650839, US8596477, US8376163, US8251236, US8231018, US8100277, US7798359, US7780024, US7766178, US7645414, US7644902, US7413097, US7235207, US7198170,

Abstract:

A tamper-indicating closure of integrally molded plastic construction that include a base wall having a peripheral skirt with internal threads for engaging external threads on a container finish. A tamper-indicating band is connected to the edge of the skirt by a plurality of circumferentially spaced integral frangible bridges. A stop flange extends from an edge of the band remote from the skirt for engagement with a bead on the container finish. The stop flange has a circumferentially continuous free edge remote from the band disposed in a plane parallel to the base wall. A plurality of circumferentially spaced openings are disposed in the stop flange adjacent to the band for drainage of liquid from between the closure skirt and the container finish. A plurality of circumferentially spaced gussets in the stop flange are at the free edge of the ring, with each gusset being disposed between an adjacent pair of drainage openings. The gussets function during inversion of the stop flange, from an axially outward orientation as molded to an axially inward orientation for use, to absorb compressive stresses on the flange and thereby isolate portions of the flange surrounding the drainage openings from such compressive stresses. A plurality of circumferentially spaced lugs are molded on the inside surface of the closure for opposed abutment with the bead on the finish to help facilitate drainage from between the skirt and finish.

