

1) Family number: 23912009 (US6446844B)

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Title: Closure with internal flow control for a pressure openable valve in an extendable/retractable nozzle

Abstract: A dispensing system is provided for dispensing a product from a container having an opening. The dispensing system includes a spout for communicating with the container opening. The spout defines at least one discharge aperture and a distal seal. A nozzle assembly is mounted on the spout for movement between a retracted, closed position and an extended, open position. The nozzle assembly includes a nozzle having a dispensing passage around at least a portion of the spout. The nozzle assembly also includes a resiliently flexible valve that is sealingly disposed across the nozzle dispensing passage at a location distally of the spout and has an initially closed dispensing orifice which opens in response to a pressure differential acting across the valve. The nozzle assembly also includes a flow restrictor below the valve, and a distal seal for sealingly engaging the spout distal seal.

Classifications:

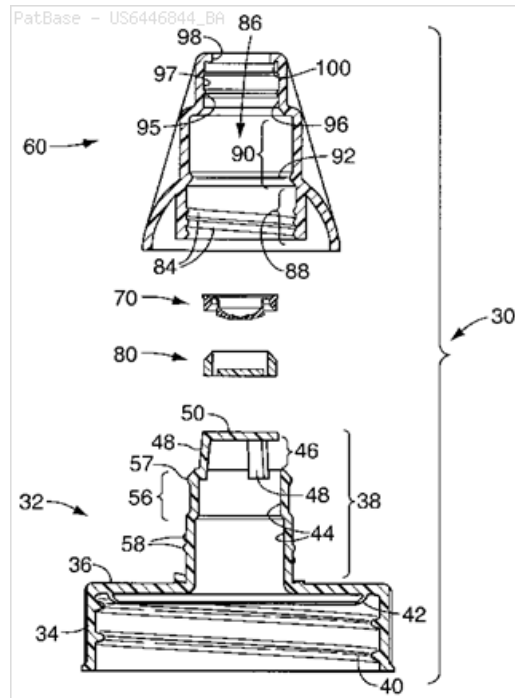
International (IPC 8-9): B65D B65D1/00 B65D35/00 B65D35/28
B65D47/20 B65D47/24 B65D83/00 (Advanced/Invention);
B65D1/00 B65D35/00 B65D35/24 B65D47/04
B65D83/00 (Core/Invention);
B65D (Subclass/Invention)

International (IPC 1-7): B05D35/00 B65D1/00 B65D35/00
B65D47/20 B65D83/00

CPC: B65D47/2031 B65D47/242

European: B65D47/20E2 B65D47/24A1

US: 222/212 222/490 222/492 222/494 222/547 222/564



Family:

Publication number	Publication date	Application number	Application date
AR037862 AA	20041209	AR2002P104892	20021216
AU2002352559 AA	20030630	AU20020352559	20021108
AU2002352559 BB	20070614	AU20020352559	20021108
BRPI0215009 A	20041109	BR2002PI15009	20021108
CA2469765 AA	20040607	CA20022469765	20021108
CN100341752 C	20071010	CN20028027980	20021108
CN1617818 A	20050518	CN20028027980	20021108
EP1465812 A1	20041013	EP20020789519	20021108
HK1078062 A1	20080808	HK20050110000	20051109
HK1078062 A1	20060303	HK20050110000	20051109
HK1078062 A3	20060303	HK20050110000	20051109
HK1078062 B	20080808	HK20050110000	20051109
IN01533DN2004 A	20070316	IN2004DN01533	20040603
JP2005511440 T2	20050428	JP20030552625T	20021108
MXPA04005532 A1	20040913	MX2004PA05532	20021108
PL200286 B1	20081231	PL20020370800	20021108
PL370800 A1	20050530	PL20020370800	20021108
RU2004121981 A	20050310	RU20040121981	20021108
RU2295482 C2	20070320	RU20040121981	20021108
US6446844 BA	20020910	US20010024832	20011218
WO03051731 A1	20030626	WO2002US35870	20021108

Priority:

US20010024832 20011218 WO2002US35870 20021108

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s): (std): SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC ; SIKVIST KLOUZHERZ FORIN INK

Assignee(s): APTARGROUP INC ; GROSS RICHARD A

Inventor(s): (std): GROSS RICHARD A ; RICHARD A GROSS ; RICHARD GROSS

Inventor(s): GROSS RICHARD

Agent(s): SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO; CHINA PATENT AGENT HK LTD

Designated states: AT AU BE BG BR CA CH CN CY CZ DE DK EE ES FI FR GB GR IE IN IT JP LI LU MC MX NL PL PT RU SE SK TR

2) Family number: 2934020 (US4749108A)

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Title: BIMODAL STORAGE AND DISPENSING PACKAGE INCLUDING SELF-SEALING DISPENSING VALVE TO PROVIDE AUTOMATIC SHUT-OFF AND **LEAK**-RESISTANT INVERTED STORAGE

Abstract: A flexible storage and dispensing package for fluid material. The package has a first mode of operation capable of storing the fluid material without leakage when the package is subjected to unintentional external forces and a second mode of operation capable of dispensing the fluid material when the package is subjected to external forces intentionally applied by the user. The second mode of operation is capable of dispensing the fluid material through a discharge orifice in response to manually applied forces and of automatically ceasing the dispensing operation when the manually applied forces are removed. The package is also resistant to leakage in the second mode of operation when stored with its discharge orifice downwardly oriented intermediate dispensing cycles.

Classifications:

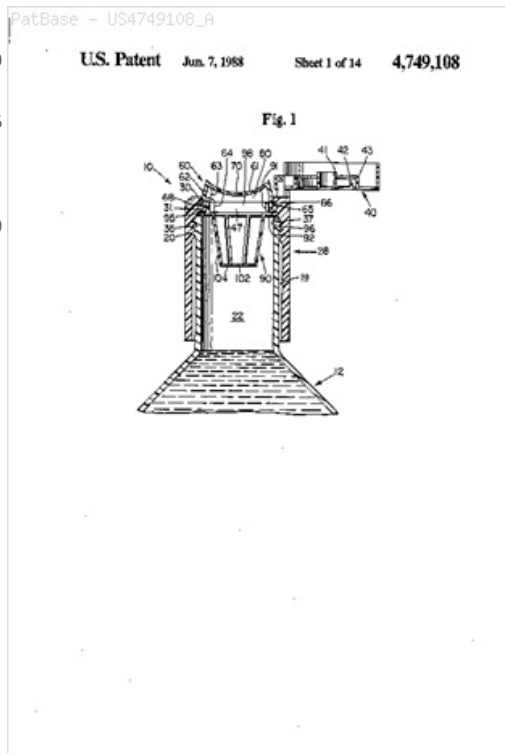
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B65D85/72 (Advanced/Invention);
B65D47/06 (Advanced/Non-invention);
B65D1/00 B65D23/00 B65D35/00 B65D47/00 B65D47/04 B65D47/06
B65D47/08 B65D5/00 B65D85/72 (Core/Invention);
B65D (Subclass/Invention)

International (ipc 1-7): A47K5/122 A61K31/485 A61K9/00
A61L15/14 B65BA B65D1/32 B65D35/48 B65D35/50 B65D35/52
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B65D5/72 B65D65/00 B65D85/72 B67D3/04 F16K21/04 F16K7/12

CPC: B65D23/00 B65D47/043 B65D47/0885 B65D47/2031

European: B65D23/00 B65D47/04A B65D47/08D4C1 B65D47/20E2

US: 222/212 222/490 222/494 222/545 222/556



Family:

Publication number	Publication date	Application number	Application date
AT78228 E	19920815	AT19870202497T	19871214
AU198782808 A1	19880623	AU19870082808	19871218
AU589881 B2	19891019	AU19870082808	19871218
CA1283085 A1	19910416	CA19870554807	19871218
DE3780441 D1	19920820	DE19873780441	19871214
DE3780441 T2	19921217	DE19873780441T	19871214
DK169503 B1	19941114	DK19870006623	19871216
DK662387 A	19880620	DK19870006623	19871216
DK662387 A0	19871216	DK19870006623	19871216
EG18305 A	19921030	EG19870000736	19871217
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EP0278125 A3	19890524	EP19870202497	19871214
EP0278125 B1	19920715	EP19870202497	19871214
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FI875520 A	19880620	FI19870005520	19871216
FI875520 A0	19871216	FI19870005520	19871216
GR3005936 T3	19930607	GR19920402256T	19921012
IE60519 B	19940727	IE19870003455	19871218
IE873455 L	19880619	IE19870003455	19871218
JP1935882 C3	19950526	JP19870321138	19871218
JP6059900 B4	19940810	JP19870321138	19871218
JP63248662 A2	19881014	JP19870321138	19871218
KR19880007352 A	19880827	KR19870014552	19871219
MA21135 A1	19880701	MA19870021376	19871218
MX166267 B	19921228	MX19870009813	19871217
NZ222988 A	19890628	NZ19870222988	19871218
PT86408 A	19890117	PT19870086408	19871218
PT86408 B	19930831	PT19870086408	19871218
TR24274 A	19910729	TR19870000005	19871221
US4749108 A	19880607	US19870109663	19871015

Priority:

US19860944632 19861219 US19870109663 19871015 EP19870202497 19871214
EP19870202497 19871214 EP19870202497 19871214 CA19870554807 19871218

Probable Assignee: OWENS ILLINOIS CLOSURE INC**Assignee(s):** (std): PROCTER AND GAMBLE ; DORNBUSCH ARTHUR H**Assignee(s):** DROBISH JAMES L ; OWENS ILLINOIS CLOSURE INC ; BLAUT ROBERT W ; PROCTER AND GAMBLE CO ; PROCTER AND GAMBLE CO THE ; THE PROCTER AND GAMBLE COMPANY ; PROCTER AND GAMBLE COMPANY THE ; THE PROCTER AND GAMBLE CO ; THE PROCTER AND GAMBLE CO CINCINNATI OHIO US ; TASKE LEO E ; SCHANZLE ROGER E**Inventor(s):** (std): DORNBUSCH A H ; DROBISH J L ; SCHANZLE R E ; TASKE L E ; BLAUT R W ; DORNBUSCH ARTHUR H ; ARTHUR HAROLD DORNBUSCH ; ROGER EVAN SCHANZLE ; LEO EDWARD TASKE ; JAMES LEE DROBISH ; BLAUT ROBERT WILLIAM ; TASKE LEO EDWARD ; SCHANZLE ROGER EVAN ; DORNBUSCH ARTHUR HAROLD ; DROBISH JAMES LEE ; REO EDOWAADO TASUKU ; JIEEMUZU RII DOROBISHIYU ; ROBAATO UIRIAMU BURAUO ; AASAA HARORUDO DOONBUTSUSHIYU ; ROJIYAA EBAN SHIYANZURU ; WILLIAM BLAUT ROBERT ; EDWARD TASKE LEO ; EVAN SCHANZLE ROGER ; LEE DROBISH JAMES ; HAROLD DORNBUSCH ARTHUR ; DROBISH JAMES LEE ; BLAUT ROBERT W ; TASKE LEO E ; SCHANZLE ROGER E ; DROBISH JAMES L ; DORNBUSCH ARTHUR H**Inventor(s):** DROBISH JAMES LEE CINCINNATI OHIO 45215 US ; DORNBUSCH ARTHUR HAROLD CINCINNATI OHIO 45211 US ; TASKE LEO EDWARD CINCINNATI OHIO 45247 US ; SCHANZLE ROGER EVAN CINCINNATI OHIO 45242 US ; ROBERT WILLIAM BLAUT**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; KIRBY EADES GALE BAKER**Designated states:** AT BE CH DE ES FR GB GR IT LI LU NL SE**3) Family number: 3734166 (US4739906A)**

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Title: STORAGE BOTTLE FOR CONTACT LENS CLEANING SOLUTION HAVING A SELF CLOSING VALVE ASSEMBLY

Abstract: A plastic squeeze bottle has a dispensing end having a central, closed-ended, cone-shaped portion which serves as a stem or core for a valve assembly which includes an elastomeric seal which overlies and resiliently grips and circumferentially seals around the stem. The seal also covers apertures in the bottle end adjacent the stem. A small central aperture in the seal where it overlies the closed end of the stem, enables dispensing contents from the bottle when the bottle is squeezed, as the resulting internal pressure causes the seal to balloon slightly away from the stem and permit passage of saline solution from the bottle through the bottle end apertures and seal central aperture. When the squeezing stops, the seal resiliently retracts against the stem and closes the bottle. A snap-on overcap assembly has seal control and closure maintenance features to avoid accidental dispensing of bottle contents due to unintentional squeezing of the bottle when the overcap is closed.

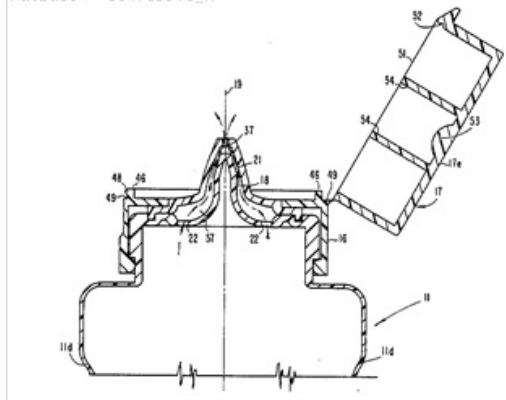
Classifications:**International (IPC 8-9):** A61J1/14 B65D35/50

B65D47/20 (Advanced/Invention);

A61J1/14 B65D47/04 (Core/Invention)

International (IPC 1-7): B05B11/04 B65D35/50**CPC:** B65D47/2081 A61J1/1443 A61J1/1468**European:** A61J1/14F B65D47/20E4B K61J1/14M**US:** 222/153 222/212 222/484 222/494 222/496 222/556 222/562

PatBase - US4739906_R

**Family:**

Publication number	Publication date	Application number	Application date
CA1278279 A1	19901227	CA19870541913	19870713
DE3782200 D1	19921119	DE19873782200	19870610
DE3782200 T2	19930506	DE19873782200T	19870610
EP0253495 A2	19880120	EP19870305135	19870610
EP0253495 A3	19890315	EP19870305135	19870610
EP0253495 B1	19921014	EP19870305135	19870610
ES2036208 T3	19930516	ES19870305135T	19870610
US4739906 A	19880426	US19860885422	19860714

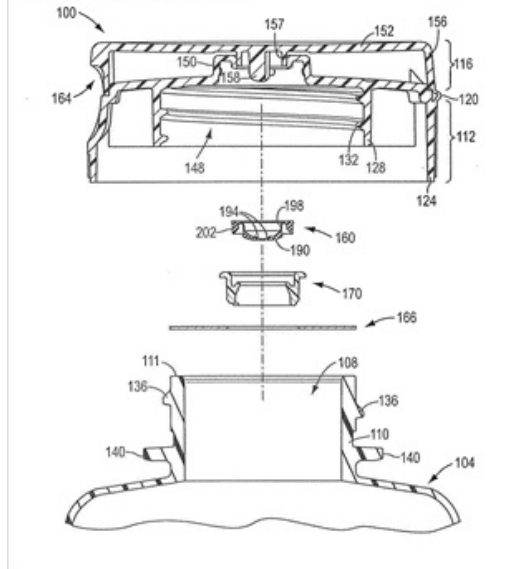
Priority:

US19860885422 19860714 CA19870541913 19870713

Probable Assignee: BLAIREX LAB**Assignee(s):** (std): BLAIREX LAB ; BLAIREX LAB INC**Assignee(s):** BLAIREX LABORATORIES INC ; BLAIREX LABORATORIES INC A CORP OF IN ; BLAIREX LABORATORIES INC EVANSVILLE IND US ; JPMORGAN CHASE BANK NA ; LOTURCO RAYMOND A**Inventor(s):** (std): LOTURCO RAYMOND A**Agent(s):** SMART AND BIGGAR**Designated states:** DE ES FR GB IT NL SE**4) Family number: 15381175 (US5971232A)**

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Title: Dispensing structure which has a pressure-openable valve retained with folding elements

**Family:**

Publication number	Publication date	Application number	Application date
AR103736 AA	20170531	AR2016P100444	20160219
BR112018004626 A2	20180925	BR20181104626	20151111
EP3337733 A1	20180627	EP20150908437	20151111
EP3337733 A4	20180919	EP20150908437	20151111
MX2018005869 A1	20180815	MX20180005869	20151111
US2018244440 AA	20180830	US20150753832	20151111
US10442585 BB	20191015	US20150753832	20151111
WO17082892 A1	20170518	WO2015US60138	20151111

Priority:

US20150753832 20151111 WO2015US60138 20151111

Probable Assignee: APTARGROUP INC

Assignee(s): (std): APTARGROUP INC

Inventor(s): (std): STACY BEILKE ; DOMINIC SQUILLACCI ; DOMINIC SQUILLACI ; STACY BELLKE ; PHILLIP BURN ; BURN PHILLIP ; SQUILLACI DOMINIC ; BEILKE STACY

Agent(s): APPELT CHRISTIAN W; 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 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

6) Family number: 31867205 (US2005087555A)

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Title: FLUID DISPENSING COMPONENTS

Abstract: Components are provided for use in systems for dispensing fluids. A resilient diaphragm is provided for a diaphragm pump. The diaphragm includes a pressurizing portion connected with a connecting member to a peripheral mounting flange for mounting the diaphragm in the housing of the pump. The pump housing has a retention wall which can be swaged against the diaphragm flange. The pump housing has a discharge structure with an outlet valve and a restraint structure adjacent the valve to prevent in-venting through the outlet valve. The outlet valve includes a flange which is retained by a retention wall and which projects from the discharge structure and which is swaged into engagement with the outlet valve flange.

Classifications:

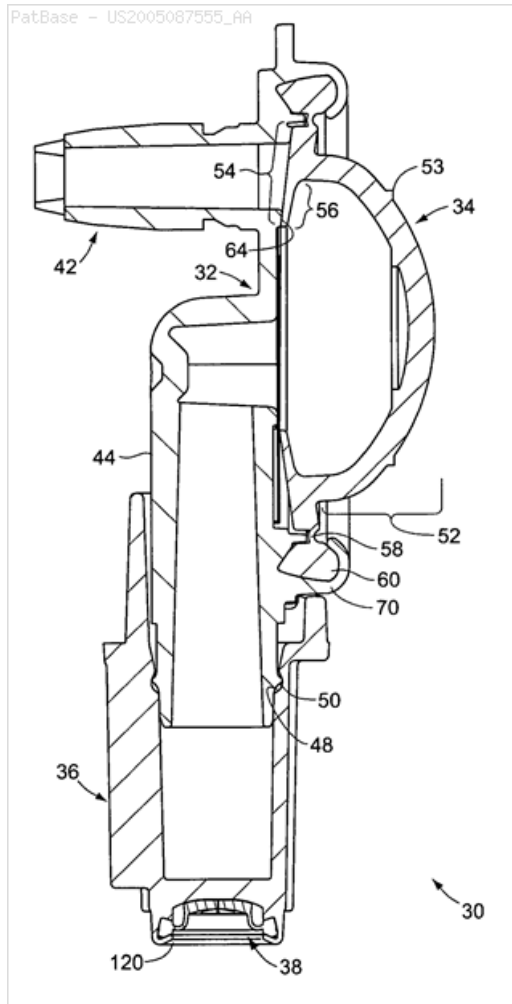
International (IPC 8-9): A47K5/12 B65D B65D25/40 B65D35/28 B65D35/38 B65D35/56 B65D37/00 B65D47/20 B65D5/40 B65D5/72 B65D83/76 B67D5/06 B67D7/06 (Advanced/Invention); A47K5/00 B65D25/38 B65D35/00 B65D35/24 B65D37/00 B65D5/00 B65D5/72 B67D7/06 (Core/Invention)

International (IPC 1-7): A47K5/12 B01L B65D25/40 B65D35/28 B65D35/38 B65D35/56 B65D37/00 B65D5/40 B65D5/72 B67D5/06

CPC: A47K5/1208

European: A47K5/12C2

US: 222/207 222/209 222/494

**Family:**

Publication number	Publication date	Application number	Application date
AU2004287375 AA	20050519	AU20040287375	20041007
BRPI0416095 A	20070102	BR2004PI16095	20041007
CA2542589 AA	20060412	CA20042542589	20041007
CN1871163 A	20061129	CN200480031524	20041007
EP1678045 A2	20060712	EP20040794444	20041007
HK1095573 A1	20070511	HK20070102870	20070316
HK1095573 A3	20070511	HK20070102870	20070316
IN01037KN2006 A	20070420	IN2006KN01037	20060421
JP2007509827 T2	20070419	JP20060538028T	20041007
RU2006118313 A	20071227	RU20060118313	20041007
US2005087555 AA	20050428	US20030695227	20031028
US2007080177 AA	20070412	US20060634664	20061206
WO05044449 A2	20050519	WO2004US33098	20041007
WO05044449 A3	20050909	WO2004US33098	20041007

Priority:

US20030695227 20031028 WO2004US33098 20041007 US20060634664 20061206

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s): (std): SEAQUEST CLOSURES FOREIGN INC ; SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC

Assignee(s): TUCKEY STEVEN R ; HATTON JASON D ; HESS JOHN M III ; HESS JOHN MIII

Inventor(s): (std): HESS JOHN M ; HATTON JASON D TUCKEY STEVEN R ; JOHN M HESS ; JASON D HATTON ; STEVEN R TUCKEY ; JOHN M III HESS ; HESS JOHN M III ; TUCKEY STEVEN R ; HATTON JASON D

Inventor(s): HESS JOHN MIII ; TUCKEY STEVEN ; HESS JOHN ; HATTON JASON

Agent(s): SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO; CHINA PATENT AGENT HK LTD; WOOD PHILLIPS KATZ CLARK AND MORTIMER

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

7) Family number: 15492205 (US5938086A)

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Title: Container and closure with non-rising rotatable housing, dispensing valve, and separate releasable internal shipping seal

Abstract: A dispensing system is provided for a container having an opening to the container interior. The dispensing

system includes a closure with an elevator that is disposed within the container opening for movement between a fully elevated position and a fully lowered position while the elevator is restrained by the container from rotating. The elevator has a seat defining an inlet passage and has a thread. A rotatable housing is mounted on the container at the opening and has a thread engaged with the elevator thread. The housing has a dispensing passage and an occlusion member. The occlusion member sealingly engages the elevator seat and prevents flow through the elevator inlet passage when the elevator is in the fully elevated position. When the elevator is moved away from the fully elevated position by rotation of the housing, flow is permitted through the inlet passage and into the housing dispensing passage. A flexible dispensing valve is sealingly secured across the dispensing passage in the housing. The valve has a self-sealing slit which opens to permit flow therethrough in response to increased pressure on the side of the valve facing the interior of the container.

Classifications:

International (IPC 8-9): B65D47/20 B65D47/24

B67D3/00 (Advanced/Invention);

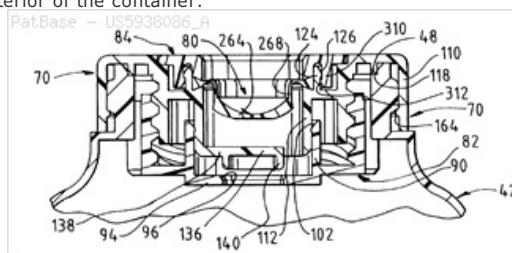
B65D47/04 (Core/Invention)

International (IPC 1-7): B67D3/00

CPC: B65D47/2031 B65D47/244

European: B65D47/20E2 B65D47/24A3

US: 222/494 222/506 222/507 222/525 222/542 222/545



Family:

Publication number	Publication date	Application number	Application date
CA2347703 AA	20010424	CA19992347703	19991020
DE69920952 D1	20041111	DE19996020952	19991020
DE69920952 D1	20041111	DE19996020952T	19991020
DE69920952 T2	20051103	DE19996020952T	19991020
EP1135324 A1	20010926	EP19990971783	19991020
EP1135324 A4	20030521	EP19990971783	19991020
EP1135324 B1	20041006	EP19990971783	19991020
ES2229822 T3	20050416	ES19990971783T	19991020
US5938086 A	19990817	US19980186967	19981105
WO0027745 A1	20000518	WO1999US24684	19991020

Priority:

US19980186967 19981105 WO1999US24684 19991020

Probable Assignee: APTARGROUP INC

Assignee(s): (std): APTARGROUP INC ; SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC

Assignee(s): GROSS RICHARD A

Inventor(s): (std): GROSS RICHARD A ; GROSS A

Agent(s): FETHERSTONHAUGH AND CO

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

8) Family number: 28633212 (US2003106910A)

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Title: Closure with pressure-actuated valve and lid seal

Abstract: A dispensing valve is mounted in a dispensing aperture of a closure that has (1) a deck around the aperture, and (2) a hinged lid for closing over the aperture. The valve includes a marginal portion, a head portion with a discharge orifice therein, and a resilient, connector sleeve extending between the marginal portion to the head portion. The connector sleeve has a generally U-shaped cross-section that defines a first leg that is connected with the marginal portion and a shorter second leg connected with the head portion. The connector sleeve locates the head portion below the closed lid. An arcuate junction portion of the connector sleeve joins the first and second legs. The arcuate junction portion projects from the deck aperture when the lid is open. When the lid is closed, the arcuate junction portion is engaged and elastically deformed by the lid, and that prevents the valve orifice from opening.

Classifications:

International (IPC 8-9): B65D B65D1/00 B65D25/40 B65D47/08

B65D47/20 (Advanced/Invention);

B65D1/00 B65D25/38 B65D47/04 B65D47/08 (Core/Invention);

B65D (Subclass/Invention)

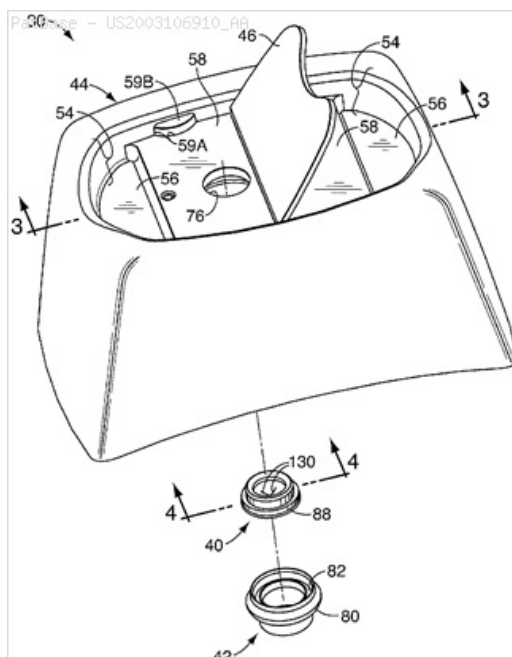
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CPC: B65D47/0847 B65D47/2031 B65D2251/1016

European: B65D47/08B4F B65D47/20E2 L65D251/10D

US: 222/212 222/490 222/494 222/556



Family:

Publication number	Publication date	Application number	Application date
AR037722 AA	20041201	AR2002P104730	20021205
AU2002352635 AA	20030623	AU20020352635	20021112
AU2002352635 BB	20071122	AU20020352635	20021112
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CA2464052 AA	20040416	CA20022464052	20021112
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CN1309624 C	20070411	CN20028024151	20021112
CN1599686 A	20050323	CN20028024151	20021112
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EP1451075 A4	20051116	EP20020789583	20021112
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RU2004120698 A	20050310	RU20040120698	20021112
RU2296087 C2	20070327	RU20040120698	20021112
US2003106910 AA	20030612	US20010008794	20011207
US6616016 BB	20030909	US20010008794	20011207
WO03050008 A1	20030619	WO2002US36176	20021112

Priority:

US20010008794 20011207 WO2002US36176 20021112

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s): (std): SEAQUEST CLOSURES FOREIGN INC ; SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC ; SIKVIST KLOUZHHERZ FORIN INK

Assignee(s): SOCIER TIMOTHY R ; APTARGROUP INC ; HICKS MARGE M ; SEAQUIST CLOSURES FOREIGN INC 475 WEST TERRA COTTA CRYSTAL LAKE

Inventor(s): (std): HICKS MARGE M ; SOCIER TIMOTHY R ; MARGE M HICKS ; HICKS M ; SOCIER R ; SOS E TIMOTI R ; KHIKS MARDZH M ; TIMOTHY R SOCIER ; HICKS MARGE M SOCIER TIMOTHY R

Inventor(s): SOS'E TIMOTI R.

Agent(s): SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO; CHINA PATENT AGENT HK LTD 22 F GREAT EAGLE CENTRE 23 HARBOUR ROAD; CHINA PATENT AGENT HK LTD

Designated states: AT AU BE BG BR CA CH CN CY CZ DE DK EE ES FI FR GB GR IE IN IT JP LU MC MX NL PL PT RU SE SK TR

9) Family number: 6717223 (US4969581A)

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Title: Unequivocal bottom delivery container with self-sealing valve

Abstract: An unequivocal bottom delivery package with a self sealing valve for storing and dispensing a fluid material. The package has a shipping configuration in which a shipping cap is located over the self sealing valve to provide leakage resistance during shipment. Upon receipt it is obvious that operation of the package first necessitates removal of the shipping cap. Removal of the shipping cap transforms the package into a dispensing configuration. The dispensing configuration provides easy one step dispensing and makes it obvious that the container is intended to be stored with the self sealing valve between uses. A travel cap is provided for placement over the self sealing valve, transforming the package into a traveling configuration, which provides leakage resistance during subsequent transportation. It is obvious the package is not intended to be placed into the travelling configuration between every use.

Classifications:

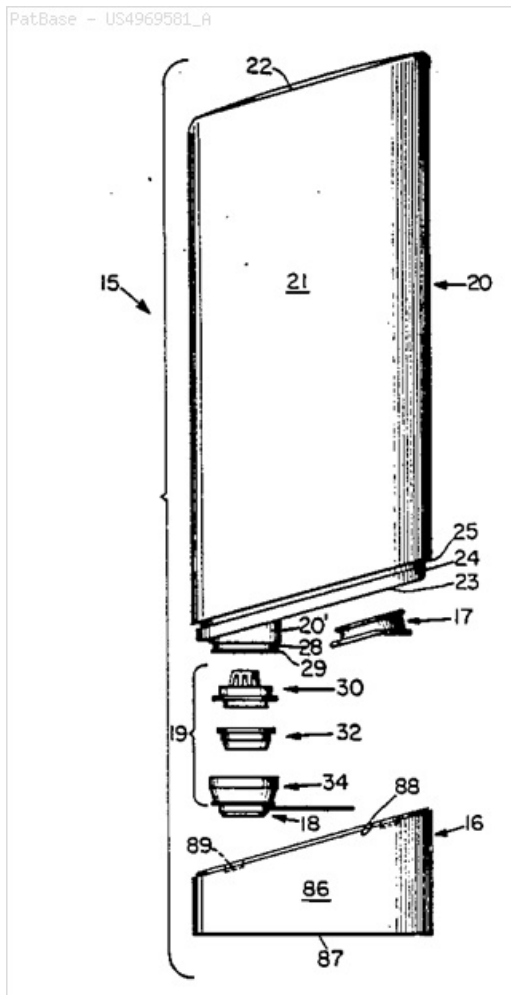
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International (IPC 1-7): B65D1/06 B65D1/32 B65D35/28 B65D35/44 B65D35/50 B65D35/52 B65D37/00 B65D47/00 B65D47/12 B65D47/20 B65D47/28 B65D83/00

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European: B65D1/32 B65D25/24 B65D47/20E2 B65D83/00

US: 220/254 220/307 222/173 222/184 222/185 222/212 222/490 222/494 222/545 222/562 D9/520

**Family:**

Publication number	Publication date	Application number	Application date
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AU626444 B2	19920730	AU19900060266	19900807
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CN1049829 A	19910313	CN19901007371	19900808
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Priority:

US19890391070 19890808 GB19900006212 19900320 CA19902022853 19900808
CA19902022853 19900808

Probable Assignee: PROCTER AND GAMBLE CO

Assignee(s): (std): PROCTER AND GAMBLE ; SEIFERT JOHN A ; LOEW CHRISTOPHER ; PAPALIA ROCCO D

Assignee(s): PAPALIA ROCCO DOMINIC ; PROCTER AND GAMBLE CO ; PROCTER AND GAMBLE CO THE ; PROCTER AND GAMBLE COMPANY THE ; SAMPSON CRAIG F ; SAMPSON CRAIG FIELD ; SEIFERT JOHN ALFRED ; THE PROCTER AND GAMBLE CO ; THE PROCTER AND GAMBLE COMPANY

Inventor(s): (std): SEIFERT JOHN ALFRED ; PAPALIA ROCCO DOMINIC ; SAMPSON CRAIG FIELD ; LOEW CHRISTOPHER ; SEIFERT JOHN A ; PAPALIA ROCCO D ; SAMPSON CRAIG F ; SAMPSON CRAIG F ; DEFLANDER JOSEPH FERNAND ; SAMPSON GRAIG FIELD ; LECLERCQ JEAN PIERRE ; KUREIGU FUIRUDO SANPUSON ; JIYON ARUFURETSUDO SEIFUAATO ; KURISUTOFUAA ROO ; ROTSUKO DOMINIKU PAPARIA ; LOEW CHRISTOPHER NMN

Inventor(s): SAMPSON CRAIG FIELD ; CHRISTOPHER NMN LOEW ; CRAIG FIELD SAMPSON ; JOHN ALFRED SEIFERT ; CHRISTOPHER LOEW ; ROCCO DOMINIC PAPALIA

Agent(s): PHILLIPS ORMONDE FITZPATRICK; GOWLING LAFLEUR HENDERSON LLP

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

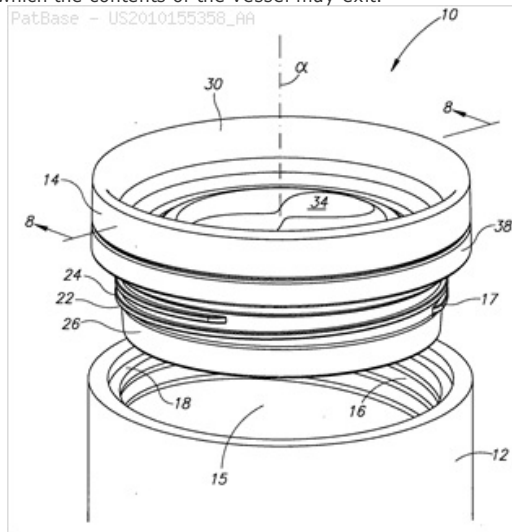
Abstract: A lid including a positionable stopper nested inside an upper body that is nested inside a lower body. A user applies a rotational force to the upper body, which rotates about an axis of rotation relative to the lower body to translate the rotational movement of the upper body into linear movement of the stopper along the axis of rotation. The stopper is configured to move axially along the axis of rotation relative to the upper body toward and away from the vessel based upon the direction in which the upper body is rotated. When the stopper is farthest from the vessel along the axis of rotation, the stopper abuts the upper body and seals the liquid inside the vessel. When the stopper is sufficiently near the vessel, an opening is defined between the stopper and the upper body through which the contents of the vessel may exit.

International (IPC 8-9): B65D39/08 (Advanced/Invention)

CPC: B65D47/244

European: B65D47/24A3

US: 215/356



Publication number	Publication date	Application number	Application date
US2010155358 AA	20100624	US20080338008	20081218

US20080338008 20081218

Probable Assignee: PACIFIC MARKET INT LLC

Assignee(s): (std): GEORGE SARAH DANGER

Assignee(s): PACIFIC MARKET INT LLC

Inventor(s): (std): GEORGE SARAH DANGER

Agent(s): DAVIS WRIGHT TREMAINE LLP SEATTLE

Title: Dispensing system with an internal releasable shipping seal and an extended tip containing a pressure openable valve

Abstract: A dispensing system is provided for dispensing a product from a container having an opening. The dispensing system includes a spout for communicating with the container opening. The spout defines at least one discharge aperture, a distal seal surface located distally of the discharge aperture, and a proximal seal surface located on the exterior of the spout proximally of the discharge aperture. A nozzle assembly is mounted on the spout for movement between a retracted, closed position and an extended, open position. The nozzle assembly includes a nozzle having a dispensing passage around at least a portion of the spout, a proximal seal surface for sealingly engaging the spout proximal surface, and a distal seal surface located outwardly of the nozzle proximal seal surface for sealingly engaging the spout distal seal surface when the nozzle assembly is in the retracted, closed position. The nozzle assembly also includes a resiliently flexible valve that is sealingly disposed across the nozzle dispensing passage at a location distally of the spout distal seal surface and has an initially closed dispensing orifice which opens in response to a pressure differential acting across the valve.

International (IPC 8-9): B65D B65D35/28 B65D35/50 B65D47/06

B65D47/20 B65D47/24 B65D47/26 (Advanced/Invention);

B65D35/00 B65D35/24 B65D47/04 B65D47/06 (Core/Invention)

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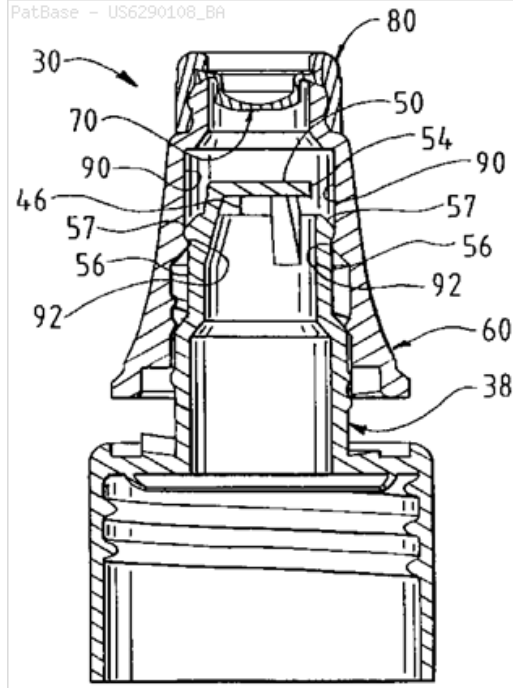
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B65D47/26

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European: B65D47/2052 B65D

European: B65D47/20E2 B65D47/24A1
US: 333/313 333/400 333/403 333/404

US: 222/212 222/490 222/492 222/494 222/547

**Family:**

Publication number	Publication date	Application number	Application date
AR029511 AA	20030702	AR2001P101751	20010411
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AU200157601 A5	20011030	AU20010057601D	20010411
BRPI0110007 A	20050111	BR2001PI10007	20010411
CA2403076 AA	20020912	CA20012403076	20010411
CN1213914 C	20050810	CN20018008039	20010411
CN1438957 A	20030827	CN20018008039	20010411
CZ20023386 A3	20040414	CZ20020003386	20010411
CZ297588 B6	20070207	CZ20020003386	20010411
EP1286898 A1	20030305	EP20010931137	20010411
EP1286898 A4	20060118	EP20010931137	20010411
HK1058346 A1	20060331	HK20040101106	20040216
HK1058346 B	20060331	HK20040101106	20040216
IN209121 B	20070831	IN2002MN01188	20020829
JP2003531076 T2	20031021	JP20010576343T	20010411
MXPA02008986 A1	20030212	MX2002PA08986	20010411
PL205980 B1	20100630	PL20010365839	20010411
PL365839 A1	20050110	PL20010365839	20010411
RU2002130512 A	20040320	RU20020130512	20010411
RU2272763 C2	20060327	RU20020130512	20010411
US6290108 BA	20010918	US20000550279	20000414
WO0179071 A1	20011025	WO2001US40495	20010411

Priority:

US20000550279 20000414 WO2001US40495 20010411

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC**Assignee(s):** (std): SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC**Assignee(s):** GROSS RICHARD A**Inventor(s):** (std): GROSS RICHARD A ; RA GROSS ; GROSS R A**Inventor(s):** R A GROSS ; RICHARD A GROSS**Agent(s):** SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO; CHINA PATENT AGENT HK LTD**Designated states:** AT AU BE BR CA CH CN CY CZ DE DK ES FI FR GB GR IE IN IT JP LI LU MC MX NL PL PT RU SE TR**12) Family number: 31388370 (US2002033399A)**

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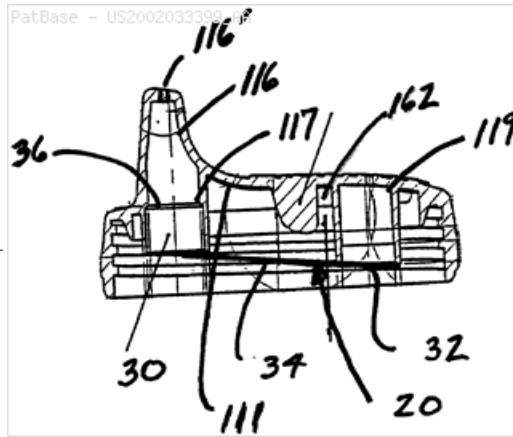
Title: Cup assembly with retaining mechanism

Abstract: A drinking cup assembly having a cup having an open end, a cap adapted to enclose the open end, the cap having a drinking spout and an air vent and a pair of mating surfaces that align with the drinking spout and the air vent, and a removable flow control valve adapted to engage the mating surfaces. The cap has a retaining mechanism that in conjunction with one mating surface secures in place the flow control element when not in use.

Classifications:

International (IPC 8-9): A45F A45F3/16 A47G A47G19/12
A47G19/22 A47G19/30 A47G21/18 A61J9/00 A61J9/06 B28B1/00
B29C45/16 B65D23/10 B65D25/28 B65D25/42 B65D35/46
B65D39/04 B65D41/04 B65D43/00 B65D47/06 B65D47/20
B65D47/32 B65D51/00 B65D51/16 B65D51/18
B65D51/24 (Advanced/Invention);

A47G19/22 B29L31/00 B29L31/46 B29L31/56
 B65D51/24 (Advanced/Non-invention);
 A47G19/22 (Core/Invention);
 A47G B65D (Subclass/Invention)
International (IPC 1-7): A45F3/16 A47G19/12 A47G19/22
 B65D25/42 B65D47/06 B65D47/32
CPC: F16K15/147 F16K24/06 A47G19/22 A47G19/2266 B65D47/06
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 B29C45/1676 B29L2031/463 B29L2031/56 B29L2031/7158
 B65D23/10 B65D47/2031 B65D51/165 B65D25/28 B65D51/1644
 B65D47/32 B65D51/242 B65D2525/283
European: A47G19/22 A47G19/22B12 A47G19/22B12G B29C45/16L
 B65D23/10 B65D47/06 B65D47/20E2 B65D51/16D2A F16K15/14H3
 F16K24/06 L29L31/46B L29L31/56 L29L31/7158 L65D251/02
 L65D251/06 L65D543/00Y1D
US: 1/1 215/11.4 215/11.5 215/11.500S 215/311 220/200
 220/203.11 220/203.110P 220/203.17 220/203.170S 220/212.5
 220/212.500P 220/710.5 220/710.500P 220/710.500S 220/713
 220/714 220/717 222/465.1 222/482 264/250 264/250S 264/328.1
 79/900 D7/392.1 D7/396.2 D7/510 D7/511 D7/534 D7/900
Locarno class: 07/99



Family:

Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: PLAYTEX PRODUCTS INC

Assignee(s): (std): PLAYTEX PRODUCTS INC ; LIEBERMAN JOSHUA S ; MANGANIello FRANK ; MALONEY MICHAEL ; EDGEWELL PERSONAL CARE BRANDS LLC ; EDGEWELL PERSONAL CARE CANADA ULC ; EVEREADY BATTERY INC ; PLAYTEX PRODUCTS LLC ; SEJNOWSKI JOSEPH PAUL ; RANDOLPH ROSS STEVEN

Assignee(s): TANNING RESEARCH LABORATORIES INC ; ANGELCARE FEEDING USA LLC ; CREDIT SUISSE FIRST BOSTON ADMINISTRATIVE AGENT AS ; CREDIT SUISSE FIRST BOSTON AS ADMINISTRATIVE AGENT ; EVEREADY BATTERY CO LLC ; PLAYTEX PRODUCTS INC WESTPORT ; PLAY LATEX PRODUCTS ; PLAYTEX PRODUCTS INC 300 NYALA FARMS ROAD WESTPORT CONNECTICUT ; WELLS FARGO BANK MINNESOTA NATIONAL ASSOCIATION ; WELLS FARGO BANK NATIONAL ASSOCIATION ; EGDEWELL PERSONAL CARE BRANDS LLC ; EVEREADY BATTER CO INC ; GENERAL ELECTRIC CAPITAL CORP ; GE CANADA FINANCE HOLDING CO ; MANGANIello FRANCIS X ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; EVEREADY BATTERY CO INC

Inventor(s): (std): FRANK MANGANIello ; MICHAEL MALONEY ; FRANCIS X MANGANIello ; JOSHUA S LIEBERMAN ; FRANCES X MANGANIRO ; SEJNOWSKI JOSEPH P ; SEJNOWSKI JOSEPH PAUL ; MANGANIello FRANCIS ; MANGANIello F X ; MANGANIello FRANCIS X ; LIISTRO BRENDA ; HILL ARDEN ; RANDOLPH ROSS STEVEN ; STEVEN RANDOLPH ROSS ; LIEBERMAN JOSHUA S ; MANGANIello FRANK ; MALONEY MICHAEL ; RANDOLPH ROSS S ; ROSS STEVEN RANDOLPH ; MANGANIRO FRANCES X

Inventor(s): FX MANGANIello ; F X MANGANIello ; LIEBERMAN JOSHUA ; RANDOLPH ROSS ; MANGANIello FRANCIS X POMPTON PLAINS

Agent(s): PHILLIPS ORMONDE FITZPATRICK; MILLER THOMSON LLP; GIERCZAK EUGENE J A; SMART AND BIGGAR LLP; SMART AND BIGGAR; STENGER WATZKE RING INTELLECTUAL PROPERTY; DR WEITZEL AND PARTNER; HASTINGS AND CO; CHINA PATENT AGENT HK LTD 22 F GREAT EAGLE CENTRE 23 HARBOUR ROAD; LUZZATTO AND LUZZATTO; CHARLES NJ RUGGIERO ESQ OHLANDT GREELEY RUGGIERO AND PERLE LLP; CHARLES NJ RUGGIERO OHLANDT GREELEY RUGGIERO AND PERLE LLP; OHLANDT GREELEY RUGGIERO AND PERLE LLP; EDGEWELL PERSONAL CARE BRANDS LLC

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

Title: DISPENSING VALVE

Abstract: 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.

Classifications:

International (IPC 8-9): A47K5/122 B65D33/38 B65D35/46 B65D35/50 B65D35/52 B65D47/08 B65D47/20 B65D83/00 B65D83/44 B67D5/06 B67D7/06 F16K15/14 F16K21/04 F16K7/00 (Advanced/Invention);

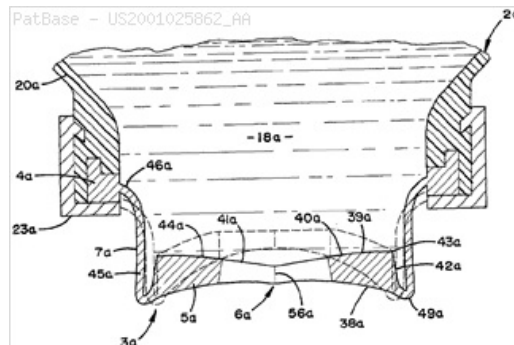
B65D83/00 B67D7/06 (Advanced/Non-invention); B65D35/00 F16K15/14 F16K21/00 (Core/Invention)

International (IPC 1-7): A47K5/06 A47K5/122 B65D1/32 B65D25/42 B65D33/38 B65D35/00 B65D35/46 B65D35/50 B65D35/52 B65D35/56 B65D37/00 B65D47/06 B65D47/08 B65D47/20 B65D47/44 B65D83/00 B65D83/14 B65D83/44 B67D5/06 F16K15/14 F16K21/04 F16K7/00

CPC: B65D47/2031 F16K15/147 Y10T137/788

European: B65D47/20E2 F16K15/14H3

US: 137/844 220/203 220/203.08 220/203.11 220/203.17 220/203.18 220/203.19 220/89.1 222/105 222/173 222/185 222/185.1 222/185.100P 222/212 222/49 222/490 222/493 222/494 222/496 222/497

**Family:**

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AT194122 E	20000715	AT19920201619T	19921202
AT203970 E	20010815	AT19920201618T	19921202
AT261909 E	20040415	AT19960926756T	19960723
AT414653 E	20081215	AT19960006112T	19960723
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AU199642232 A1	19960418	AU19960042232	19960131
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AU664056 B2	19951102	AU19920029740	19921130
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CA2084465 AA	19930607	CA19922084465	19921203
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CA2227888 C	20060214	CA19962227888	19960723
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CN101301941 A	20081112	CN200810100517	19960723
CN101301941 B	20110615	CN200810100517	19960723
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DE0794126 T1	19980115	DE19970201618T	19921202
DE0794127 T1	19980115	DE19970201619T	19921202
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DE69637758 D1	20090102	DE19966037758	19960723
DE9219156 U1	19980924	DE19920019156U	19921202
DK0545678 T3	20010423	DK19920310986T	19921202
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EP0545678 B1	19980211	EP19920310986	19921202
EP0794126 A2	19970910	EP19970201618	19921202
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EP0794127 A3	19971112	EP19970201619	19921202
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EP0869912 A1	19981014	EP19960926756	19960723

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EP0869912 B1	20040317	EP19960926756	19960723
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EP0994037 B1	20060802	EP19990124464	19921202
EP1426303 A2	20040609	EP20040006112	19960723
EP1426303 A3	20041208	EP20040006112	19960723
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ES2316890 T3	20090416	ES20040006112T	19960723
HK1011667 A1	20000428	HK19980112842	19981204
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HK1024895 A1	20010921	HK20000100276	19981204
IL123084 A0	19980924	IL19960123084	19960723
JP11278505 A2	19991012	JP19990049006	19990225
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US6279783 BA	20010828	US19970886567	19970701
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US7077296 BB	20060718	US20020180746	20020625
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WO9705055 A1	19970213	WO1996US12095	19960723

Priority:

US19910804086	19911206	AU19920029740	19921130	EP19970201619	19921202
EP19920310986	19921202	CA19922084465	19921203	JP19920357429	19921204
US19930039896	19930330	US19930052113	19930423	US19930119814	19930910
US19940240264	19940510	US19950508472	19950728	AU19920029740	19960131
AU19960042232	19960131	EP19960926756	19960723	WO1996US12095	19960723
US19970886567	19970701	AU19980058294	19980306	US20010812129	20010319
US20020180746	20020625	US20020180746	20020626	US20050295840	20051207

Probable Assignee: APTARGROUP INC

Assignee(s): (std): APTAR GROUP INC ; APTARGROUP INC ; SOCIER TOMOTHY R ; SOCIER TIMOTHY R ; LIQUID MOLDING SYSTEMS INC ; SEAQUIST CLOSURES FOREIGN INC ; SEAQUIST CLOSURES

Assignee(s): LIQUID MOLDING SYSTEMS INC MIDLAND MICH US ; APTARGROUP INC CRYSTAL LAKE ILL US ; BROWN PAUL E ; FLUID FROMATION SYSTEM CO ; LIQUID MOLDING SYST INC

Inventor(s): (std): SOCIER TOMOTHY R ; BROWN PAUL E ; SOCIER TIMOTHY R ; BROWN PAUL EDWARD ; SOCIER TIMOTHY RANDALL ; POORU II BURAUN ; TEIMOSHII AARU SOSHIEERU ; PAUL E BROWN ; TIMOTHY R SOCIER ; TIMOTHY RANDALL SOCIER ; PAUL EDWARD BROWN ; EDWARD BROWN PAUL

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Agent(s): GRIFFITH HACK ; BORDEN LADNER GERVAIS LLP ; IGNACIO ESCOBAR URIBE ; APPELT CHRISTIAN W ET AL ; WOOD PHILLIPS KATZ CLARK AND MORTIMER

Designated states: AT AU BE CA CH CN DE DK ES FI FR GB GR IE IL IT JP KR LI LU MC MX NL PT SE SG

14) Family number: 65189494 (US2018251274A)

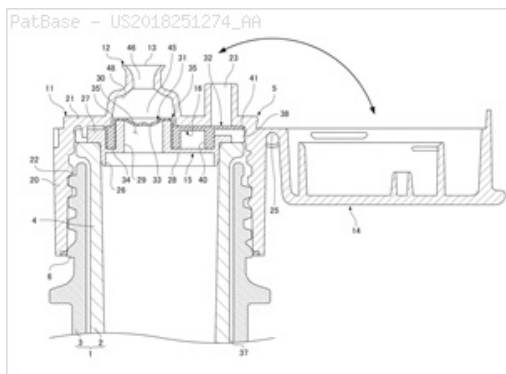
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Title: CAP

Abstract: A cap includes a main unit fit onto the mouth of a double-walled container, a spout cylinder provided on the main unit, an inner stopper that is provided in the main unit, and a first inner valve. The inner stopper includes a communicating part that communicates with the inside of the inner container and the inside of the spout cylinder. The first inner valve includes a first valve body that covers the communicating part. The first valve body has passage holes. The first valve body being deformed from a closing position S toward an opening position O keeps acting as a partition between the communicating part and the spout cylinder.

Classifications:

International (IPC 8-9): B65D41/04 B65D47/08 B65D47/20
B65D47/32 B65D47/40 B65D51/16 B65D77/06
B65D83/00 (Advanced/Invention)
CPC: B65D47/0838 B65D47/2081 B65D83/0055 B65D2205/02
B65D47/20 B65D47/40 B65D51/16 B65D77/06 B65D41/04
US: 1/1 222/213

**Family:**

Publication number	Publication date	Application number	Application date
CN107922089 A	20180417	CN201680051354	20160906
CN107922089 B	20190830	CN201680051354	20160906
EP3348489 A1	20180718	EP20160844330	20160906
EP3348489 A4	20190717	EP20160844330	20160906
JP2017052517 A2	20170316	JP20150175260	20150907
JP2017071408 A2	20170413	JP20150198982	20151007
JP6643855 B2	20200212	JP20150198982	20151007
KR20180050310 A	20180514	KR20187006260	20160906
US2018251274 AA	20180906	US20160757664	20160906
US2019233181 AA	20190801	US20190378658	20190409
US10308403 BB	20190604	US20160757664	20160906
US10507958 BB	20191217	US20190378658	20190409
WO17043469 A1	20170316	WO2016JP76108	20160906

Priority:

JP20150175260 20150907 JP20150198982 20151007 WO2016JP76108 20160906
US20180757664 20180306 US20190378658 20190409

Probable Assignee: KIKKOMAN CORP

Assignee(s): (std): KIKKOMAN CORP ; MIKASA IND CO LTD ; MIKASA SANGYO CO LTD ; MIKASA SANGYO KK

Assignee(s): MIKASA IND CO

Inventor(s): (std): MIURA EISUKE ; KUWAGAKI DENMI ; HASHIMOTO TAKEHISA ; HORI HIROTAKA ; SAKANOU E AYA ;
MORI HIROAKI ; MAEDA TATSUHIRO ; IKEDA SATOSHI ; MIURA ESUKE ; MORI KEIKO ; HASHIMOTO
TAKENAO

Agent(s): VAN BRED A JACOBUS ; KUSNER AND JAFFE ; MORIMOTO INTL PATENT OFFICE

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 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

15) Family number: 28671555 (US4728006A)

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Title: FLEXIBLE CONTAINER INCLUDING SELF-SEALING DISPENSING VALVE TO PROVIDE AUTOMATIC SHUT-OFF AND **LEAK**
RESISTANT INVERTED STORAGE

Abstract: A resiliently deformable container having at least one discharge orifice equipped with a self-sealing dispensing valve, said valve having a resiliently deformable, concave shaped portion with its perimeter sealingly secured across the container's discharge orifice. The self-sealing valve is secured across the orifice so that it is inwardly concave when the container is in an undeformed condition. The concave shaped portion of the valve includes at least one substantially linear slit extending through the thickness of the valve. The valve requires the attainment of a threshold opening pressure to effect inversion from a concave at rest position in order to dispense the package contents. By providing a container with sufficient flexibility to permit manual deformation and sufficient resilience to return substantially to its undeformed configuration when the externally applied forces are removed, a void volume equivalent to the amount of fluid material discharged from the package is provided inside the container after removal of the applied forces. This aids in closing the self-sealing valve which, after venting the container to the atmosphere, returns to an inwardly concave, sealed position until sufficiently large external forces are again applied to the container to effect inversion of the valve and consequent material discharge.

Classifications:

International (IPC 8-9): B05B11/04 B65D1/32 B65D23/00
B65D35/50 B65D35/52 B65D47/20 (Advanced/Invention);
B65D1/00 B65D23/00 B65D35/00 B65D47/04 (Core/Invention)
International (IPC 1-7): A47K5/122 B05B11/04 B65D1/00 B65D1/32
B65D25/00 B65D35/28 B65D35/44 B65D35/50 B65D47/00
B65D47/06 B65D47/44 B65D85/72 B65DA
CPC: Y10T137/7885 Y10T137/7895 B65D47/2031 B65D1/32
B65D23/003
European: B65D1/32 B65D23/00D B65D47/20E2
US: 137/849 137/859 222/181 222/181.3 222/213 222/490 222/494

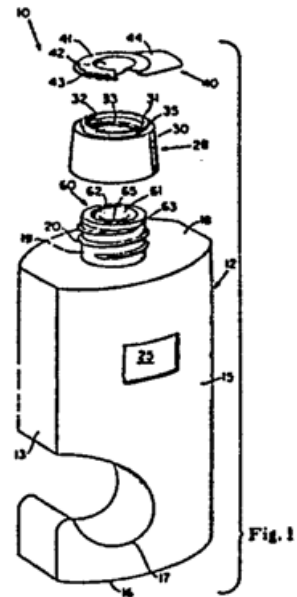


Fig. 1

Family:

Publication number	Publication date	Application number	Application date
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AU575155 B2	19880721	AU19850041694	19850424
CA1271458 A1	19900710	CA19850480200	19850426
DE3585455 D1	19920409	DE19853585455	19850417
DK168477 B1	19940405	DK19850001872	19850426
DK187285 A	19851028	DK19850001872	19850426
DK187285 A0	19850426	DK19850001872	19850426
EG16970 A	19910830	EG19850000267	19850424
EP0160336 A2	19851106	EP19850200589	19850417
EP0160336 A3	19870415	EP19850200589	19850417
EP0160336 B1	19920304	EP19850200589	19850417
ES286370 U	19851116	ES19850286370U	19850426
ES286370 Y	19860601	ES19850286370U	19850426
ES286370 Y1	19860625	ES19850286370U	19850426
FI81761 B	19900831	FI19850001657	19850426
FI81761 C	19901210	FI19850001657	19850426
FI851657 A	19851028	FI19850001657	19850426
FI851657 A0	19850426	FI19850001657	19850426
FI851657 L	19851028	FI19850001657	19850426
GB2158049 A1	19851106	GB19850010233	19850422
GB2158049 B2	19871007	GB19850010233	19850422
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HK57990 A	19900810	HK19900000579	19900802
IE57957 B	19930519	IE19850001074	19851126
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JP61033927 A2	19860218	JP19850090763	19850426
KR930004461 Y1	19930716	KR19850004684U	19850424
MA20421 A1	19851231	MA19850020645	19850426
MX163063 A	19910812	MX19850205113	19850426
MX163063 B	19910812	MX19850205113	19850426
PH23706 A	19890927	PH19850032191	19850425
SG9090425 A	19900817	SG19900090425	19900620
US4728006 A	19880301	US19840656397	19841001

Priority:

US19840604782 19840427 US19840656397 19841001 EP19850200589 19850417
CA19850480200 19850426

Probable Assignee: PROCTER AND GAMBLE CO**Assignee(s):** (std): PROCTER AND GAMBLE ; PROCTER AND GAMBLE CO THE ; PROCTER AND GAMBLE COMPANY THE ; THE PROCTER AND GAMBLE CO ; THE PROCTER AND GAMBLE COMPANY**Assignee(s):** TASKE LEO E ; DROBISH JAMES L ; THE PROCTER AND GAMBLE CO CINCINNATI OHIO US ; PROCTER AND GAMBLE CO ; PROCTER AND GAMBLE CO AN OH CORP**Inventor(s):** (std): DROBISH JAMES L ; DROBISH JAMES LEE ; DROBISH JAMES L ; JAMES LEE DROBISH ; TASKE LEO EDWARD ; JIEEMUZU RII DOROBISHIYU ; REO EDOWAADO TASUKE ; TASKE LEO E ; LEO EDWARD TASKE**Inventor(s):** TASKE LEO EDWARD CINCINNATI OHIO 45247 US ; DROBISH JAMES LEE CINCINNATI OHIO 45215 US**Agent(s):** WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; KIRBY EADES GALE BAKER

16) Family number: 12602593 (US6050451A)

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Title: DISPENSING STRUCTURE INCORPORATING A VALVE-CONTAINING FITMENT FOR MOUNTING TO A CONTAINER AND A PACKAGE WITH A DISPENSING STRUCTURE

Abstract: A dispensing structure, and a package with a dispensing structure, is provided with a valve. In one embodiment, the dispensing structure is a multi-piece fitment. The multi-piece fitment includes a base for mounting to the container and a valve carrier for mounting to the base. A flexible, self-sealing slit-type valve is mounted within the carrier. In another embodiment, a fitment is mounted in the opening of a thin-walled, flexible, collapsible container, and the flexible valve is mounted in the fitment. In yet another embodiment, a package includes a container having a corner wall defining an opening, and a fitment is sealingly mounted to the corner wall at the opening. A valve is disposed within the fitment. A removable and disposable cover extends from the container over the fitment and at least a portion of the corner wall to define a hermetically sealed volume around the fitment. The cover may be pulled away from the container to expose the fitment.

Classifications:

International (ipc 8-9): B65D B65D17/40 B65D30/24 B65D33/36 B65D33/38 B65D35/46 B65D47/00 B65D47/20 B65D5/74 B65D75/00 B65D75/58 (Advanced/Invention);

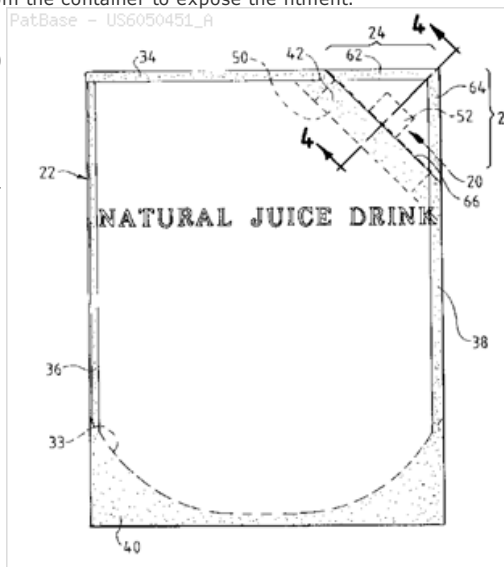
B65D17/28 B65D30/24 B65D33/36 B65D35/00 B65D47/00 B65D47/04 B65D5/74 B65D75/00 B65D75/52 (Core/Invention); B65D (Subclass/Invention)

International (ipc 1-7): B65D17/40 B65D30/24 B65D33/38 B65D35/46 B65D35/50 B65D47/00 B65D47/20 B65D47/22 B65D5/74 B65D75/00 B65D75/58 B65D77/30 B67C7/00

CPC: B29C65/06 B29C65/08 B29C66/30223 B29C66/53263 B65D75/5883 B65D75/746 B65D47/2031 B65D75/008 B65D75/5822 B65D2575/583

European: B65D47/20E2 B65D5/74D B65D75/00E B65D75/58D1 B65D75/58G3C L65D75/58C

US: 105/107 105/153.05 105/153.14 105/490 105/541.6 222/105 222/107 222/153.05 222/153.06 222/153.14 222/490 222/541.6 222/92 229/125.04 229/125.14 229/216 229/217

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HK1086237 A1	20060915	HK20060106157	20031219
HK1086237 A1	20100813	HK20060106157	20031219
HK1086237 A3	20060915	HK20060106157	20031219
HK1086237 B	20100813	HK20060106157	20031219
JP2002530253 T2	20020917	JP20000583808T	19991117
PL198329 B1	20080630	PL19990348706	19991117
PL348706 A1	20020603	PL19990348706	19991117
US6050451 A	20000418	US19980196301	19981119
US6131806 A	20001017	US20000501669	20000210

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WO0030969 B1	20001026	WO1999US27300	19991117

Priority:

US19980196301 19981119	AU20000020260 19991117	CA19992350230 19991117
CA19992658864 19991117	WO1999US27300 19991117	US20000501669 20000210
US20020087015 20020228	AU20020304013 20021125	HK20030109266 20031219

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s): (std): APTARGROUP INC ; SEAQUIST CLOSURES FOREIGN INC ; SEAQUIST CLOSURES ; SIQUIST ENCLOSED PIECE FOREIGN ; SEAQUIST CLOSURES FOREIGN CO

Assignee(s): SIQUIST ENCLOSED PIECE FOREIGN CO ; SOCIER TIMOTHY R ; BROWN STUART R ; HESS JOHN M III ; ROBINSON JOEL R

Inventor(s): (std): STUART R BROWN ; HESS III JOHN M BROWN STUART R ; OAO J M HIRS ; ROBINSON J R ; HIRS J M III ; ROBINSON R ; BROWN R ; SOCIER R ; HESS M ; SOCIER THIMOTHY R ; III ; HESS JOHN M ; AL J R ROBINSON ET ; HESS J M III ; BROWN S R ; HESS JOHN M III ; SOCIER TIMOTHY R ; ROBINSON JOEL R ; HESS III JOHN M ; BROWN STUART R

Inventor(s): JOEL R ROBINSON ; TIMOTHY R SOCIER ; JOHN M HESS III ; S R BROWN ; J M HESS III ; J R ROBINSON ET AL ; THIMOTHY R SOCIER ; JOHN M HESS ; J M HIRS III ; J R ROBINSON ; J M HIRS OAO ; JM HIRS III ; JM HIRS OAO ; HESS JOHN MIII ; JR ROBINSON ; JR ROBINSON ET AL ; SR BROWN ; JM HESS III ; HESS III JOHN

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; FETHERSTONHAUGH AND CO; ERNESTO CAVELIER; CHINA PATENT AGENT HK LTD; WOOD PHILLIPS KATZ CLARK AND MORTIMER

Designated states: AT AU BE BR CA CH CN CY CZ DE DK ES FI FR GB GR IE IT JP KR LU MC MX NL PL PT SE SG

17) Family number: 15252670 (US6543652B)

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Title: Closure with dispensing valve

Abstract: A dispensing closure (1) incorporating a flexible, self-closing valve (5) and a transport seal for preventing accidental dispensing of product through the valve during transportation and storage of a filled container. The closure includes a cover (4), which is adapted to move axially between raised and lowered positions, to actuate the transport seal. The transport seal comprises a sealing plate (8), located between the valve and the container opening, which partially occludes the container opening but defines at least one dispensing orifice (9). To form the transport seal, the cover is lowered so that it presses part of the flexible valve against the sealing plate around the dispensing orifice/s, thereby blocking the dispensing passageway to the valve.

Classifications:

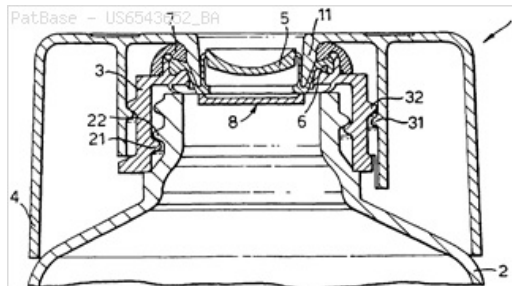
International (IPC 8-9): B65D47/20 B65D47/24 (Advanced/Invention); B65D47/04 (Core/Invention)

International (IPC 1-7): B65D47/20 B65D47/24 G01F11/30

CPC: B65D47/2037 B65D47/242 B65D47/243

European: B65D47/20E2B B65D47/24A1 B65D47/24A2

US: 222/212 222/494 222/521



Family:

Publication number	Publication date	Application number	Application date
AT260827 E	20040315	AT20000927511T	20000505
AU200045908 A1	20001228	AU20000045908	20000505
AU200045908 A5	20001228	AU20000045908D	20000505
BRPI0011336 A	20020305	BR2000PI11336	20000505
BRPI0011336 B1	20100727	BR2000PI11336	20000505
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MXPA01012408 A1	20020830	MX2001PA12408	20000505
US6543652 BA	20030408	US20020980459	20020329
WO0075032 A1	20001214	WO2000GB01722	20000505

Priority:

GB19990012977 19990604	WO2000GB01722 20000505
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Probable Assignee: CROWN PACKAGING TECHNOLOGY INC

Assignee(s): (std): CROW CORK AND SEAL TECHNOLOGIES ; CROWN CORK AND SEAL TECHNOLOGI ; CROWN CORK AND SEAL TECH CORP ; METAL BOX PLC ; KELDER MARIA LOUISE ; CROWN PACKAGING TECHNOLOGY INC ; RAMSEY CHRISTOPHER PAUL

Assignee(s): OBRIST CLOSURES SWITZERLAND GMBH ; CROWN CORK AND SEAL TECHNOLOGIES CORP ; CROWN OBRIST GMBH ; CROWN CORK AND SEAL TECHNOLOGIES CORP ALSIP ; CROW CORK AND SEAL TECHNOLOGIES CORP ; CARNAUDMETALBOX PLC ; CITICORP NORTH AMERICA INC

Inventor(s): (std): RAMSEY CHRISTOPHER PAUL ; KELDER MARIA LOUISE ; KELDER LOUISE

Inventor(s): MARIA LOUISE KELDER ; CHRISTOPHER PAUL RAMSEY

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

18) Family number: 11915686 (US6176399B)

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Title: VALVED DISPENSING SYSTEM FOR MULTIPLE DISPENSING STREAMS

Abstract: A dispensing system is provided and can be embodied in a dispensing closure for a container having an opening. The system includes a unitary, resiliently flexible, molded valve array structure for being sealingly disposed on the container over the container opening. The valve array structure includes an impervious membrane. The valve array structure also includes a plurality of resiliently flexible, slit valves molded unitary with the membrane. Each valve has a normally closed dispensing orifice which opens when the pressure in the interior of the container exceeds the pressure on the exterior of the valve by a predetermined amount. The valves can be arranged to discharge parallel streams, diverging streams, or converging streams.

Classifications:

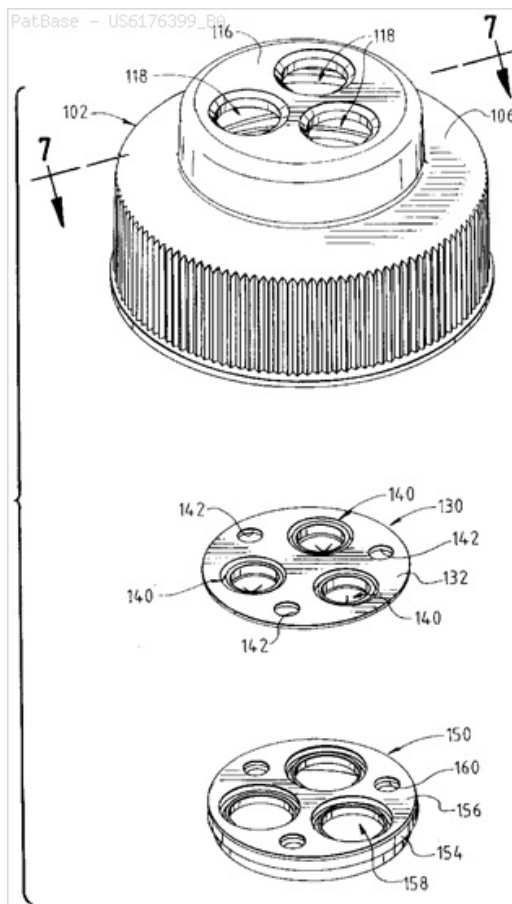
International (IPC 8-9): B65D25/44 B65D35/50 B65D35/52
B65D47/20 B65D88/54 B67D5/06 (Advanced/Invention);
B65D25/38 B65D35/00 B65D47/04 (Core/Invention)

International (IPC 1-7): B65D25/44 B65D35/50 B65D35/52
B65D47/20 B65D88/54 B67D3/00 B67D5/06

CPC: B65D47/2031

European: B65D47/20E2

US: 222/484 222/494

**Family:**

Publication number	Publication date	Application number	Application date
AR024724 AA	20021023	AR2000P103581	20000712
AU200063379 A1	20010130	AU20000063379	20000626
AU200063379 A5	20010130	AU20000063379D	20000626
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BRPI0012360 A	20020326	BR2000PI12360	20000626
CA2376080 AA	20011130	CA20002376080	20000626
CN1367750 A	20020904	CN20008010350	20000626
CZ20020092 A3	20030115	CZ20020000092	20000626
EP1210275 A1	20020605	EP20000950252	20000626
EP1210275 A4	20050921	EP20000950252	20000626
IN01104MN2005 A	20051202	IN2005MN01104	20051007
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RU2002103378 A	20030827	RU20020103378	20000626
RU2247066 C2	20050227	RU20020103378	20000626
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WO0104011 A1	20010118	WO2000US17502	20000626

Priority:

US19990352172 19990712 WO2000US17502 20000626

Probable Assignee: APTARGROUP INC

Assignee(s): (std): SEAQUIST CLOSURES FOREIGN INC ; SEAQUIST CLOSURES ; APTARGROUP INC

Assignee(s): GROSS RICHARD A ; SOCIER TIMOTHY R ; SCHANTZ DANIEL G

Inventor(s): (std): SCHANTZ DANIEL G ; SOCIER TIMOTHY R ; GROSS RICHARD A ; SCHANTZ D G ; SOCIER T R ; GROSS R A ; SHANTS DEHNIEL DZH ; SOUSIR TIMOTI R

Inventor(s): SHANTS DEHNIEL' DZH. ; T R SOCIER ; R A GROSS ; D G SCHANTZ ; DANIEL G SCHANTZ ; TIMOTHY R SOCIER ; RICHARD A GROSS ; DG SCHANTZ ; TR SOCIER ; RA GROSS

19) Family number: 31048690 (US2001013523A)

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Title: MULTIPLE DISPENSING VALVE CLOSURE WITH THREADED ATTACHMENT TO A CONTAINER AND WITH A TWIST-OPEN SPOUT

Abstract: In a dispensing system comprising a container having at least two storage chambers, each for a fluent material, the finishes of the respective chambers are arranged in a contiguous pair defining a cylindrical surface having outer threads, except for two anti-rotational flats. Each finish defines an outlet. A valve of a type that remains closed until opened by a differential between inside pressure and outside pressure overlies the outlet defined by each finish. A fitment defines a mixing chamber having two inlets, one for each storage chamber, and having an outlet. The fitment has two skirts, each having an inner surface having at least one rib, each defining an antirotational flat. The fitment fits over the paired finishes and over the valves so that the anti-rotational flats on the ribs engage the anti-rotational flats on the paired finishes. A collar having inner threads is threaded onto the paired finishes so as to hold the fitment, which holds the valves. Each valve has an elastomeric flange forming a seal between a margin of an associated outlet and a margin of an associated inlet. A dispensing spout is provided. The fitment and the dispensing spout have coacting formations, which permit the dispensing spout to be twisted in one rotational sense relative to the fitment so that the sealing formation of the dispensing spout engages the sealing formation of the fitment, to be twisted in the opposite sense relative to the fitment so that the sealing formation of the dispensing spout is disengaged from the sealing formation of the fitment, but not to become detached from the fitment.

Classifications:

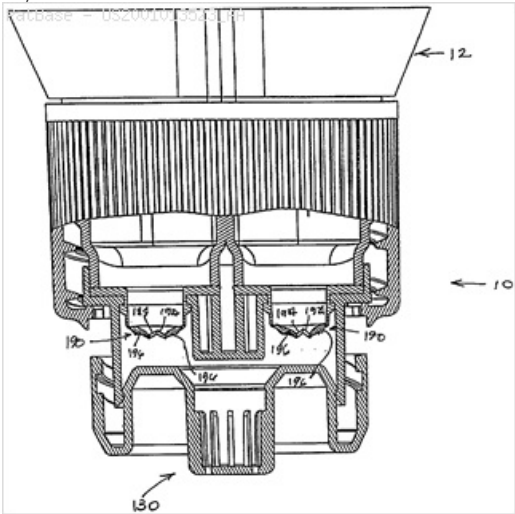
International (ipc 8-9): B24B21/04 B24B21/08 B24B21/10 B24B37/00 B24B37/04 B24B37/12 B24B37/16 B24B37/30 B24B49/00 B24B49/10 B24B49/16 B24D9/08 B65D B65D35/22 B65D35/50 B65D35/52 B65D47/06 B65D47/20 B65D47/24 B65D81/32 B65D83/00 H01L21/304 (Advanced/Invention); H01L21/304 (Advanced/Non-invention); B24B21/04 B24B37/00 B24B37/04 B24B49/10 B24B49/16 B24D9/08 B65D35/00 B65D47/04 B65D47/06 B65D81/32 B65D83/00 H01L21/02 (Core/Invention)

International (ipc 1-7): B24B1/00 B24B21/04 B24B21/10 B24B37/00 B24B37/04 B24B49/00 B65D B65D035/22 B65D35/22 B65D35/50 B65D35/52 B65D47/06 B65D47/20 B65D5/72 B65D81/32 B65D83/00 B67D3/60 B67D5/60 H01L21/304

CPC: B24B21/04 B24B37/12 B24B49/10 B24B49/16 B24D9/08 B24B21/08 B24B37/16 B24B37/30 B65D47/2031 B65D47/242 B65D81/3283

European: B24B21/04 B24B21/08 B24B37/12 B24B37/16 B24B37/30 B24B49/10 B24B49/16 B24D9/08 B65D47/20E2 B65D47/24A1 B65D81/32L

US: 222/129 222/145.1 222/145.5 222/490 222/521 222/94 451/168 451/173 451/288 451/303 451/41 451/41S 451/9 451/9P



Family:

Publication number	Publication date	Application number	Application date
AR028900 AA	20030528	AR2001P100228	20010118
AU2001229700 AA	20010820	AU20010229700	20010123
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JP4225465 B2	20090218	JP20020551130T	20011221
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MXPA02007607 A1	20030327	MX2002PA07607	20010123
PL202388 B1	20090630	PL20010356833	20010123
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US6607425 BA	20030819	US20000747845	20001221
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Priority:

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Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s): (std): GROSS RICHARD A ; HICKOK ALAN P ; KISTLER ROD ; SCHANTZ DANIEL G ; SOCIER TIMOTHY R ; SEAQUIST CLOSURES FOREIGN INC ; SEAQUIST CLOSURES ; LAM RES CORP ; OWCZARZ ALEK ; SEQUIST CLOSURES FOREIGN INC ; LAM RESEARCH CORP ; BOYD JOHN

Assignee(s): GRISSMEYER JULIE M ; APPLIED MATERIALS INC ; LAM RESEARCH CORP FREMONT ; MARTIN FRED H ; TOLL DUNCAN

Inventor(s): (std): SHANTS DEHNIEL DZH ; TR SOCIER ; ROD KISTLER ; DUNCAN TOLL ; ALEK OWCZARZ ; DG SCHANTZ ; JOHN BOYD ; RA GROSS ; TOLL DUNCAN ; GRISSMEYER DZHULI M ; MARTIN FRED G ; SOS E TIMOTI R ; GROSS R A ; SCHANTZ D G ; SOCIER T R ; MARTIN FRED H ; GRISSMEYER JULIE M ; TOLL DUNCAN ; OWCZARZ ALEK ; BOYD JOHN ; KISTLER ROD ; SOCIER TIMOTHY R ; HICKOK ALAN P ; SCHANTZ DANIEL G ; GROSS RICHARD A

Inventor(s): RICHARD A GROSS ; DANIEL G SCHANTZ ; TIMOTHY R SOCIER ; T R SOCIER ; R A GROSS ; D G SCHANTZ ; SOS'E TIMOTI R. ; SHANTS DEHNIEL' DZH. ; ALAN P HICKOK ; JULIE M GRISSMEYER ; FRED H MARTIN

Agent(s): SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO; CHINA PATENT AGENT HK 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 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 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

20) Family number: 8354735 (US5281303A)

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Title: Process for manufacturing integrated optical components using silicon mask

Abstract: A process for the production of an integrated optical circuit in a glass body by ion exchange between certain regions of the glass body and a metallic salt with the use of a mask defining the regions where the ion exchange occurs, wherein the mask comprises a layer of silicon and the mask is removed by an etching operation preceded by a cleansing operation.

Classifications:

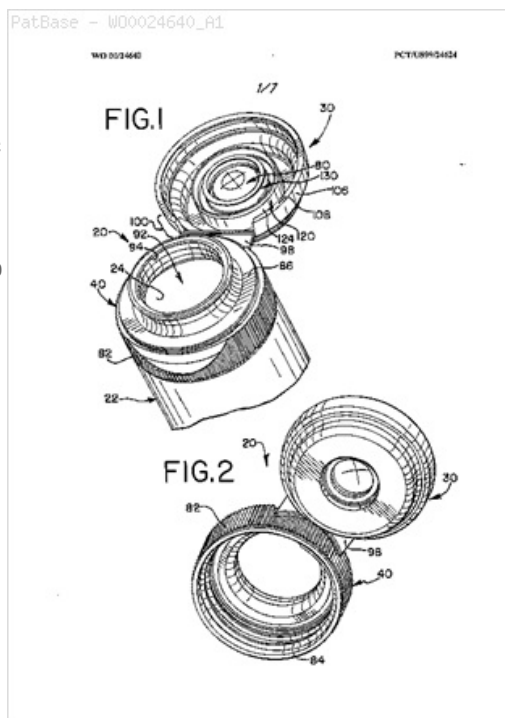
International (IPC 8-9): B65D35/46 B65D35/52 B65D47/06 B65D47/08 B65D47/20 B65D5/72 B65D83/00 C03C17/22 C03C21/00 C23F1/24 G02B6/12 G02B6/13 G02B6/134 G11C11/56 G11C13/00 G11C16/00 G11C16/02 G11C16/10 G11C16/34 H01L21/228 H01L21/302 H01L21/425 (Advanced/Invention); B65D83/00 C03C17/22 G02B6/12 G02B6/13 (Advanced/Non-invention); B65D35/00 B65D47/04 B65D47/08 B65D5/72 B65D83/00 C03C17/22 C03C21/00 G02B6/12 G02B6/13 G11C11/56 G11C13/00 G11C16/00 G11C16/02 G11C16/06 (Core/Invention); H01L21/425 (Core/Non-invention)

International (IPC 1-7): B65D25/40 B65D35/46 B65D35/52 B65D47/00 B65D47/06 B65D47/08 B65D47/20 B65D5/72 B65D83/00 C03C15/00 C03C17/22 C03C21/00 C23C14/14 C23F1/10 C23F1/12 C23F1/24 C23G1/10 G02B6/12 G02B6/255 G02B6/28 H01L21/00 H01L21/228 H01L21/302 H01L21/425 H05K1/03

CPC: C03C21/002 G02B6/1345 B65D47/0809 B65D47/2031 B65D2547/066

European: B65D47/08B1 B65D47/20E2 C03C21/00B2 G02B6/12A2B G02B6/134E L65D547/06Y1

US: 134/3 156/638 156/643 156/646 156/653 156/667 216/51 216/62 216/66 216/67 216/99 220/256 220/258.5 222/494 222/545 222/556 252/79.1 252/791 65/30.13



Family:

Publication number	Publication date	Application number	Application date
AR020757 AA	20020529	AR1999P105106	19991008
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AU200012167 A1	20000515	AU20000012167	19991020
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AU661029 B2	19950713	AU19920024541	19920917
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BRPI9203676 A	19930420	BR1992PI03676	19920922
BRPI9914845 A	20010710	BR1999PI14845	19991020
CA2077984 AA	19930328	CA19922077984	19920910
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EP1161373 A1	20011212	EP19990970974	19991020
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HU64287 A2	19931228	HU19920003073	19920925
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JP2002528345 T2	20020903	JP20000578216T	19991020
JP5254892 A2	19931005	JP19920281103	19920928
KR19930005929 A	19930420	KR19920017609	19920926
KR930005929 A	19930420	KR19920017609	19920926
MX9205500 A1	19930401	MX19920005500	19920925
PL347475 A1	20020408	PL19990347475	19991020
SK294892 A3	19950308	SK19920002948	19920925
TW238414 B	19950111	TW19920107959	19921005
US5281303 A	19940125	US19920943187	19920910
US6006960 A	19991228	US19980181342	19981028
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Priority:

FR19910011923 19910927 CA19922077984 19920910 US19980181342 19981028
US19990414177 19991007 WO1999US24624 19991020

Probable Assignee: APTARGROUP INC

Assignee(s): (std): CORNING INC ; APTARGROUP INC ; SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC

Assignee(s): BEGUIN ALAIN MARCEL JEAN ; CORNING INC CORNING N Y US ; CORNING INC US ; CORNING INCORPORATIONUS ; LABORDE PASCALE ; PRESOTTO JEAN CLAUDE ; CORNING INCORPORATION ; GROSS RICHARD A

Inventor(s): (std): BEGUIN ALAIN ; PRESOTTO JEAN CLAUDE ; LABORDE PASCALE ; LABORDE MADAME PASCALE ; LABORDE PASCAL ; GROSS RICHARD A ; ALAIN BEGUIN ; PASCALE LABORDE ; JEAN CLAUDE PRESETTO ; BEGUIN ALAIN M J ; LABORDE PASCALE CORNING INCORP ; PRESOTTO JEAN CLAUDE CORNING I ; BEGUIN ALAIN CORNING INCOROPAT

Inventor(s): PRESETTO JEAN CLAUDE ; RICHARD A GROSS ; BEGUIN ALAIN MARCEL JEAN ; PRESOTTO JEAN CLAUDE FR ; LABORDE PASCAL FR ; BEGUIN ALAIN FR ; MADAME PASCALE LABORDE ; BEGUIN ALAIN CORNING INCOROPATED CORNING NY 14831 ; PRESOTTO JEAN CLAUDE CORNING INCORPORATED CORNING ; LABORDE PASCALE CORNING INCORPORATED CORNING NY 14 ; LABORDE PASCALE CORNING INCORPORATED ; PRESOTTO JEAN CLAUDE CORNING INCORPORATED ; BEGUIN ALAIN CORNING INCOROPATED ; PRESOTTO JEAN CLAUDE CORNING INC ; LABORDE PASCALE CORNING INC ; JEAN CLAUDE PRESOTTO ; BEGUIN ALAIN CORNING INCOROPATED CORNING NY... ; LABORDE PASCALE CORNING INCORPORATED CORNING...

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; GOWLING LAFLEUR HENDERSON LLP; FETHERSTONHAUGH AND CO

Designated states: AT AU BE BR CA CH CY CZ DE DK ES FI FR GB GR IE IT JP LU MC MX NL PL PT SE

21) Family number: 3299783 (US4991745A)

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Title: DISPENSING VALVE WITH TRAMPOLINE-LIKE CONSTRUCTION

Abstract: A dispensing package (1) is provided for fluid products, such as liquids, pastes, powders and the like. The package comprises a container (2) in which the product is packaged, and a self-sealing dispensing valve (3) which is of silicone rubber and has a slit (20) which automatically opens and closes in response to the application and removal of a predetermined threshold pressure. A removable closure (4) may be provided to cover the dispensing valve and prevent inadvertent discharge of the product during transport, storage and other similar conditions. The valve (3) has a flange (19) which is held in compressed condition between a lip (13) and a crimped ring (27) to provide an effective seal.

Classifications:

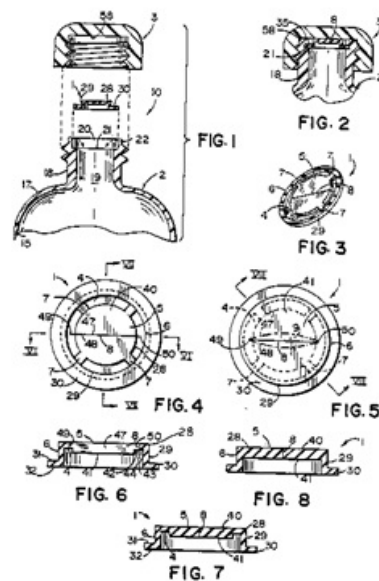
International (ipc 8-9): B65D35/12 B65D35/50 B65D35/52
B65D47/12 B65D47/20 B65D47/32 (Advanced/Invention);
B65D47/12 (Advanced/Non-invention);
B65D35/00 B65D35/02 B65D47/04 B65D47/12 (Core/Invention)

International (ipc 1-7): B05B11/04 B65D1/02 B65D25/40
B65D25/42 B65D25/44 B65D25/48 B65D35/12 B65D35/50
B65D35/52 B65D47/12 B65D47/20 B65D47/32 B65D83/44
F16L47/00

CPC: B29C65/56 B29C66/5344 B29C66/53461 B29C66/542
B29C65/568 B29L2031/565 Y10T137/7771 Y10T137/7881 B65D35/12
B65D47/2031 B29C66/7392 B29C66/73941 B29C66/24221
B29C66/61 B29C66/1122 B29C66/131 B29C66/135 B29C66/21

European: B29C65/56 B29C65/56H2 B29C66/534 B65D35/12
B65D47/20E2 L29C65/56H2 L29C65/561 L29L31/56B

US: 137/493 137/845 222/212 222/490 222/494 285/382 285/423

**Family:**

Publication number	Publication date	Application number	Application date
AT94135 E	19930915	AT19900304453T	19900425
AU199053646 A1	19901101	AU19900053646	19900418
AU627021 B2	19920813	AU19900053646	19900418
CA2014789 AA	19901025	CA19902014789	19900418
CA2014789 C	20011218	CA19902014789	19900418
DE69003160 D1	19931014	DE19906003160	19900425
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ES2044435 T3	19940101	ES19900304453T	19900425
JP2689009 B2	19971210	JP19900108569	19900424
JP3124568 A2	19910528	JP19900108569	19900424
KR0162090 B1	19981201	KR19900005750	19900424
KR100162090 B1	19981201	KR19900005750	19900424
KR19900016022 A	19901112	KR19900005750	19900424
US4991745 A	19910212	US19900462613	19900109
US5033655 A	19910723	US19890343464	19890425

Priority:

US19890311190 19890215 US19890343464 19890425 US19900462613 19900109
 CA19902014789 19900418 EP19900304453 19900425

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s): (std): BROWN PAUL E ; LIQUID MOLDING SYSTEMS INC ; LIQUID MOORUDEINGU SYST INC

Assignee(s): SEAQUIST CLOSURES FOREIGN INC ; LIQUID MOLDING SYSTEMS INC MIDLAND MICH US ; APTAR GROUP INC ; APTARGROUP INC

Inventor(s): (std): POORU II BURAUIN ; BROWN PAUL E

Inventor(s): PAUL E BROWN

Agent(s): GRIFFITH HACK ; BORDEN LADNER GERVAIS LLP

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

22) Family number: 8596869 (US5531363A)

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Title: Dispensing closure cartridge valve system

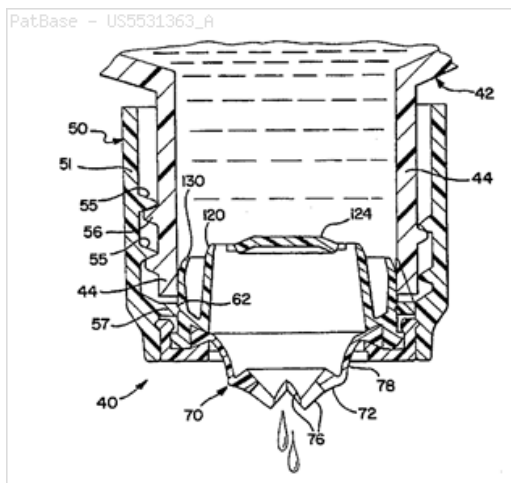
Abstract: A cartridge for a closure, and a closure containing such a cartridge, are provided for accommodating the dispensing of a liquid product from a container. The cartridge includes a body, a valve seated in the body, and a retainer engaged with the body to hold the retainer and body in a clamping relationship retaining the valve in position on the body. A standardized valve and overall cartridge design may be employed with a variety of different closure housings for different containers.

Classifications:

International (IPC 8-9): B65D25/40 B65D35/50 B65D47/06
 B65D47/20 B65D49/12 B65D83/44 (Advanced/Invention);
 B67B5/00 (Advanced/Non-invention);
 B65D25/38 B65D35/00 B65D47/04 B65D49/00 (Core/Invention);
 B65D83/44 (Core/Non-invention)

International (IPC 1-7): B65D05/72 B65D25/40 B65D35/50

B65D47/06 B65D49/12 B65D5/72 B65D83/44 B67B05/00 B67B5/00
CPC: B65D47/2031 B65D2101/0007 B65D2101/0023
European: B65D47/20E2 L65D101/00A1 L65D101/00A3
US: 222/494 222/541.9 222/547



Family:

Publication number	Publication date	Application number	Application date
AU199521285 A1	19960105	AU19950021285	19950324
AU685616 B2	19980122	AU19950021285	19950324
BRPI9507957 A	19970902	BR1995PI07957	19950324
CA2188419 AA	19961021	CA19952188419	19950324
CN1150412 A	19970521	CN19951093544	19950324
CO4410225 A1	19970109	CO19950012884	19950330
EP0762988 A1	19970319	EP19950914191	19950324
EP0762988 A4	19980701	EP19950914191	19950324
JP10501205 T2	19980203	JP19960502126T	19950324
JP3753433 B2	20060308	JP19960502126	19950324
KR19970703909 A	19970809	KR19960707015	19950324
MX9605641 A1	19980531	MX19960005641	19950324
TW330566 Y	19980421	TW19960205419U	19950320
US5531363 A	19960702	US19940258659	19940610
WO9534500 A1	19951221	WO1995US03732	19950324

Priority:

US19940258659 19940610 WO1995US03732 19950324

Probable Assignee: SEAQUIST CLOSURES FOREIGN INC

Assignee(s): (std): APTARGROUP INC

Assignee(s): APTARGROUP INCUS ; GROSS RICHARD A ; SEAQUIST CLOSURES FOREIGN INC ; SCHAFFER ELDON W II ; APTAR GROUP INC

Inventor(s): (std): SCHAFFER ELDON W ; SCHAFFER II ELDON W ; SCHAFFER E W II ; GROSS R A ; SCHAFFER ELDON W II ; GROSS RICHARD A

Inventor(s): E W SCHAFFER II ; R A GROSS ; RICHARD A GROSS ; ELDON W SCHAFFER II ; ELDON W SCHAFFER

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

Designated states: AT AU BE BR CA CH CN DE DK ES FR GB GR IE IT JP KR LU MC MX NL PT SE SG

23) Family number: 33096892 (US2006144875A)

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Title: FLEXIBLE CONTAINER CONTAINING A LIQUID PRODUCT, AND A PROCESS FOR MAKING A LIQUID-FILLED, FLEXIBLE CONTAINER

Abstract: The present invention relates to a flexible container containing a liquid product, wherein the flexible container (2) comprises a closure having an inner end and an outer end, the closure being fixed through the wall of the flexible container (2) such that the inner end of the closure lies within the flexible container (2) and is in contact with the liquid product, and the outer end of the closure lies outside of the flexible container, wherein the closure has an open position and a closed position, and wherein the outer end of the closure is connected to a self-sealing valve (30) which opens when the closure is in the open position and when pressure is applied to the liquid product within the flexible container, and which closes when the pressure is released. In another aspect the invention relates to a process of making a liquid-filled, flexible container by: (i) forming a closed flexible container (2) from a film material and fixing a female part (10) of a closure through the wall of the flexible container (2); (ii) filling the flexible container (2) with a liquid product by injecting the liquid product into the flexible container (2) through the female part (10) of the closure; (iii) sealing the flexible container by closing the female part (10) of the closure; and (iv) inserting a male part (20) of a closure into the female part (10) so that the male (20) and female (10) parts form a closure having an open and a closed position, wherein the male part (20) of the closure comprises a self-sealing valve (30) which opens when the closure is in the open position and when pressure is applied to the liquid product within the flexible container (2), and which closes when the pressure is released.

Classifications:

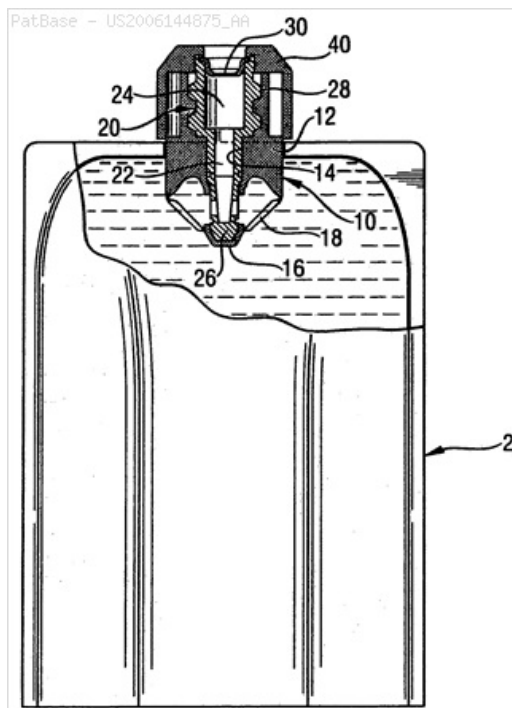
International (IPC 8-9): B05B11/04 B65D35/38 B65D47/20
B65D47/24 B65D75/58 (Advanced/Invention);
B05B11/04 B65D35/24 B65D47/04 B65D75/52 (Core/Invention)

International (IPC 1-7): B05B11/04 B65D47/24 B65D47/24
B65D47/40 B65D47/40 B65D75/58 B65D75/58

CPC: B05B11/047 B65D75/008 B65D75/5883

European: B05B11/04E B65D75/58G3C L65D75/00E

US: 222/494



Family:

Publication number	Publication date	Application number	Application date
AR052859 AA	20070404	AR2005P105636	20051229
BRPI0519670 A2	20090303	BR2005PI19670	20051220
CL2005003472 A1	20060825	CL20050003472	20051229
CN101080352 A	20071128	CN200580043494	20051220
EP1676784 A1	20060705	EP20040078548	20041229
IN03955DN2007 A	20070831	IN2007DN03955	20070525
MX2007008062 A1	20070717	MX20070008062	20051220
US2006144875 AA	20060706	US20050312316	20051220
WO06071660 A1	20060706	WO2005US46286	20051220

Priority:

EP20040078548 20041229 WO2005US46286 20051220

Probable Assignee: PROCTER AND GAMBLE CO

Assignee(s): (std): ETESSE PATRICK J ; ETESSE PATRICK JEAN FRANCOIS ; PROCTER AND GAMBLE ; THE PROCTER AND GAMBLE COMPANY

Assignee(s): PROCTER AND GAMBLE CO

Inventor(s): (std): ETESSE PATRICK JEAN FRANCOIS ; ETESSE PATRICK J

Inventor(s): PATRICK JEAN FRANCOIS ETESSE ; ETESSE PATRICK ; ETESE PATRICK JEAN FRANCOIS

Agent(s): LLOVET; THE PROCTER AND GAMBLE COMPANY, INTELLECTUAL PROPERTY DIVISION; PROCTER AND GAMBLE CO INTELLECTUAL PROPERTY DIVISION

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

24) Family number: 32535957 (US2008067194A)

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Title: CONTAINER FOR PACKAGING A LIQUID TO BE DISPENSED IN DROPS, REVERSIBLY DEFORMED BY AIR INPUT

Abstract: The invention concerns a container for packaging a liquid (1) to be dispensed in drops, said container being reversibly deformed by air input and being equipped with a head (3) for dispensing liquid through a nozzle (5). The latter (3) comprises a recessed body (4) which is nested inside a neck (10) of the container and which holds a hydrophobic microporous pad (8) arranged upstream of a chamber (9). Said chamber (9) is provided with an air reservoir for preventing the liquid from passing through the microporous pad between two liquid dispensing operations when the nozzle (5) is sealingly obstructed with a cap (6) and for drying a partly hydrophilic and hydrophobic filtering membrane (7) arranged in the dispensing head (3).

Classifications:

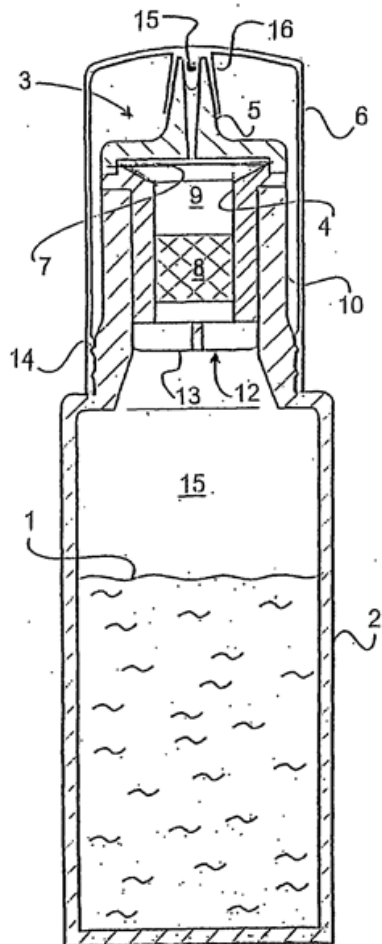
International (IPC 8-9): A61J1/14 B05B B05B11/04 B60S5/00 B65D47/18 B65D83/00 B67D5/58 B67D7/76 (Advanced/Invention); A61J1/14 B05B11/00 B05B11/04 B60S5/00 B65D47/00 B65D47/06 B65D83/00 B67D7/76 (Core/Invention); B05B (Subclass/Invention)

International (IPC 1-7): A61J1/14 B05B11/04 B65D47/18

CPC: B65D47/18

European: B65D47/18

US: 222/189.06 222/189.07 222/189.070P 222/189.09 222/213 222/420 222/421 222/421S 222/422 222/542 222/542S

**Family:**

Publication number	Publication date	Application number	Application date
AR051064 AA	20061220	AR2005P102478	20050616
BRPI0512387 A	20080311	BR2005PI12387	20050624
BRPI0512387 B1	20181106	BR2005PI12387	20050624
BRPI0512387 B8	20190115	BR2005PI12387	20050624
CA2572048 AA	20061222	CA20052572048	20050624
CA2572048 C	20110104	CA20052572048	20050624
CN100475359 C	20090408	CN200580020671	20050624
CN1972755 A	20070530	CN200580020671	20050624
CY1120837 T1	20191211	CY20181101052T	20181016
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EP1765513 B1	20180822	EP20050756044	20050624
EP3412590 A1	20181212	EP20180183420	20050624
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FR2872137 A1	20051230	FR20040007042	20040624
FR2872137 B1	20090123	FR20040007042	20040624
HK1104253 A1	20090925	HK20070109019	20070820
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HK1104253 A3	20080111	HK20070109019	20070820
HK1104253 B	20090925	HK20070109019	20070820
HU039799 T2	20190228	HU20050756044T	20050624
IN01596MN2006 A	20070525	IN2006MN01596	20061221
IN250812 B	20120203	IN2006MN01596	20061221
JP2008503410 T2	20080207	JP20070517521T	20050624
JP2012210979 A2	20121101	JP20120113156	20120517
JP5080972 B2	20121121	JP20070517521T	20050624
JP5307916 B2	20131002	JP20120113156	20120517
KR100919520 B1	20090928	KR20077001804	20050624
KR20070027738 A	20070309	KR20077001804	20050624
LT1765513 T	20181112	LT20050756044T	20050624
MA28671 B1	20070601	MA20060029543	20061219
MXPA06014657 A1	20070212	MX2006PA14657	20050624
MY164320 A	20171215	MY20050002867	20050623
NO20070474 A	20070326	NO20070000474	20070123
NO20070474 L	20070326	NO20070000474	20070123
NO343517 B1	20190401	NO20070000474	20070123
PL1765513 T3	20190131	PL20050756044T	20050624
PT1765513 T	20181120	PT20050756044T	20050624

RU2007101567 A	20080427	RU20070101567	20050624
SI1765513 T1	20181231	SI20050032232T	20050624
TNSN06415 A1	20080222	TN2006SN00415	20061214
TR201815132 T4	20181121	TR20180015132T	20050624
US2008067194 AA	20080320	US20050630831	20050624
US7971755 BB	20110705	US20050630831	20050624
WO06000897 A1	20060105	WO2005IB01791	20050624
ZA200700248 A	20080528	ZA20070000248	20070109

Priority:

FR20040007042 20040624 EP20050756044 20050624 JP20070517521 20050624
WO2005IB01791 20050624 JP20070517521T 20050624

Probable Assignee: LABORATORIES THEA

Assignee(s): (std): FAURIE MICHEL ; LAB THEA ; LABORATOIRES THEA ; THEA LAB SA ; THEA LAB ; THEA SA LAB ; LABORATORIES THEA ; TEA LAB
Assignee(s): LABORATUAR TEA ; LABORATOIRES THEA SOC ANONYME ; LABORATOIRES THEA SOCIETE ANONYME
Inventor(s): (std): MICHEL FAURIE ; FOR E MISHEL ; FAURIE MICHEL
Inventor(s): FOR'E MISHEL'
Agent(s): GOUDREAU GAGE DUBUC ; LAVERY DE BILLY LLP ; SANTARELLI ; ZHONGZI IP ; FULYA SUEMERALP ; MILLEN WHITE ZELANO AND BRANIGAN 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 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

25) Family number: 11522996 (US6095382A)

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Title: Container and closure with dispensing valve and separate releasable internal shipping seal

Abstract: A dispensing system is provided for a container having an opening to the interior. The container has a sealable seat around the opening and a thread. A closure is disposed on the container. The closure defines a thread that is threadably engaged with the container thread for accommodating movement of the closure between a lowered position and an elevated position. The closure defines a dispensing passage for establishing communication between the container opening and the exterior of the closure. The closure includes a dispensing valve disposed in the dispensing passage for opening to dispense fluid therethrough and for closing to occlude flow. The closure includes an occlusion member inwardly of the valve in the dispensing passage to sealingly engage the container seat and prevent flow from the container opening into the dispensing passage below the valve when the closure is in the lowered position and to permit flow into the dispensing passage when the closure is in the elevated position.

Classifications:

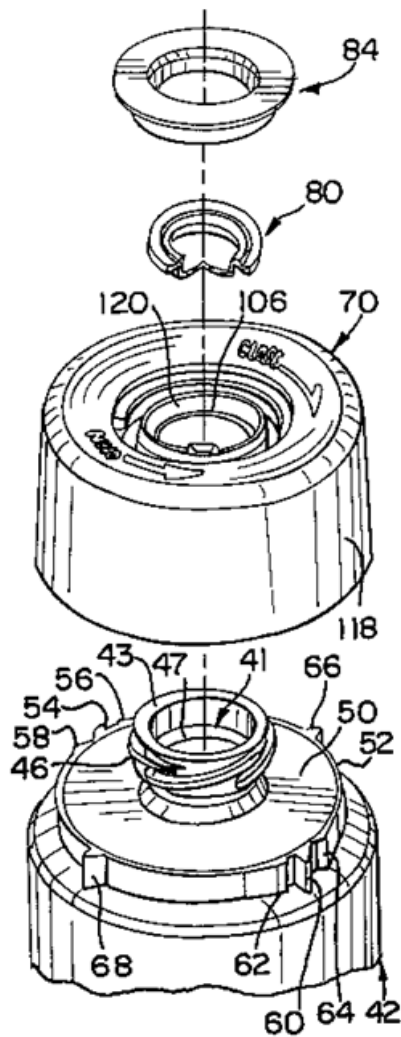
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B65D47/20 B65D47/24 B65D47/44 B65D83/00 B67D
B67D3/00 (Advanced/Invention);
B65D83/00 (Advanced/Non-invention);
B05B11/04 B65D35/00 B65D47/00 B65D47/04 B65D83/00
B67D3/00 (Core/Invention)

International (IPC 1-7): B65D35/44 B65D35/50 B65D47/04
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CPC: B65D47/2031 B65D47/242

European: B65D47/20E2 B65D47/24A1

US: 215/271 220/254 220/254.8 222/493 222/494 222/520 222/521
222/525

**Family:**

Publication number	Publication date	Application number	Application date
AR020481 AA	20020515	AR1999P104703	19990917
AU199959166 A1	20000410	AU19990059166	19990909
AU199959166 A5	20000410	AU19990059166	19990909
AU747758 B2	20020523	AU19990059166	19990909
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CA2341438 AA	20010221	CA19992341438	19990909
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CN1319073 A	20011024	CN19998011168	19990909
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HK1041248 A1	20040806	HK20020102828	20020415
HK1041248 B	20040806	HK20020102828	20020415
JP2002526343 T2	20020820	JP20000574011T	19990909
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PL346562 A1	20020211	PL19990346562	19990909
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US6095382 A	20000801	US19980157706	19980921
WO0017092 A1	20000330	WO1999US20742	19990909

Priority:

US19980157706 19980921 WO1999US20742 19990909

Probable Assignee: APTARGROUP INC**Assignee(s):** (std): APTARGROUP INC ; SEAQUIST CLOSURES ; SEAQUIST CLOSURES FOREIGN INC ; SEAQUITS CLOSURES FOREIGN INC**Assignee(s):** SEAQUIST CLOSURES FOREIGN INC 475 WEST TERRA COTTA CRYSTAL LAKE IL ; GROSS RICHARD A**Inventor(s):** (std): GROSS RICHARD A ; GROSS A ; GROSS R A

Inventor(s): RA GROSS ; RICHARD A GROSS ; R A GROSS
Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; FETHERSTONHAUGH AND CO; ERNESTO
CAVELIER; CHINA PATENT AGENT HK LTD 22 F GREAT EAGLE CENTRE 23 HARBOUR ROAD WANCHAI
Designated states: AT AU BE BR CA CH CN CY CZ DE DK ES FI FR GB GR IE IT JP KR LU MC MX NL PL PT SE SG