

Search history

Search [SP]: A container includes a finish, a shoulder portion, a body, and a base portion. The finish defines an opening. The shoulder portion extends from the finish. The body extends from the shoulder portion and defines a chamber. The base portion extends at an end of the body opposite to the shoulder portion and is moveable from an as-blown position to an expanded position and from the expanded position to a retracted position. The base portion includes a standing ring, a pivot area, and a central area. The pivot area is disposed between the standing ring and the central area. The pivot area is configured to flex and move the central area along the longitudinal axis when the base portion moves from the as-blown position to the expanded position, and from the expanded position to a retracted position. (Results 240)

Search thread* (Results 1000000)
2:

Search 1 and 2 (Results 98)
3:

Search groove* and rib* (Results 425097)
4:

Search 3 and 4 (Results 35)
5:

1) Family number: 17887391 (US4108324A)

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Title: Ribbed bottom structure for plastic container

Abstract: A container formed of synthetic resinous material having a bottom structure the outer surface of which comprises a central concavity and a convex heel, the heel surrounding the concavity and merging therewith and with the container sidewall. A plurality of hollow convex ribs, distributed in a symmetrical array, interrupt the outer surface of the concavity and merge smoothly therewith, each rib extending longitudinally in the direction of the heel and downwardly from an inner portion of the concavity. The wall of the bottom structure generally decreases in thickness progressively from the innermost point of the concavity to the sidewall.

Classifications:

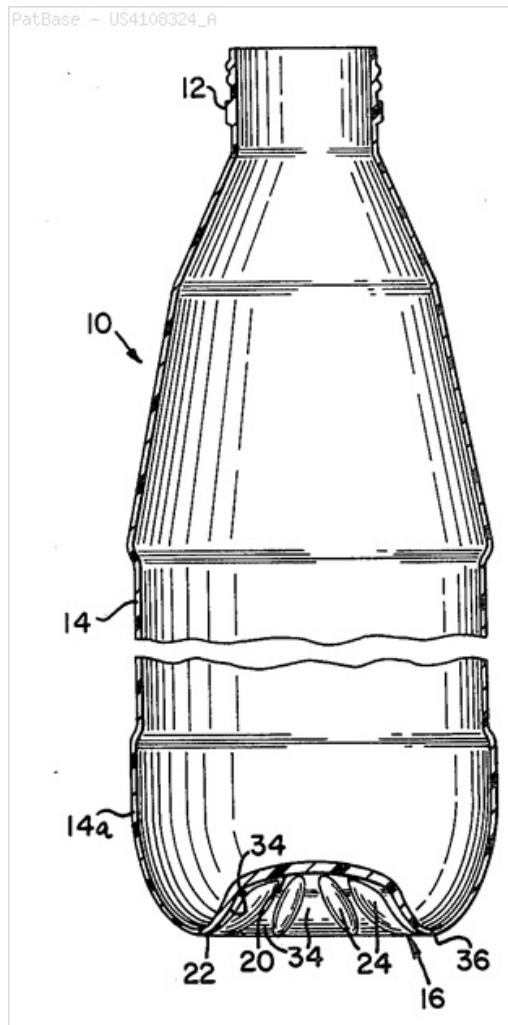
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B65D1/02 E06B3/88 (Advanced/Invention);
A47B13/08 A47B96/02 E06B3/88 (Advanced/Non-invention);
A47B13/08 A47B95/00 A47B96/02 B65D1/02 (Core/Invention);
E06B3/70 (Core/Non-invention)

International (IPC 1-7): A47B13/08 A47B95/04 A47B96/00 A47B96/02
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B65D23/00 B67B E04C2/38 F16B5/12 F16S3/00

CPC: A47B95/043 E06B3/88 H05K999/00 B65D1/0276

European: A47B95/04B B65D1/02D2 B65D1/02D2C P06B3/88

US: 108/27 215/1C 215/373 220/608 49/462 52/716 52/717.06
52/800.12



Family:

Publication number	Publication date	Application number	Application date
AT370978 A	19920615	AT19780003709	19780522
AT395573 B	19930125	AT19780003709	19780522
AU197835889 A1	19791115	AU19780035889	19780508
AU197836389 A1	19791129	AU19780036389	19780523
AU522578 B2	19820617	AU19780036389	19780523
BE867345 A	19780918	BE19781008891	19780529
BR7803238 A	19790102	BR19780003238	19780522
CA1075626 A1	19800415	CA19780303107	19780511
CA1089806 A1	19801118	CA19780303864	19780523
DE2821430 A1	19781207	DE19782821430	19780516
DE2822450 A1	19781130	DE19782822450	19780523
DK226478 A	19781124	DK19780002264	19780522
DK227678 A	19781125	DK19780002276	19780523
ES236148 U	19780901	ES19780236148U	19780522
ES236148 Y	19790116	ES19780236148U	19780522
FI781592 A	19781125	FI19780001592	19780519
FR2391672 A1	19781222	FR19780015010	19780518
FR2391918 A1	19781222	FR19780015016	19780522
GB1601493 A	19811028	GB19780021090	19780522
GR65306 B	19800801	GR19780156149	19780505
IE46976 B	19831116	IE19780001021	19780522
IE781021 L	19781123	IE19780001021	19780522
IL54595 A0	19780731	IL19780054595	19780427
IT1206601 A	19890427	IT19780023654	19780522
IT7823654 A0	19780522	IT19780023654	19780522
JP1161699 C3	19830810	JP19780060892	19780522
JP53145775 A2	19781219	JP19780062132	19780524
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JP57057330 B4	19821203	JP19780060892	19780522
MX145774 A	19820330	MX19780173380	19780509
NL7805564 A	19781127	NL19780005564	19780523
NL7805600 A	19781128	NL19780005600	19780523
NO781755 A	19781221	NO19780001755	19780522

NO781766 A	19781124	NO19780001766	19780522
PT68072 A	19780601	PT19780068072	19780522
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SE7706076 L	19781125	SE19770006076	19770524
SE7805727 A	19781124	SE19780005727	19780518
US4108324 A	19780822	US19770799635	19770523
US4242848 A	19810106	US19780907749	19780519
ZA7802418 A	19790425	ZA19780002418	19780427

Priority:

US19770799635 19770523 SE19770006076 19770524 CA19780303864 19780523

Probable Assignee: CONTINENTAL CAN CO USA INC

Assignee(s): (std): CONTINENTAL GROUP ; SCHOULTZ SVEN ; SVEN SCHOULTZ ; SCHOULTZ SVEN CONTINENTAL ; SCHOULTZ S ; SVEN SCHOULTZ TE STOCKHOLM ; SCHOULTZ SVEN THE CONTINENTAL

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Agent(s): WM; WATERMARK INTELLECTUAL PROPERTY PTY LTD; JOHNSON AND HICKS

2) Family number: 4888965 (US4620639A)

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Title: SYNTHETIC RESIN THIN-WALLED BOTTLE

Abstract: This invention provides a synthetic resin thin-walled bottle, a tubular intermediate therefor and a method of producing a thin-walled bottle. The thin-walled bottle has ribs at least at its bottom portion, and the bottle bottom is raised up frusto-conically or has an undulatory shape. The tubular intermediate is first formed with ribs which become thin-walled protuberant ribs after blow molding. The thin-walled bottle is produced by blow-molding the ribbed tubular intermediate.

Classifications:

International (IPC 8-9): B29B11/08 B29C49/00 B29C49/06 B29C49/08 B29C49/12 B29C49/48 B29C49/64 B29C65/00 B65D1/02 B65D1/46 B65D23/00 (Advanced/Invention); B29C49/00 B29C49/06 B29C49/64 (Advanced/Non-invention); B29B11/00 B29C49/00 B29C49/06 B29C49/08 B29C49/48 B29C49/64 B29C65/00 B65D1/02 B65D1/40 B65D23/00 (Core/Invention); B29C49/06 (Core/Non-invention)

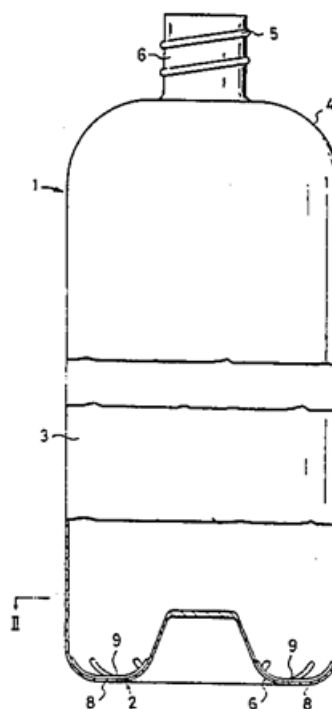
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CPC: B29B2911/1434 B29B2911/1442 B29B2911/141 B29B2911/14486 B65D1/0284 B65D2501/0036 Y10T428/1397 B29B2911/1433 B29B2911/14331 B29B2911/14336 B29B2911/14337 B29B2911/14344 B29B2911/14345 B29B2911/1408 B29B2911/14086 B29B2911/14113 B29B2911/14466 B29C49/06 B29B2911/14033 B29B2911/1404 B29B2911/14332 B29C49/0078 B29B2911/1402 B29B2911/14026 B29B2911/14326 B29B2911/14333 B29B2911/1444 B65D1/0276

European: B29C49/00G2 B65D1/02D2 B65D1/02D2C B65D1/02D2E L29B911/14B2B L29B911/14B2D L29B911/14B2F L29B911/14B2H L29B911/14B4F L29B911/14B4F2 L29B911/14B4H2 L29B911/14B4L2 L29B911/14D10D10 L29B911/14D10D4 L29B911/14D10D4D2 L29B911/14D10D4F L29B911/14D2 L29B911/14D4 L29C49/06 L65D501/02Y1C

US: 215/1C 215/371 215/373 215/375 215/382 220/606 220/608 220/609 220/70 264/532 264/535 264/537 428/36.92 428/542.8

PatBase - US4620639_A



Family:

Publication number	Publication date	Application number	Application date
AU197952434 A1	19800515	AU19790052434	19791102

AU520221 B2	19820121	AU19790052434	19791102
CA1153323 A1	19830906	CA19790339303	19791106
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CA1164371 A1	19840327	CA19830429481	19830601
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CH634777 A	19830228	CH19820002319	19820416
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DE2944160 A1	19800508	DE19792944160	19791102
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Probable Assignee: YOSHINO KOGYOSHO CO LTD

Assignee(s): (std): YOSHINO KOGYOSHO CO LTD

Assignee(s): YOSHINO KOGYOSHO CO LTD TE TOKIO ; YOSHINO YATARO ; YOSHINO KOGYOSHO CO

Inventor(s): (std): YOSHINO YATAROU ; YOSHINO Y ; YATARO YOSHINO ; YOSHINO YATARO

Inventor(s): Y YOSHINO

Agent(s): FB RICE AND CO; FETHERSTONHAUGH AND CO

3) Family number: 1442785 (US4342398A)

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Title: Self-supporting plastic container for liquids

Abstract: A pressure-resistant thermoplastic container has a low center of gravity and a dimensionally stable seating ring zone of substantial strength. The center of gravity is lowered by reducing the weight of the finish and neck, and using a larger diameter for the main body to reduce the overall height while maintaining the desired internal volume. The improved design of the seating ring results in a thicker wall in the bottom end and, therefore, a stronger structure. The bottom end includes a sharp V-shaped structure having a concave inside wall and a generally convex outside wall joined at the bottom ends by a return portion. A convex central portion is connected to an upper end of the inner wall to define a central cavity and an extreme lower end of the outer wall is generally concave.

Classifications:

International (IPC 8-9): B29C49/00 B29C49/08 B29C49/42 B29C49/48
B29C65/00 B65D1/02 (Advanced/Invention);
B29C49/00 B29C49/08 B29C49/42 B29C49/48 B29C65/00 (Advanced/Non-invention);
B29C49/00 B29C49/08 B29C49/42 B29C49/48 B29C65/00

B65D1/02 (Core/Invention)

International (IPC 1-7): B29C17/07 B29D23/03 B65D1/02 B65D1/40

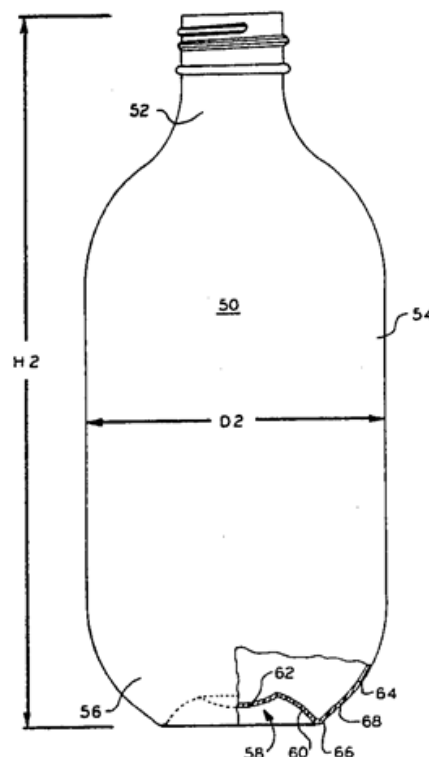
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CPC: B65D1/0276

European: B65D1/02D2 B65D1/02D2C

US: 215/1C 215/373 220/606 D24/197

PatBase - US4342398_A



Family:

Publication number	Publication date	Application number	Application date
AU198175129 A1	19820826	AU19810075129	19810910
AU530261 B2	19830707	AU19810075129	19810910
CA1157787 A1	19831129	CA19810385021	19810902
DE3137735 A1	19820519	DE19813137735	19810923
FR2492340 A1	19820423	FR19810019396	19811015
GB2085395 A1	19820428	GB19810031105	19811015
JP57096938 A2	19820616	JP19810162918	19811014
US4342398 A	19820803	US19800197467	19801016
ZA8106089 A	19820929	ZA19810006089	19810902

Priority:

US19800197467 19801016 CA19810385021 19810902

Probable Assignee: OWENS ILLINOIS PLASTIC PRODUCTS INC A CORP OF DE

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

Assignee(s): OWENS ILLINOIS PLASTIC PRODUCTS INC ; OWENS ILLINOIS PLASTIC PRODUCTS INC A CORP OF DE ;
CHANG LONG F

Inventor(s): (std): CHANG LONG F ; CHANG LONG FEI ; LONG FEI CHANG ; RON FUEI CHAN ; RON FUEI CHIYAN

Inventor(s): FEI CHANG LONG

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; G RONALD BELL AND ASSOCIATES

4) Family number: 6149150 (US4959006A)

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Title: APPARATUS RELATING TO A PREFORM WITH GEODESIC REINFORCEMENT RING

Abstract: A mold-core rod combination for producing a plastic preform for forming blow molded plastic bottles which comprises: a neck portion defining an opening; a tubular sidewall portion depending therefrom; and an integral base structure depending from the tubular sidewall portion to a closed end; the preform having an outside wall face and an inside wall face with one of these in the base structure having integrally formed thereon a plurality of filets, extending longitudinally of the preform and defining a continuous reinforcing ring of varying thickness spaced from the closed end and circumscribing the base structure, wherein the filets decrease progressively in width and radial thickness at least from the reinforcing ring toward the closed end. The preform is capable of forming a blow molded plastic bottle with a bottom portion having a continuous reinforcing ring of circumferentially continuous radially extending alterations in wall thickness with a regularly undulating cross-section along the circumference. Preferably the filets are integral with the inside wall face.

Classifications:

International (IPC 8-9): B29B11/06 B29B11/08 B29C45/26 B29C49/00

B65D1/02 (Advanced/Invention);

B29B11/00 B29C45/26 B29C49/00 B65D1/02 (Core/Invention)

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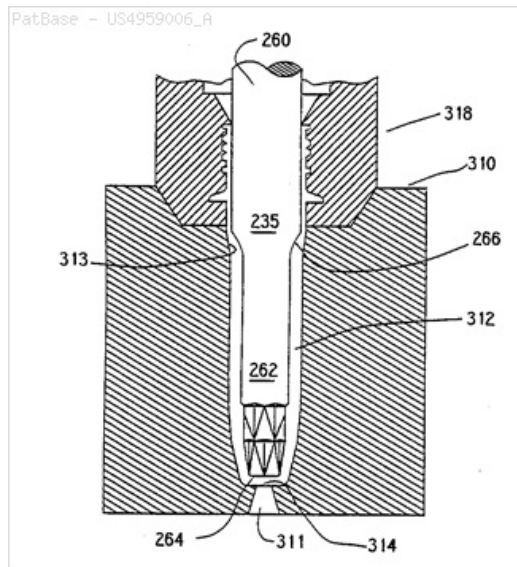
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B29B2911/14332 B29B2911/14336 B29B2911/14337 B29B2911/14345

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B29B2911/1404 B29B2911/14326 B29B2911/14333 B29B2911/14393
B29B2911/1442 B29B2911/1444 B29B2911/14466 B29B2911/14486
B29B2911/14693 B29B2911/147 B29B2911/1498 B29C49/0078
B29K2105/253
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US: 215/1C 215/371 215/373 220/608 220/70 249/122 249/175 264/318
264/513 264/541 264/DIG.33 425/533 428/36.92



Family:

Publication number	Publication date	Application number	Application date
■ AU199059481 A1	19910117	AU19900059481	19900530
■ CN1048350 A	19910109	CN19901003315	19900627
■ DD300086 A5	19920521	DD19900342166	19900627
■ DD342166 AB	19920507	DD19900342166	19900627
■ DD342166 B1	19920507	DD19900342166	19900627
■ US4959006 A	19900925	US19890441065	19891122
■ US4981736 A	19910101	US19890420143	19891011
■ WO9100220 A1	19910110	WO1990US03079	19900530

Priority:

US19890373046 19890628 US19890420143 19891011 US19890441065 19891122
WO1990US03079 19900530 DD19900342166 19900627

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Inventor(s): FREDERICK J FEDDERSEN ; FREDERICK J FEDDERSEN JIZU J CHENG ; JIZU J CHENG

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

5) Family number: 8334664 (US5217737A)

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Title: PLASTIC CONTAINERS CAPABLE OF SURVIVING STERILIZATION

Abstract: Retortable high panel strength plastic containers have a recessed circular center portion in the bottom wall of the container which facilitates the volumetric changes in the container during a sterilization process. Examples of containers having this feature are disclosed as well as the cross-sectional profile of the recessed circular center portions of the bottom walls of the containers.

Classifications:

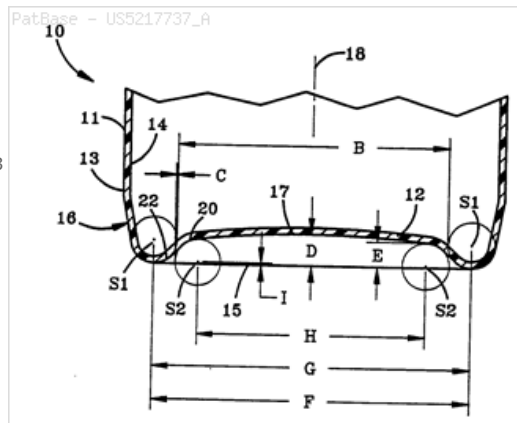
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B65D1/02 (Core/Invention)

International (IPC 1-7): B65D1/02 B65D1/09 B65D1/10 B65D1/14
B65D1/16 B65D23/00 B65D23/00 B65D6/04 B65D81/00

CPC: B65D1/0215 B65D1/0276 B65D2501/0036

European: B65D1/02B1 B65D1/02D2 B65D1/02D2C L65D501/02Y1C

US: 215/1C 215/373 215/381 215/383 220/609 426/106 426/111 426/113
426/127 426/131 426/407



Family:

Publication number	Publication date	Application number	Application date
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CA2100088 C	19980616	CA19922100088	19920514
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DE69216608 T2	19970710	DE19926016608T	19920514
EP0584219 A1	19940302	EP19920911962	19920514
EP0584219 A4	19951018	EP19920911962	19920514
EP0584219 B1	19970108	EP19920911962	19920514
ES2099261 T3	19970516	ES19920911962T	19920514
IE78299 B	19980211	IE19920001587	19920701
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JP6500979 T2	19940127	JP19920500210	19920514
MX9202341 A1	19930901	MX19920002341	19920519
US5217737 A	19930608	US19910702558	19910520
WO9220587 A1	19921126	WO1992US04082	19920514

Priority:
US19910702558 19910320 US19910702558 19910520 WO1992US04082 19920514

Probable Assignee: ABBOTT LABORATORIES

Assignee(s): (std): ABBOTT LAB

Assignee(s): ABBOTT LABORATORIES ; ABBOTT LABORATORIES ABBOTT PARK ILL US ; GYGAX RALPH ALLEN ; LOUGHRIN THOMAS DANIEL ; OSIP THOMAS WALTER ; LIPPIAN JOSEPH MICHAEL ; MALONE WILLIAM THOMAS ; PEZZOLI PAUL ANTHONY

Inventor(s): (std): GYGAX RALHP ALLEN ; GYGAX RALPH ; GYGAX RALPH A ; GYGAX RALPH ALLEN ; LIPPIAN JOSEPH ; LIPPIAN JOSEPH M ; LIPPIAN JOSEPH MICHAEL ; LOUGHRIN THOMAS ; LOUGHRIN THOMAS D ; LOUGHRIN THOMAS DANIEL ; MALONE WILLIAM ; MALONE WILLIAM T ; MALONE WILLIAM THOMAS ; PEZZOLI PAUL ; PEZZOLI PAUL A ; PEZZOLI PAUL ANTHONY ; OSIP THOMAS ; OSIP THOMAS W ; OSIP THOMAS WALTER

Inventor(s): OSIP THOMAS WALTER WORTHINGTON OH 43085 US ; ABBOTT LABORATORIES ; PEZZOLI PAUL ANTHONY TOPEKA KS 66610 US ; RALHP ALLEN GYGAX ; WILLIAM THOMAS MALONE ; THOMAS WALTER OSIP ; THOMAS DANIEL LOUGHRIN ; ROORIN TOOMASU DANIERU ; RITSUPIAN JOSEFU MAIKERU ; RALPH ALLEN GYGAX ; PETSUZOORI HOORU ANSONII ; PAUL ANTHONY PEZZOLI ; OSHITSUPU TOOMASU UORUTAA ; MAROON UIRIAMU TOOMASU ; JOSEPH MICHAEL LIPPIAN ; GIGATSUKUSU RARUFU AREN ; MALONE WILLIAM THOMAS COLUMBUS OH 43235 US ; LOUGHRIN THOMAS DANIEL COLUMBUS OH 43235 US ; LIPPIAN JOSEPH MICHAEL WORTHINGTON OH 43085 US ; GYGAX RALPH ALLEN WESTERVILLE OH 43081 US

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; OGILVY RENAULT

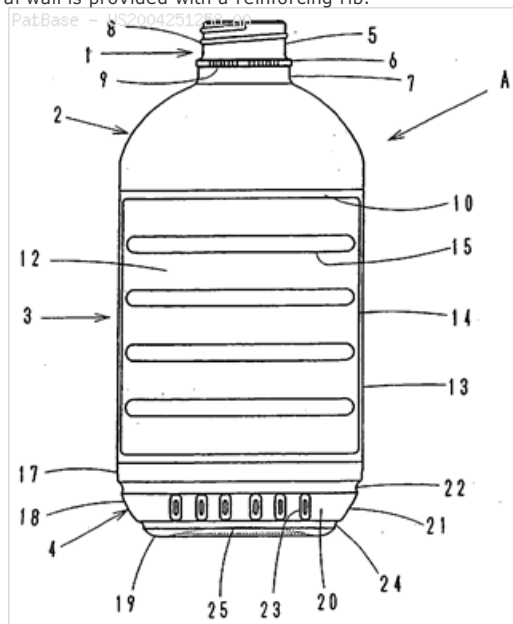
Designated states: AT AU BE CA CH DE DK ES FR GB GR IT JP LI LU MC NL SE

6) Family number: 20644248 (US2004251258A)
PatBase

Title: SYNTHETIC RESIN CONTAINER WITH THIN WALL

Abstract: A container has a body which comprises front end rear walls, and the side walls. Each of the front and rear walls has an elliptic cross section, and is provided with a lateral recess. Each of the side walls is a vertical plan which intersects the elliptic cross section of the front and rear walls, and is provided with a plurality of reinforcements. The container has a bottom which comprises a peripheral wall connected to the body and a bottom wall. The peripheral wall comprises slightly inclined front and rear walls, and side walls inclined by a predetermined angle. The peripheral wall is provided with a reinforcing rib.

Classifications:
International (IPC 8-9): B65D1/02 B65D1/42 B65D1/46 B65D90/02 (Advanced/Invention); B65D1/02 B65D1/40 (Core/Invention)
International (IPC 1-7): B65D1/02 B65D1/42 B65D1/46 B65D25/22 B65D90/02
CPC: B65D1/0223 B65D1/0276 B65D2501/0027 B65D2501/0036 B65D2501/0081
European: B65D1/02D B65D1/02D2 B65D1/02D2C L65D501/02Y1A L65D501/02Y1C L65D501/02Y9
US: 215/373 215/379 215/382 215/42 220/475



Family:

Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: YOSHINO KOGYOSHO CO LTD

Assignee(s): (std): AKIYAMA YOSHIO ; KOSHIO SHUICHI ; TANABE SHOJI ; TOKUDA HIROAKI ; YONEYAMA MASASHI ; TOMIYAMA SHIGERU ; YONEYAMA SHIGERU ; YOSHINO KOGYO CO LTD ; YOSHINO KOGYOSHO CO LTD ; YOSHIO KOGYO CO LTD

Assignee(s): YOSHINO KOGYOSHO CO ; YOSHIO KOGYO CO ; YOSHINO KOGYO CO

Inventor(s): (std): AKIYAMA YOSHIO ; KOSHIO SHUICHI ; HIROAKI TOKUDA ; SHUICHI KOSHIO ; MASASHI YONEYAMA ; SEISHI KOMEYAMA ; SEISHI AKIYAMA ZENO KOSHIO SHU ; SHOJI TANABE ; SHIGERU TOMIYAMA ; SHIGERU YONEYAMA ; YONEYAMA MASASHI ; TOKUDA HIROAKI ; TANABE SHOJI ; TOMIYAMA SHIGERU ; YONEYAMA SHIGERU ; TANABE TAKATSUGU ; YOSHIO AKIYAMA ; ZENO AKIYAMA ; SHUICHI KOSHIO

Inventor(s): KOSHIO SHUICHI ; KOMEYAMA SEISHI ; AKIYAMA ZENO KOSHIO SHUICHI KOMEYAMA SEISHI ; AKIYAMA ZENO

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; MARKS AND CLERK; HOFFMANN EITLE PATENT U RECHTSANWALTE PARTMBB; CROUCH DAVID JOHN; OLIFF AND BERRIDGE PLC

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 KE KG KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

7) Family number: 30780075 (US2004155008A)

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Title: INVERTING VACUUM PANELS FOR A PLASTIC CONTAINER

Abstract: A sidewall portion of a plastic container adapted for vacuum pressure absorption. The sidewall portion including generally rectangular shaped vacuum panels equidistantly spaced about the container. The vacuum panels being defined in at least part by an upper portion, a central portion and a lower portion formed in a compound curve shape. The vacuum panels being moveable to accommodate vacuum forces generated within the container thereby decreasing the volume of the container.

Classifications:

International (IPC 8-9): A23L3/02 B65D1/02 B65D1/40 B65D1/46

B65D23/00 B65D79/00 (Advanced/Invention);

B65D1/02 B65D23/00 B65D79/00 (Core/Invention)

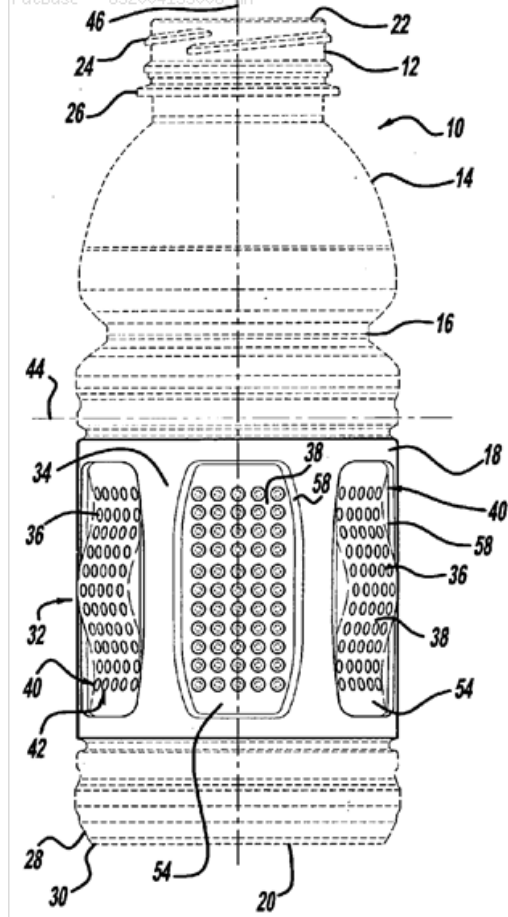
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B65D79/00 B65D90/02

CPC: B65D1/42 B65D79/005 B65D1/0223

European: B65D1/02D B65D1/42 B65D79/00B

US: 215/381 215/383 215/384 220/673 220/675

**Family:**

Publication number	Publication date	Application number	Application date
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■ AU2006255160 BB	20120112	AU20060255160	20060605
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■ BRPI0611114 A2	20100810	BR2006PI11114	20060605
■ BRPI0611114 B1	20180313	BR2006PI11114	20060605
■ DE602004045506 D1	20140904	DE200460045506T	20040210
■ DE602006019418 D1	20110217	DE200660019418T	20060605
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■ EP1597169 B1	20140723	EP20040709885	20040210
■ EP1888428 A1	20080220	EP20060772205	20060605
■ EP1888428 B1	20110105	EP20060772205	20060605
■ ES2359081 T3	20110518	ES20060772205T	20060605
■ ES2513042 T3	20141024	ES20040709885T	20040210
■ MX2007015481 A1	20080304	MX20070015481	20060605
■ MXPA05008433 A1	20060208	MX2005PA08433	20040210
■ NZ541880 A	20090131	NZ20040541880	20040210
■ NZ564013 A	20101126	NZ20060564013	20060605
■ NZ571809 A	20100129	NZ20040571809	20040210
■ US2004155008 AA	20040812	US20030361356	20030210
■ US2005247664 AA	20051110	US20050146163	20050606
■ US6920992 BB	20050726	US20030361356	20030210
■ US7377399 BB	20080527	US20050146163	20050606
■ WO04071897 A1	20040826	WO2004US03938	20040210
■ WO06133127 A1	20061214	WO2006US21804	20060605

Priority:

US20030361356 20030210 EP20040709885 20040210 WO2004US03938 20040210
 US20050146163 20050606 WO2006US21804 20060605

Probable Assignee: AMCOR GROUP GMBH

Assignee(s): (std): AMCOR LTD ; BROWN RANDALL S ; LANE MICHAEL T ; STEIH RICHARD J ; GAMBER DANIEL W ; JOSHI ROHIT V

Assignee(s): AMCOR LTD ABBOTSFORD ; AMCOR 679 VICTORIA STREET ABLTD ; AMCOR GROUP GMBH ; AMCOR LIMITED

Inventor(s): (std): LANE MICHAEL T ; JOSHI ROHIT V ; MICHAEL T LANE ; RANDALL S BROWN ; LANE MICHAEL ; BROWN RANDALL ; BROWN RANDALL S ; GAMBER DANIEL W ; DANIEL W GAMBER ; GAMBER DANIEL ; STEIH RICHARD J ; RICHARD J STEIH ; ROHIT V JOSHI ; STEIH RICHARD
Inventor(s): STEIH RICHARD J JACKSON ; BROWN RANDALL S KENNESAW ; JOSHI ROHIT ; GAMBER DANIEL W LAKELAND ; LANE MICHAEL T BROOKLYN
Agent(s): FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; FLEUCHAUS AND GALLO PARTNERSCHAFT MBB; HAMMOND ANDREW DAVID; VALEA AB; DE ELZABURU ALBERTO; HARNESS DICKEY AND PIERCE PLC
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

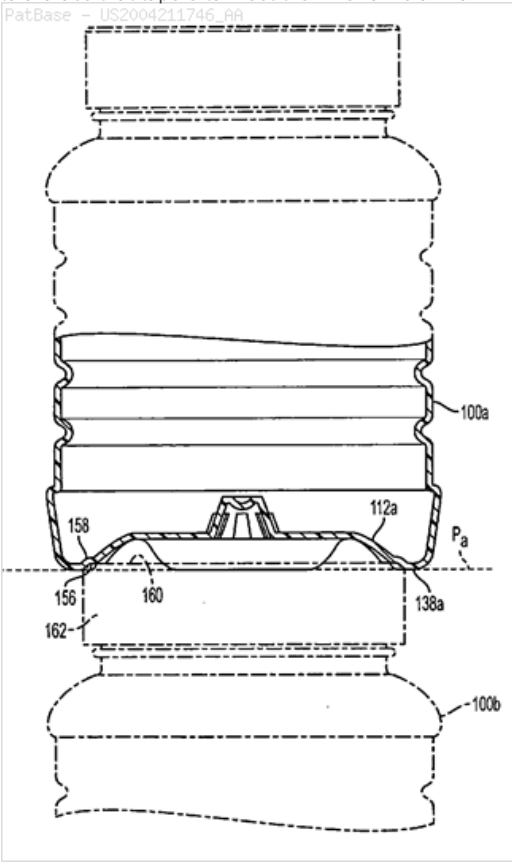
8) Family number: 46891878 (US2004211746A) © PatBase

Title: MULTI-FUNCTIONAL BASE FOR A PLASTIC, WIDE-MOUTH, BLOW-MOLDED CONTAINER

Abstract: A container can have a body with an integrally formed base attached to the body. The base includes a concave annular wall extending from the container sidewall to a standing surface, and an inner wall extending from the standing surface to a substantially flat inner annular wall. The inner annular wall is recessed in the base and is substantially perpendicular to the container sidewall. The inner annular wall includes a centrally located dimple. The dimple includes a plurality of spaced apart and radially extending indented ribs. One or more of the ribs extend radially into a brace that tapers to meet the inner annular wall.

Classifications:

International (IPC 8-9): B65D1/02 B65D21/02 B65D79/00
B65D90/12 (Advanced/Invention)
International (IPC 1-7): B65D21/00 B65D85/62 B65D90/12
CPC: B29D22/003 B65D1/0276 B65D1/0284 B65D21/0231 B65B61/24
B29C49/4252 B29C49/4273 B29C49/70 B29L2022/00 B29L2031/716
B65B7/28 B65B63/08 B65D79/005 B65B3/022
European: B65D1/02D2C B65D1/02D2E B65D21/02E12B B65D79/00B
US: 206/501 206/508 206/508S 206/511 206/511S 215/373 215/374
215/375 215/382 220/609



Family:

Publication number	Publication date	Application number	Application date
US2004211746 AA	20041028	US20040851083	20040524
US7543713 BB	20090609	US20040851083	20040524

Priority:

US20010284795P 20010419 US20020124734 20020417 US20030444616 20030523
US20040851083 20040524

Probable Assignee: GRAHAM PACKAGING CO LP

Assignee(s): (std): GRAHAM PACKAGING CO

Assignee(s): DEUTSCHE BANK CAYMAN ISLANDS BRANCH SECOND LIEN COLLATERAL AGENT AG AS ; GRAHAM PACKAGING CO LP ; REYNOLDS GROUP HOLDINGS INC ; BANK OF NEW YORK MELLON ; DEUTSCHE BANK AG ; DEUTSCHE BANK CAYMAN ISLANDS BRANCH AG ; DEUTSCHE BANK CAYMAN ISLANDS BRANCH SECOND LIEN CO ; GRAHAM PACKAGING COMPANY L P

Inventor(s): (std): OGG RICHARD K ; TOBIAS JOHN W ; TRUDE GREG

Agent(s): MILES AND STOCKBRIDGE PC; CARMICHAEL JAMES T; MILLER PATRICK L; PATRICK L; JAMES T

Title: CONTAINER BASE STRUCTURE RESPONSIVE TO VACUUM RELATED FORCES

Abstract: A plastic container having a base portion adapted for vacuum pressure absorption. The base portion including a contact ring upon which the container is supported, an upstanding wall and a central portion. The upstanding wall being adjacent to and generally circumscribing the contact ring. The central portion being defined in at least part by a central pushup and an inversion ring which generally circumscribes the central pushup. The central pushup and the inversion ring being moveable to accommodate vacuum forces generated within the container.

Classifications:

International (IPC 8-9): B29C49/08 B65B1/00 B65D1/00 B65D1/02 B65D1/14 B65D1/40 B65D1/42 B65D1/46 B65D23/00 B65D79/00 B65D90/02 B65D90/12 B65D90/32 B67C3/00

F17C5/00 (Advanced/Invention);

A61J1/06 B65D1/00 B65D1/02 B65D1/14 B65D79/00 (Advanced/Non-invention);

B65D1/00 B65D1/02 B65D1/40 B65D23/00 B65D79/00 B65D90/02

B65D90/12 (Core/Invention);

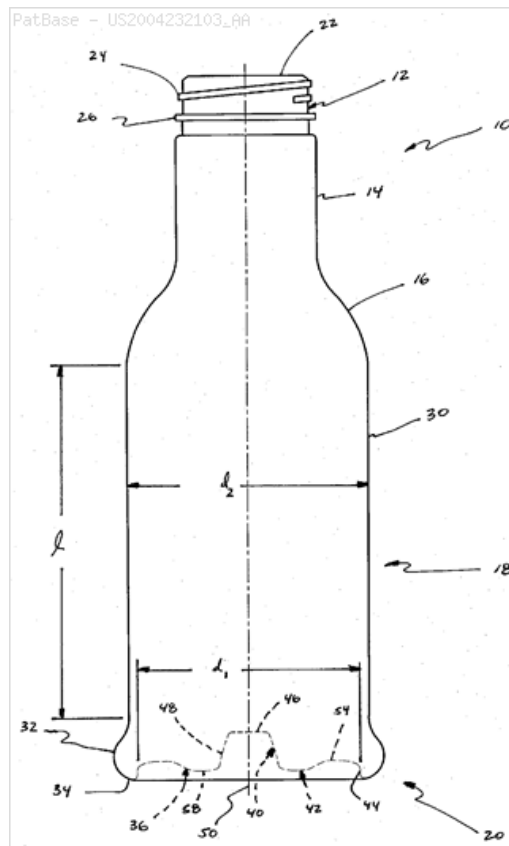
B65D (Subclass/Invention)

International (IPC 1-7): B65D1/00 B65D1/02 B65D1/40 B65D79/00 B65D90/12

CPC: B65D1/40 Y10T428/1352 B65D1/0261 B65D79/005 B65D1/0276 B65D2501/0036

European: B65D1/02D2 B65D1/02D2C B65D79/00B L65D501/02Y1C

US: 1/1 215/371 215/373 215/373P 215/374 215/381 220/605 220/606 220/609 220/672 220/675 428/35.7 428/35.700P



Family:

Publication number	Publication date	Application number	Application date
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US8833579 BB	20140916	US20120611161	20120912
US9394072 BB	20160719	US20130072377	20131105
US9751679 BB	20170905	US20160198668	20160630
WO04106175 A1	20041209	WO2004US13341	20040430
WO06118584 A1	20061109	WO2005US20853	20050613
WO10056517 A1	20100520	WO2009US62301	20091028
WO11014759 A2	20110203	WO2010US43885	20100730
WO11014759 A3	20110603	WO2010US43885	20100730
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Priority:

US20030445104	20030523	EP20040750969	20040430	JP20060532513	20040430
JP20100268769	20040430	WO2004US13341	20040430	US20050116764	20050428
EP20050758519	20050613	JP20080508816	20050613	WO2005US20853	20050613
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Probable Assignee: AMCOR GROUP GMBH

Assignee(s): (std): AMCOR GROUP GMBH ; AMCOR LTD ; AMCOR LIMITED ; LISCH DAVID G ; AMKOR LTD ; DOWNING DAVID ; BEUERLE FREDERICK C ; HOWE CHRISTOPHER ; LANE MICHAEL T ; LISCH G DAVID ; SILVERS KERRY W ; VAILLIENCOURT DWAYNE G ; LISCH G D ; PIESZCHALA BRIAN L ; STEIH RICHARD J ; PATCHEAK TERRY D ; VAILLIENCOURT DWAYNE G ; MAST LUKE A ; STRASSER WALTER J ; STELZER JAMES

Assignee(s): AMKOR LIMITED ; AMCOR LTD HAWTHORN ; LISCH G ; AMCOR 679 VICTORIA STREET ABLTD

Inventor(s): (std): BEUERIE FREDERICK C ; BEUERLE FREDERICK C ; DAVID G LISCH ; BRIAN L PIESZCHALA ; DAVID DOWNING ; CHRISTOPHER HOWE ; G DAVID LISCH ; DWAYNE G VAILLIENCOURT ; DOWNING DAVID ; LISCH G DAVID ; LISCH G D ; LISCH DAVID G ; LISCH G D SILVERS KERRY W VAIL ; KERRY W SILVERS ; LISCH G ; PATCHEAK TERRY D ; LISH G DEVID ; MAST LUKE A ; HOWE CHRISTOPHER ; LUKE A MAST ; SILVERS KERRY W ; VAILLIENCOURT DWAYNE G ; PIESZCHALA BRIAN L ; STEIH RICHARD J ; RICHARD J STEIH ; SILVERS KERRY ; VAILLIENCOURT DWAYNE ; SIL VERS KERRI U ; STEJ RICHARD DZH ; VEJLINKORT DUEHJN G ; PIZCHALA BRAJAN L ; VAILLIENCOURT DWAYNE G ; PIESZCHALA BRIAN ; STEIH RICHARD ; STRASSER WALTER J ; TERRY D PATCHEAK ; WALTER J STRASSER ; DAVID LISCH G ; FREDERICK C BEUERLE ; LANE MICHAEL T ; STRASSE WALTER J ; STELZER JAMES

Inventor(s): WALTER J STRASSE ; STEIH RICHARD J JACKSON ; LUKEA MAST ; FREDERICK C BEUERIE ; DOWNING DAVID MANCHESTER ; SIL'VERS KERRI U. ; VEJLLIENKOT DVEJN G. ; LISH G. DEJVID ; GDAVID LISCH ; DWAYNE G VAILLIENCOURT

Agent(s): GRIFFITH HACK; WRAYS; MACRAE AND CO; SILVANA MARIA LOPEZ DIAZ; WITTE WELLER AND PARTNER PATENTANWAELE MBB; GAHLERT STEFAN ET AL; GAHLERT STEFAN; WITTE WELLER AND PARTNER; ISERN JORGE; UNGRIA JAVIER; HARAKENZO WORLD PATENT AND TRADEMARK; HARNESS DICKEY AND PIERCE PLC; ERJAVAC STANLEY M ET AL; SNYDER JEFFREY L ET AL; SEITZ BRENT G ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW 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 YU ZA ZM ZW

10) Family number: 32811579 (US10005583B)

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Title: PRESSURE CONTAINER WITH DIFFERENTIAL VACUUM PANELS

Abstract: A plastic container (1) has a first set of flex panels (2) and a second set of flex panels (3) one set being adapted to react to pressure changes within the container to a different degree than the other set. This can be achieved by different curvature and/or size and/or different distance from a central longitudinal axis of the container. At least one of the panels has at least two different extents of curvature. In some embodiments one or more of the panels may be flat.

Classifications:

International (IPC 8-9): B65D1/02 B65D1/32 B65D1/40 B65D23/00

B65D23/10 B65D6/00 B65D79/00 B65D8/04 B65D8/18

B65D90/02 (Advanced/Invention);

A47J27/02 B65D1/00 B65D1/02 B65D1/40 B65D79/00

B65D90/02 (Core/Invention);

B65D (Subclass/Invention)

International (IPC 1-7): B65D1/02 B65D1/42 B65D79/00

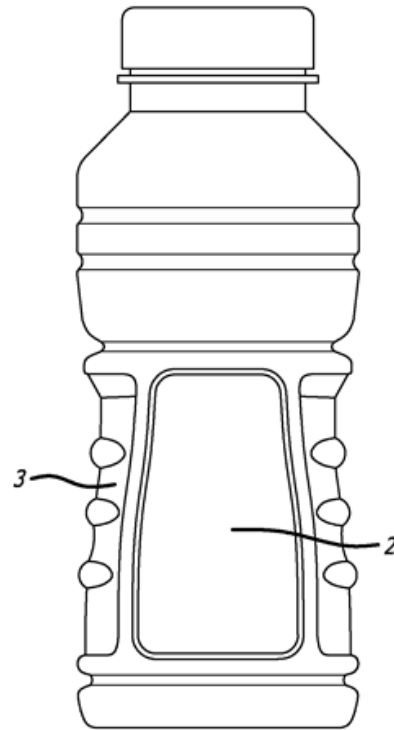
CPC: B65D1/0223 B65D2501/0027 B65D2501/0081 B65D79/005

B65D2501/0036

European: B65D1/02D B65D79/00B L65D501/02Y1A L65D501/02Y1C

L65D501/02Y9

US: 1/1 215/381 215/382 215/383 215/384 220/669 220/675

**Family:**

Publication number	Publication date	Application number	Application date
AR051580 AA	20070124	AR2005P104160	20050930
AU2005291953 AA	20060413	AU20050291953	20050930
AU2005291953 BB	20120119	AU20050291953	20050930
BRPI0515919 A	20080812	BR2005PI15919	20050930
CA2582696 AA	20070330	CA20052582696	20050930
CA2582696 C	20170718	CA20052582696	20050930
CL2005002568 A1	20060714	CL20050002568	20050930
CN101068727 A	20071107	CN200580041138	20050930
CN101068727 B	20110427	CN200580041138	20050930
GT200500274 A	20090522	GT20050000274	20050930
HK1110567 A1	20110708	HK20080105002	20080506
HK1110567 A3	20080718	HK20080105002	20080506
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IN280096 B	20170217	IN2007KN01151	20070403
JP2008514521 T2	20080508	JP20070534810T	20050930
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NZ535722 A	20070831	NZ20040535722	20040930
PE05792006 A1	20060913	PE20050001158	20050930
TH60022 B	20180112	TH20051004615	20050930
TH81208 A	20061116	TH20051004615	20050930
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TWI417223 B	20131201	TW20050134319	20050930
TWI447045 B	20140801	TW20130102347	20050930
US10005583 BB	20180626	US20130106703	20131213
US2008257856 AA	20081023	US20050664265	20050930
US2012160857 AA	20120628	US20120357232	20120124
US2012273453 AA	20121101	US20110270886	20111011
US2014346135 AA	20141127	US20130106703	20131213
US8186528 BB	20120529	US20050664265	20050930
US9162807 BB	20151020	US20120357232	20120124
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WO06039523 A1	20060413	WO2005US35241	20050930

Priority:

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WO2005US35241	20050930	US20050664265	20050930	NZ20070554532	20070413
WO2008NZ00079	20080411	US20080664265	20080616	US20090595830	20091013

Probable Assignee: MELROSE DAVID

Assignee(s): (std): BYSICK SCOTT ; DAVID MELROSE ; GRAHAM PACKAGING CO ; DAVID MURRAY MELROSE ; GRAHAM PACKAGING CO LP ; MELROSE DAVID MURRAY ; KELLEY PAUL ; HOWELL JUSTIN A ; MURRAY MELROSE DAVID ; MELROSE DAVID ; HOWELL JUSTIN ; GRAHAM PACKAGING LP

Assignee(s): BANK OF NEW YORK MELLON ; GRAHAM PACKAGING COMPANY L P ; GRAHAM PACKAGING COMPANY LP ; REYNOLDS GROUP HOLDINGS INC ; GRANHAM PACKAGING CO LT ; DAVID MELROSE DESIGN LTD ; GRAHAM PACKAGING CO L P ; CO2PAC LTD

Inventor(s): (std): SCOTT BYSICK ; PAUL KELLEY ; MURRAY MELROSE DAVID ; MELROSE DAVID MURRAY ; MELROSE DAVID ; KELLEY PAUL ; JUSTIN HOWELL ; HOWELL JUSTIN A ; HOWELL JUSTIN ; DAVID MURRAY MELROSE KELLEY PA ; DAVID MURRAY MELROSE ; BYSICK SCOTT E ; BYSICK SCOTT

Inventor(s): DAVID MURRAY MELROSE KELLEY PAUL BYSICK SCOTT... ; DAVID MURRAY MELROSE KELLEY PAUL BYSICK SCOTT HOWELL JUSTIN A ; JUSTIN A HOWELL

Agent(s): BALDWIN'S INTELLECTUAL PROPERTY ; MCCARTHY TETRAULT LLP ; CLARKE ; OSAKI KATSUMASA ; TSUBOKURA MICHIAKI ; KANAYAMA MASATAKA ; KAWAGUCHI YOSHIO ; ONO MAKOTO ; KAWAGUTI AND PARTNERS ; HENRICKS SLAVIN AND HOLMES LLP ; VENABLE LLP ; KEITH G ; LEIGH D ; ANNETTE K

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 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

11) Family number: 42025898 (US2008173613A)

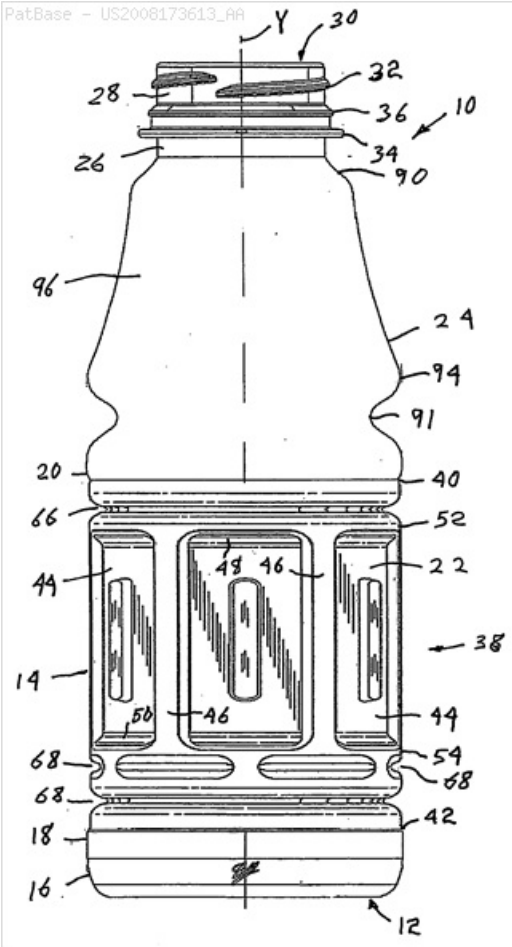
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Title: FLEX SURFACE FOR HOT-FILLABLE BOTTLE

Abstract: A blow-molded bottle has a flexible concave perimeter surface extending between an upper peripheral margin projecting outward from the bottle neck and an outwardly protruding ring located above the sidewall upper margin. The flexible concave perimeter surface is specially dimensioned to respond to the presence of a vacuum within the bottle by forming linear segments between the upper peripheral margin and the outwardly protruding ring. The average radius of the vertical mid-point of the concave perimeter surface is generally greater than $(3/\pi) (\sin \pi/3) (R_1 + R_2)$, and less than $(6/\pi) (\sin \pi/6) (R_1 + R_2)$, where R_1 is the outermost radius of the upper peripheral margin, and R_2 is the radius of the outwardly protruding ring. The vertical midpoint radius of the flexible concave perimeter surface measured from the vertical axis can be made to vary by between one and five percent at between three and five positions around the perimeter.

Classifications:

International (IPC 8-9): B65D1/02 B65D1/40 B65D1/46 B65D23/00 B65D79/00 (Advanced/Invention); B65D1/02 B65D1/40 B65D23/00 B65D79/00 (Core/Invention) **CPC:** B65D1/0223 B65D79/005 **European:** B65D1/02D B65D79/00B **US:** 215/379 215/381 215/382 220/669 220/675



Family:

Publication number	Publication date	Application number	Application date
CA2596791 AA	20080718	CA20072596791	20070810
CA2596791 C	20130528	CA20072596791	20070810

DE602007008195 D1	20100916	DE200760008195T	20070830
EP1947016 A2	20080723	EP20070075740	20070830
EP1947016 A3	20090325	EP20070075740	20070830
EP1947016 B1	20100804	EP20070075740	20070830
EP1947016 B9	20110525	EP20070075740	20070830
ES2349567 T3	20110105	ES20070075740T	20070830
MX2008000806 A1	20090223	MX20080000806	20080117
US2008173613 AA	20080724	US20070654855	20070118
US7757874 BB	20100720	US20070654855	20070118

Priority:

US20070654855 20070118 CA20072596791 20070810

Probable Assignee: BALL CORP

Assignee(s): (std): BALL CORP

Assignee(s): ROSS JOHN R ; AMCOR RIGID PLASTICS USA INC

Inventor(s): (std): ROSS JOHN R

Inventor(s): JOHN R ROSS

Agent(s): BERESKIN AND PARR LLP SENCRL SRL; PFENNING MEINIG AND PARTNER GBR; INDIANAPOLIS OFFICE 27879 BRINKS HOFER GILSON AND LIONE; BRINKS HOFER GILSON AND LIONE

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL PL PT RO RS SE SI SK TR

12) Family number: 42918996 (US2010219152A)

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Title: CONTAINER INCLUDING A BASE PROVIDED WITH A DEFORMABLE MEMBRANE

Abstract: Plastic container (1), characterized in that it comprises: a rigidified body (5), a bottom (8) extending to a lower end of the container (1) and comprising: an annular base (9) extending substantially perpendicular to the body (5) in the prolongation thereof; an annular step (10) extending from the base (9) towards the interior of the container (1), a recess (12) at the center of the bottom (8) projecting towards the interior of the container (1), a deformable annular membrane (11) in the shape of a spherical cap extending substantially perpendicular to the body (5) between the step (10) and the recess (12).

Classifications:

International (IPC 8-9): B29C49/00 B29C49/08 B65D1/02 B65D1/40

B65D23/00 B65D79/00 (Advanced/Invention);

B29C49/00 (Advanced/Non-invention);

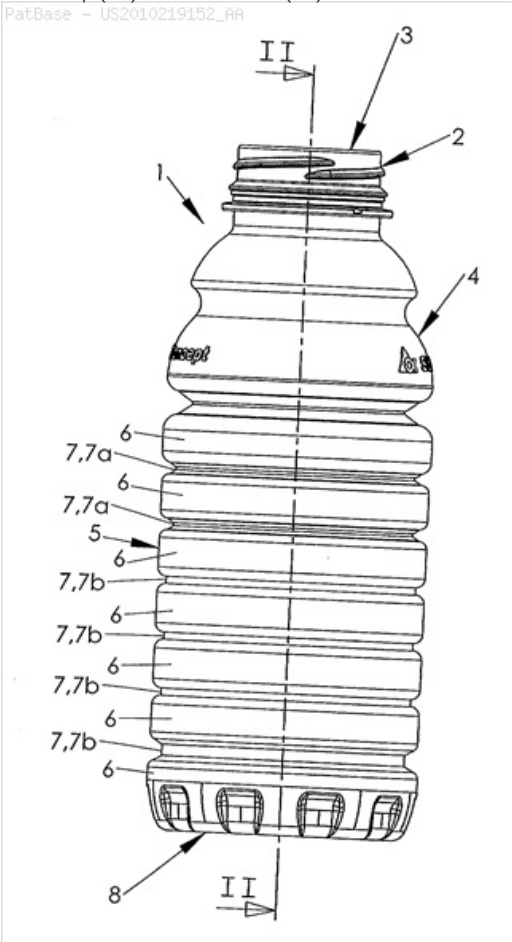
B65D1/02 B65D1/40 B65D23/00 B65D79/00 (Core/Invention);

B29C49/00 (Core/Non-invention)

CPC: B65D1/0276 B65D79/005 B65D2501/0036

European: B65D1/02D2C B65D79/00B L65D501/02Y1C

US: 215/373 215/374



Family:

Publication number	Publication date	Application number	Application date
AT525308 E	20111015	AT20080840006T	20080729
CN101801809 A	20100811	CN200880106422	20080729
CN101801809 B	20130501	CN200880106422	20080729

DE602008010048 D1	20111201	DE200860010048T	20080729
EP2173637 A1	20100414	EP20080840006	20080729
EP2173637 B1	20110921	EP20080840006	20080729
ES2372722 T3	20120125	ES20080840006T	20080729
FR2919579 A1	20090206	FR20070005554	20070730
FR2919579 B1	20110617	FR20070005554	20070730
JP2010535137 T2	20101118	JP20100518709T	20080729
MX2010001169 A1	20100520	MX20100001169	20080729
US2010219152 AA	20100902	US20080671349	20080729
US8950611 BB	20150210	US20080671349	20080729
WO09050346 A1	20090423	WO2008FR01131	20080729

Priority:

FR20070005554 20070730 EP20080840006 20080729 WO2008FR01131 20080729

Probable Assignee: SIDEL PARTICIPATIONS

Assignee(s): (std): ANDRIEUX DAVID ; BOUKOBZA MICHEL ; BUREL DIDIER ; DERRIEN MIKAEL ; SIDEL PARTICIPATIONS

Assignee(s): SIDEL PARTICIPATIONS SOC PAR ACTIONS SIMPLIFIEE ; SIDEL PARTICIPATIONS SOCIETE PAR ACTIONS SIMPLIFIEE

Inventor(s): (std): ANDRIEUX DAVID ; BOUKOBZA MICHEL ; BUREL DIDIER ; DAVID ANDRIEUX ; DERRIEN MICKAEL ; DERRIEN MIKAEL ; DERRIEN MIKAEL ; DIDIER BUREL ; MICHEL BOUKOBZA ; MIKAEL DERRIEN

Inventor(s): MIKAEL DERRIEN

Agent(s): DEMULSANT XAVIER; DEJADE AND BISET; SUGHRUE MION PLLC

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

13) Family number: 46891888 (US2009091067A)

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Title: MULTI-FUNCTIONAL BASE FOR A PLASTIC, WIDE-MOUTH, BLOW-MOLDED CONTAINER

Abstract: A container can have a body with an integrally formed base attached to the body. The base includes a concave annular wall extending from the container sidewall to a standing surface, and an inner wall extending from the standing surface to a substantially flat inner annular wall. The inner annular wall is recessed in the base and is substantially perpendicular to the container sidewall. The inner annular wall includes a centrally located dimple. The dimple includes a plurality of spaced apart and radially extending indented ribs. One or more of the ribs extend radially into a brace that tapers to meet the inner annular wall.

Classifications:

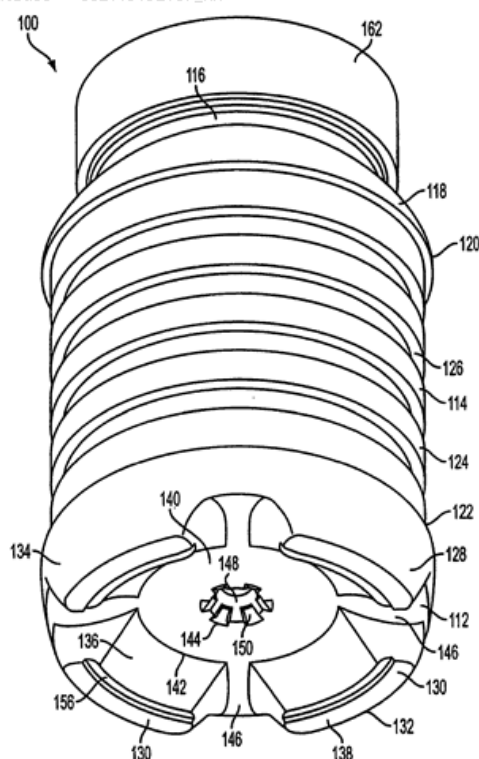
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CPC: B29D22/003 B65D1/0276 B65D1/0284 B65D21/0231 B65B61/24 B65D79/005 B29C49/4252 B29C49/4273 B29C49/70 B29L2022/00 B29L2031/716 B65B3/022 B65B7/28 B65B63/08

European: B65D1/02D2C B65D1/02D2E B65D21/02E12B B65D79/00B

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PatBase - US2009091067_AA

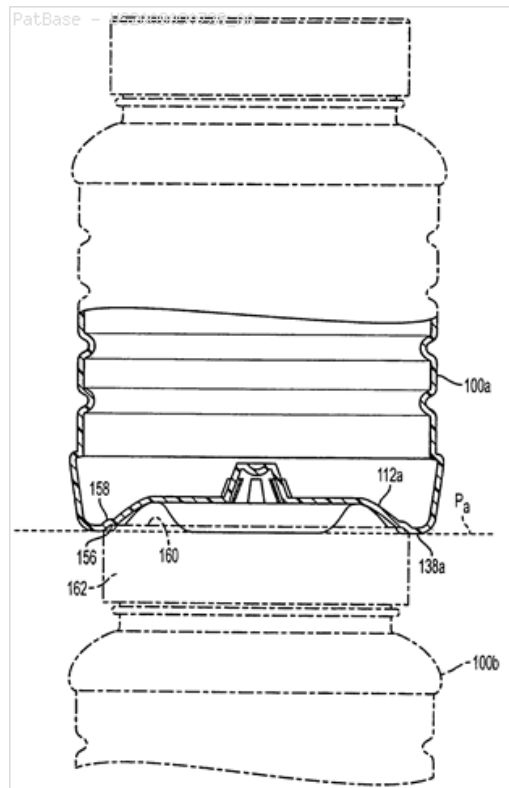


Family:

Publication number	Publication date	Application number	Application date
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US8381496 BB	20130226	US20080250856	20081014

Priority:

US20030444616 20030523



Family:

Publication number	Publication date	Application number	Application date
US2009090728 AA	20090409	US20080244041	20081002
US8839972 BB	20140923	US20080244041	20081002

Priority:

US20010284795P	20010419	US20020124734	20020417	US20030444616	20030523
US20040851083	20040524	WO2004US16405	20040524	WO2004US16405	20080524
US20080244041	20081002				

Probable Assignee: GRAHAM PACKAGING CO LP

Assignee(s): (std): OGG RICHARD K ; TRUDE GREG ; TOBIAS JOHN W ; GRAHAM PACKAGING CO

Assignee(s): GRAHAM PACKAGING CO LP ; BANK OF NEW YORK MELLON ; REYNOLDS GROUP HOLDINGS INC

Inventor(s): (std): OGG RICHARD K ; TOBIAS JOHN W ; TRUDE GREG

Agent(s): MILES AND STOCKBRIDGE PC ; BAKER BOTTS LLP

16) Family number: 46891890 (US2009120530A)

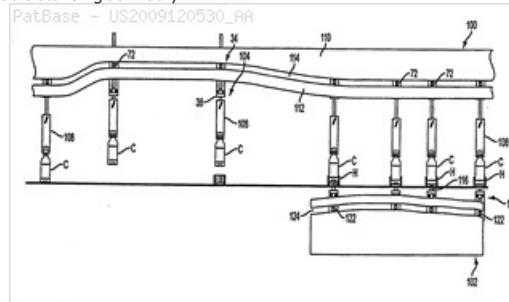
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Title: CONTAINER HANDLING SYSTEM

Abstract: A system for processing a simplified plastic container (C) that is to be filled with a hot product includes the step of blow-molding parison to form a container body, where the container body has a neck, a base, a side surface relatively free of structural geometry that surrounds an interior of the container body and, prior to being filled with the hot product, a projection (12) extending from the container body. After the container body is filled with a hot product in a production line, the neck of the filled container body is capped with a cap and then, the container body is cooled. During the cooling operation, the hot product is contracted so that the projection extending from the container can be pushed (P) into the container body like a traditional push-up so that the resultant, filled and cooled container body is relatively free of structural geometry.

Classifications:

International (IPC 8-9): B65B21/12 B65B61/02 B65B61/24 B65B63/08 B65B9/04 B65D1/02 B65D79/00 B67C3/04 B67C3/14 B67C3/24 B67C3/26 B67C7/00 (Advanced/Invention); B67C3/22 (Advanced/Non-invention); B65B (Subclass/Invention)
CPC: B65B21/12 B65B61/24 B65B63/08 B67C3/045 B67C3/14 B67C3/242 B67C7/00 B67C7/0026 B67C7/0053 B67C2003/226 B65D1/0246 B65B9/042 B65D1/0261 B65D1/40
European: B65B21/12 B65B61/24 B65B63/08 B67C3/04A B67C3/14 B67C3/24B B67C7/00 B67C7/00B6 B67C7/00B8B2
US: 1/1 141/1 141/1S 141/275 141/275S 141/61 141/61S 141/8 141/8P



Family:

Publication number	Publication date	Application number	Application date
US2009120530 AA	20090514	US20090354327	20090115

Priority:

US20030491179P 20030730	US20040551771P 20040311	US20040566294 20040730
WO2004US24581 20040730	US20060566294 20060905	US20090354327 20090115

Probable Assignee: GRAHAM PACKAGING CO

Assignee(s): (std): SHEETS PHILIP ; RYL KUCHAR CHARLES A ; LYON TED ; KELLEY PAUL ; GOSS KENT ; GRAHAM PACKAGING CO

Assignee(s): GRAHAM PACKAGING CO LP ; BANK OF NEW YORK MELLON

Inventor(s): (std): GOSS KENT ; KELLEY PAUL ; LYON TED ; RYL KUCHAR CHARLES A ; SHEETS PHILIP

Agent(s): MILES AND STOCKBRIDGE PC ; BAKER BOTTS LLP

17) Family number: 46891892 (US2009178996A)

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Title: MULTI-FUNCTIONAL BASE FOR A PLASTIC, WIDE-MOUTH, BLOW-MOLDED CONTAINER

Abstract: A container can have a body with an integrally formed base attached to the body. The base includes a concave annular wall extending from the container sidewall to a standing surface, and an inner wall extending from the standing surface to a substantially flat inner annular wall. The inner annular wall is recessed in the base and is substantially perpendicular to the container sidewall. The inner annular wall includes a centrally located dimple. The dimple includes a plurality of spaced apart and radially extending indented ribs. One or more of the ribs extend radially into a brace that tapers to meet the inner annular wall.

Classifications:

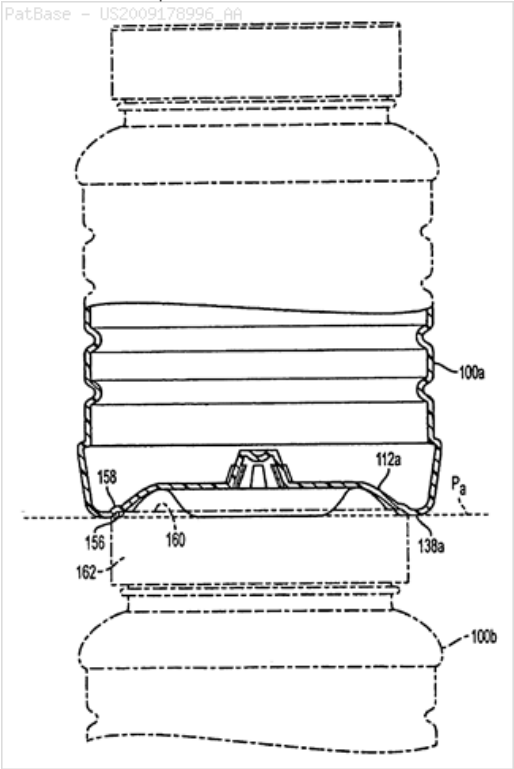
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B65D90/12 (Advanced/Invention)

CPC: B29D22/003 B65D1/0276 B65D1/0284 B65D21/0231 B65B61/24
B65D79/005 B29C49/4252 B29C49/4273 B29C49/70 B29L2022/00
B29L2031/716 B65B3/022 B65B7/28 B65B63/08

European: B65D1/02D2C B65D1/02D2E B65D21/02E12B B65D79/00B

US: 215/373 215/375 215/382



Family:

Publication number	Publication date	Application number	Application date
US2009178996 AA	20090716	US20090406491	20090318
US7980404 BB	20110719	US20090406491	20090318

Priority:

US20010284795P 20010419	US20020124734 20020417	US20030444616 20030523
US20040851083 20040524	US20090406491 20090318	

Probable Assignee: GRAHAM PACKAGING CO LP

Assignee(s): (std): GRAHAM PACKAGING CO

Assignee(s): GRAHAM PACKAGING CO LP ; GRAHAM PACKAGING COMPANY L P ; REYNOLDS GROUP HOLDINGS INC ; BANK OF NEW YORK MELLON

Inventor(s): (std): OGG RICHARD K ; TOBIAS JOHN W ; TRUDE GREG

Agent(s): MILES AND STOCKBRIDGE PC ; JAMES T ; PATRICK L

18) Family number: 43781145 (US2009242575A)

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Title: CONTAINER BASE HAVING VOLUME ABSORPTION PANEL

Abstract: A plastic container is provided having a container body and a closed base. The base includes a base body and a

plurality of deflection ribs configured to buckle as the base deforms in response to an increase in negative pressure internal to the container.

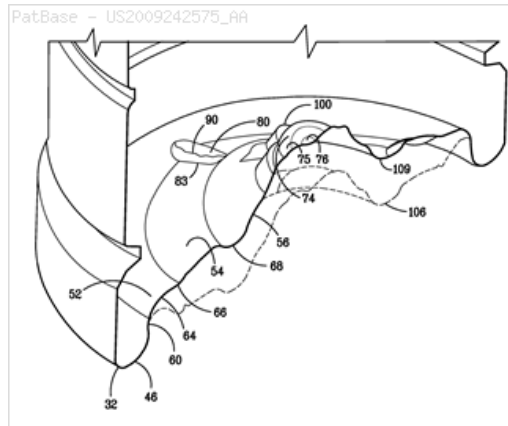
Classifications:

International (IPC 8-9): B65D1/02 B65D23/00 B65D25/00 B65D6/28
B65D90/32 (Advanced/Invention);
B65D6/00 (Core/Invention)

CPC: B65D1/0207 B65D1/0223 B65D1/0276 B65D79/005

European: B65D1/02D2C B65D79/00B

US: 215/383 220/608 220/609 220/624



Family:

Publication number	Publication date	Application number	Application date
AU2009228133 AA	20091001	AU20090228133	20090327
AU2009228133 BB	20130606	AU20090228133	20090327
AU2013206495 AA	20130711	AU20130206495	20130624
AU2013206495 BB	20160707	AU20130206495	20130624
BRPI0906313 A2	20160719	BR2009PI06313	20090327
CA2719488 AA	20100923	CA20092719488	20090327
CA2719488 C	20160712	CA20092719488	20090327
CN101980922 A	20110223	CN200980111121	20090327
CN101980922 B	20141022	CN200980111121	20090327
DE602009020069 D1	20140109	DE200960020069T	20090327
DK2279128 T3	20140224	DK20090724692T	20090327
EP2279128 A2	20110202	EP20090724692	20090327
EP2279128 A4	20120502	EP20090724692	20090327
EP2279128 B1	20131113	EP20090724692	20090327
ES2436724 T3	20140103	ES20090724692T	20090327
IN04019KN2010 A	20111125	IN2010KN04019	20101026
JP2011515295 T2	20110519	JP20110502106T	20090327
JP5764273 B2	20150819	JP20110502106T	20090327
MX2010010578 A1	20110502	MX20100010578	20090327
PT2279128 T	20131205	PT20090724692T	20090327
RU2010143915 A	20120510	RU20100143915	20090327
US2009242575 AA	20091001	US20090413043	20090327
US2014048508 AA	20140220	US20130062495	20131024
US8590729 BB	20131126	US20090413043	20090327
WO09120988 A2	20091001	WO2009US38607	20090327
WO09120988 A3	20091230	WO2009US38607	20090327

Priority:

US20080040067P	20080327	US20080040067	20080327	AU20090228133	20090327
US20090413043	20090327	EP20090724692	20090327	WO2009US38607	20090327
AU20130206495	20130624	US20130062495	20131024		

Probable Assignee: CONSTAR INC

Assignee(s): (std): BANGI MONIS ; CONSTAR INTERNAT INC ; CONSTAR INT INC ; CONSTAR INT LLC ; CONSTAR INTERNACIONAL INC ; MOONEY MICHAEL R ; CONSTAR INTERNATIONAL INC ; KAMINENI SATYA ; PLASTIPAK PACKAGING INC

Assignee(s): PLASTIPAK PACKAGIN INC ; PLASTIKPAK PACKAGING INC PLYMOUTH ; DT INC ; WELLS FARGO BANK NA ADMINISTRATIVE AGENT AS ; GENERAL ELECTRIC CAPITAL ADMINISTRATIVE AGENT AS C ; WELLS FARGO CAPITAL FINANCE LLC ; GENERAL ELECTRIC CAPITAL ADMINISTRATIVE AGENT AS CORP ; CONSTAR GROUP HOLDINGS INC ; CONSTAR GROUP INC ; CONSTAR INC ; CONSTAR INT HOLDINGS LLC ; BFF INC ; BLACK DIAMOND COMMERCIAL FINANCE LLC ; CITICORP USA INC ; CONSTAR FOREIGN HOLDINGS INC ; CONSTAR INT

Inventor(s): (std): MONIS BANGI ; MOONEY MICHAEL ; MOONEY MICHAEL R ; SATYA KAMINENI ; BANGI MONIS ; KAMINENI SATYA

Inventor(s): MICHAEL R MOONEY

Agent(s): PETER MAXWELL AND ASSOCIATES; GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; WALLINGER RICKER SCHLOTTER TOSTMANN PATENT U RECHTSANWAELTE PARTNERSCHAFT MBB; ACKROYD ROBERT; UNGRIA JAVIER; WOODCOCK WASHBURN LLP; GREER BURNS AND CRAIN LTD; FULLMER HAROLD H ET AL

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

Title: THIN WALLED HOT FILLED CONTAINER

Abstract: A hot-fill container may have a shoulder portion, body portion, bottom portion, and numerous strengthening grooves and a thin-walled, flexible, bag-like, collapsible portion in the body portion. The collapsible portion may be located between the strengthening ribs. The container structure may also employ one or more vacuum panels in the body portion that may lie between the collapsible portion and the bottom portion. The vacuum panels and the collapsible body portion may move toward a central vertical axis when the container is subjected to an internal vacuum pressure. Strengthening grooves may border the collapsible body portion, which may be circular in pre-vacuum cross-section but polygonal in post-vacuum cross-section. Part of the collapsible portion may be concave inward toward a central vertical axis of the container while part of the collapsible portion may move away from the central vertical axis. Vertical columns may support the collapsible portion.

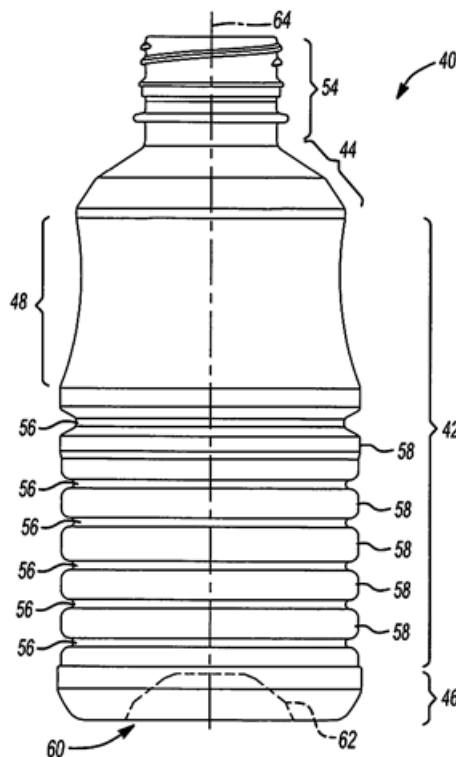
Classifications:**International (IPC 8-9):** B65D1/02 B65D1/40 B65D1/42 B65D1/44

B65D23/00 B65D90/02 (Advanced/Invention);

B65D1/02 B65D1/40 B65D23/00 (Core/Invention)

CPC: B65D1/0276 B65D79/005 B65D2501/0036**European:** B65D1/02D2C B65D79/00B L65D501/02Y1C**US:** 215/379 215/381 215/382 215/382S 220/666 220/675

PatBase - US2010006533_AA

**Family:**

Publication number	Publication date	Application number	Application date
BRPI0915454 A2	20151110	BR2009PI15454	20090709
CA2729586 AA	20100114	CA20092729586	20090709
CA2729586 C	20170307	CA20092729586	20090709
DE602009009597 D1	20121025	DE200960009597T	20090709
EP2310277 A2	20110420	EP20090795182	20090709
EP2310277 A4	20110629	EP20090795182	20090709
EP2310277 B1	20120905	EP20090795182	20090709
MX2011000101 A1	20110225	MX20110000101	20090709
US2010006533 AA	20100114	US20090499880	20090709
US8308006 BB	20121113	US20090499880	20090709
WO10006160 A2	20100114	WO2009US50092	20090709
WO10006160 A3	20100514	WO2009US50092	20090709

Priority:US20080079325 20080709
US20090499880 20090709US20080079325P 20080709
WO2009US50092 20090709

EP20090795182 20090709

Probable Assignee: AMCOR GROUP GMBH**Assignee(s):** (std): AMCOR LTD ; BEUERLE FREDERICK C ; MASLAK PATRICIA M ; MAST LUKE A ; NIEVIEROWSKI JOHN A ; STRASSER WALTER J**Assignee(s):** AMCOR GROUP GMBH ; AMCOR LIMITED**Inventor(s):** (std): BEUERLE FREDERICK C ; MASLAK PATRICIA M ; MAST LUKE A ; NIEVIEROWSKI JOHN A ; STRASSER WALTER J**Inventor(s):** WALTER J STRASSER ; STRASSER WALTER J CEMENT CITY ; NIEVIEROWSKI JOHN A ANN ARBOR ; MAST LUKE A BROOKLYN ; MASLAK PATRICIA M PLYMOUTH ; BEUERLE FREDERICK C JACKSON ; PATRICIA M MASLAK ; FREDERICK C BEUERLE ; JOHN A NIEVIEROWSKI ; LUKE A MAST**Agent(s):** MACRAE AND CO; MATKOWSKA FRANCK; HARNESS DICKEY AND PIERCE PLC; ERJAVAC STANLEY M ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG

20) Family number: 45170538 (US2010140278A)

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Title: PLASTIC CONTAINER HAVING A DEEP-INSET BASE

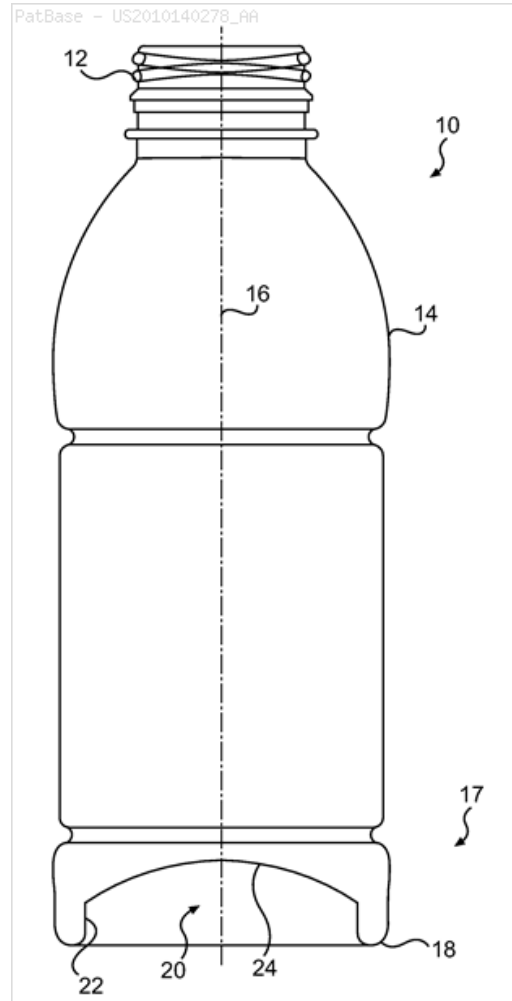
Abstract: A plastic container of the type that may be formed from a material such as PET using the stretch blow molding process includes a main body portion and a base portion that is characterized by a relatively tall and narrow profile above the standing ring and that has a deep inset recess defined therein. The deep inset recess is defined in part by an upstanding inner sidewall portion adjacent to the standing ring that has a height that may be greater than about 0.35 inch. The upstanding inner sidewall portion may have a substantially straight portion that is substantially parallel to a substantially straight portion of an outer sidewall of the base.

Classifications:**International (IPC 8-9):** B29C49/06 B29C49/08 B65D1/00 B65D1/02

B65D1/42 B65D25/00 (Advanced/Invention);

B29L22/00 (Advanced/Non-invention);

B65D1/02 B65D25/00 (Core/Invention)

CPC: B65D1/0276 B65D1/0284**European:** B65D1/02D2C B65D1/02D2E**US:** 215/373 220/608 220/628**Family:**

Publication number	Publication date	Application number	Application date
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AU2009324844 BB	20150611	AU20090324844	20091201
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CA2746263 AA	20100617	CA20092746263	20091201
CA2746263 C	20170718	CA20092746263	20091201
CA2971436 AA	20100617	CA20092971436	20091201
EP2356032 A1	20110817	EP20090761138	20091201
JP2012510937 T2	20120517	JP20110540775T	20091201
JP2016172592 A2	20160929	JP20160125427	20160624
MX2011006021 A1	20110628	MX20110006021	20091201
NZ593042 A	20121221	NZ20090593042	20091201
US2010140278 AA	20100610	US20080329912	20081208
US8047388 BB	20111101	US20080329912	20081208
WO10068522 A1	20100617	WO2009US66193	20091201

Priority:

US20080329912 20081208 CA20092746263 20091201 WO2009US66193 20091201
 JP20110540775T 20091201 JP20160125427 20160624 CA20172746263 20170629

Probable Assignee: GRAHAM PACKAGING CO LP

Assignee(s): (std): BYSICK SCOTT E ; GRAHAM PACKAGING CO ; LYNCH BRIAN A ; KELLEY PAUL V ; PHILIPPE ROMUALD ;
 NAHILL THOMAS E ; GRAHAM PACKAGINGCOMPANY L P

Assignee(s): BANK OF NEW YORK MELLON ; REYNOLDS GROUP HOLDINGS INC ; GRAHAM PACKAGING CO LP ; GRAHAM PACKAGING COMPANY L P

Inventor(s): (std): BRIAN A LYNCH ; BYSICK SCOTT E ; KELLEY PAUL V ; LYNCH BRIAN A ; NAHILL THOMAS E ; PAUL V KELLEY ; PHILIPPE ROMUALD ; ROMUALD PHILIPPE ; SCOTT E BYSICK

Inventor(s): THOMAS E NAHILL

Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; NORTON ROSE OR SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; RUSCHKE HANS EDVARD; INO SARI; KURASAWA ICHIRO; MATSUSHITA MITSURU; DESHIMARU TAKESHI; KUMAKURA YOSHIO; NISHIJIMA TAKAKI; KNOBLE YOSHIDA AND DUNLEAVY; KNOBLE YOSHIDA AND DUNLEAVY LLC; KNOBLE JOHN L

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

21) Family number: 45170904 (US2010140838A)

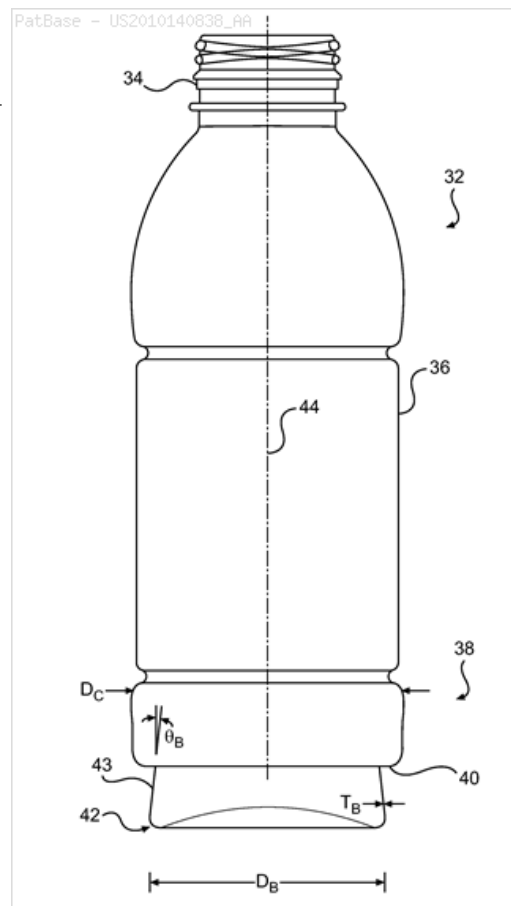
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Title: METHOD OF MAKING PLASTIC CONTAINER HAVING A DEEP-INSET BASE

Abstract: A method of plastic container having a deep inset base of the type that has a standing ring for supporting the container on a flat surface includes steps of molding a container blank having a standing ring and a base projection portion that is formed beneath the standing ring and relatively displacing the base projection portion upwardly with respect to the standing ring until the base projection portion is positioned above the standing ring. An improved plastic container having a deep inset base is also disclosed.

Classifications:

International (IPC 8-9): B29C39/02 B29C43/02 B29C49/06 B29C49/12 B29C49/18 B29C49/48 B29C49/54 B29C70/80 B65D1/00 B65D1/02 (Advanced/Invention); B29C49/06 B29C49/12 B29C49/54 B29K67/00 B65D90/12 (Advanced/Non-invention); B29C49/06 B29C49/08 B29C49/48 B29C70/00 (Core/Invention)
CPC: B29C49/06 B29C49/12 B29C49/4802 B29C49/541 B29C2049/4807 B29C2049/4889 B29K2067/00
European: B29C49/48A B29C49/54B L29C49/06 L29C49/12 L29C49/48A4 L29C49/48K7 L29K67/00
US: 264/268 264/268P 264/523 264/531 264/534



Family:

Publication number	Publication date	Application number	Application date
AU2009333640 AA	20100708	AU20090333640	20091201
AU2009333640 BB	20160204	AU20090333640	20091201
BRPI0922648 A2	20160105	BR2009PI22648	20091201
CA2746260 AA	20100708	CA20092746260	20091201
CA2746260 C	20161108	CA20092746260	20091201
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JP5714501 B2	20150507	JP20110540774T	20091201
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US2010140838 AA	20100610	US20080329899	20081208
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Priority:

US20080329899 20081208 WO2009US66191 20091201

Probable Assignee: GRAHAM PACKAGING CO LP

Assignee(s): (std): BYSICK SCOTT E ; GRAHAM PACKAGING CO ; LYNCH BRIAN A ; KELLEY PAUL V ; PHILIPPE ROMUALD ; NAHILL THOMAS E

Assignee(s): REYNOLDS GROUP HOLDINGS INC ; GRAHAM PACKAGING CO LP ; GRAHAM PACKAGING COMPANY L P ; BANK OF NEW YORK MELLON

Inventor(s): (std): BYSICK SCOTT E ; KELLEY PAUL V ; LYNCH BRIAN A ; NAHILL THOMAS E ; PHILIPPE ROMUALD

Inventor(s): THOMAS E NAHILL ; SCOTT E BYSICK ; ROMUALD PHILIPPE ; PAUL V KELLEY ; BRIAN A LYNCH

Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; NORTON ROSE OR SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; RUSCHKE HANS EDVARD; KNOBLE YOSHIDA AND DUNLEAVY; BAKER BOTTS LLP; KNOBLE JOHN L

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

22) Family number: 48166050 (US2011011825A)

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Title: CONTAINER HAVING COMPOUND FLEXIBLE PANELS

Abstract: A plastic container that is adapted for adjustment to internal volumetric changes such as those that occur as a result of internal pressure and temperature changes during the hot-fill process includes a container body defining an internal space. The container body has at least one flexible panel defined therein, which includes an outer flexible panel portion and an inner flexible panel portion. The outer flexible panel portion has a shape when a pressure equilibrium exists between the internal space and ambient external pressure, and is further constructed and arranged to assume a shape of increased concavity when a sufficient underpressure exists in the internal space. The inner flexible panel portion is constructed and arranged to flex relative to the outer flexible panel portion in order to accommodate internal pressure changes within the container body. The inner and outer flexible panel portions accordingly work in tandem to permit efficient vacuum uptake in a hot-fill type container. In addition, a boundary between the outer and inner flexible panel portions is preferably entirely curved.

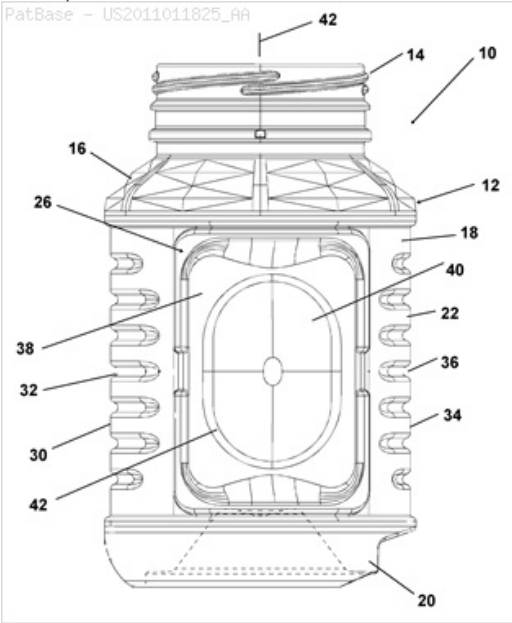
Classifications:

International (IPC 8-9): B65D1/02 B65D1/40 B65D23/00 B65D79/00 B65D90/02 (Advanced/Invention)

CPC: B65D1/0223 B65D79/005

European: B65D1/02D B65D79/00B

US: 1/1 215/381 215/383 215/383S 215/384 215/384S



Family:

Publication number	Publication date	Application number	Application date
CA2768774 AA	20110127	CA20102768774	20100702
CA2768774 C	20170606	CA20102768774	20100702
EP2456677 A1	20120530	EP20100737144	20100702
MX2012000894 A1	20120213	MX20120000894	20100702
US2011011825 AA	20110120	US20090505682	20090720
US9102434 BB	20150811	US20090505682	20090720
WO11011183 A1	20110127	WO2010US40857	20100702

Priority:

US20090505682 20090720 WO2010US40857 20100702

Probable Assignee: GRAHAM PACKAGING CO LP

Assignee(s): (std): LEWIS BENTON A ; SHAH SUNIL S ; HOWELL JUSTIN A ; UNGRADY ERIC B ; GRAHAM PACKAGING CO

Assignee(s): GRAHAM PACKAGING CO LP ; GRAHAM PACKAGING COMPANY L P ; BANK OF NEW YORK MELLON ; REYNOLDS GROUP HOLDINGS INC

Inventor(s): (std): HOWELL JUSTIN A ; LEWIS BENTON A ; SHAH SUNIL S ; UNGRADY ERIC B

Agent(s): NORTON ROSE CANADA SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; RUSCHKE HANS EDVARD; KNOBLE YOSHIDA AND DUNLEAVY; BAKER BOTTS LLP; KNOBLE JOHN L

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

23) Family number: 48693820 (US2011079574A)

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Title: PASTEURIZABLE AND HOT-FILLABLE BLOW MOLDED PLASTIC CONTAINER

Abstract: A blow molded plastic container for hot fill and pasteurization uses includes a main body portion that is shaped so as to be substantially rectangular in horizontal cross-section and a base portion. The base portion is shaped to define a generally rectangular standing ring and an elevated push-up portion that is positioned radially inward of the standing ring. The push-up portion includes a central region, an annular, substantially straight and substantially vertical rise portion that is positioned immediately radially inward of the standing ring and a plurality of radially oriented waves. Each of the waves extends radially outwardly from the central region to the vertical rise portion. The main body portion is shaped so as to have a plurality of sidewall portions that are bounded by a plurality of vertically extending edge portions. In one embodiment, at least one of the vertically extending edge portions may have at least one inwardly extending gusset defined therein to provide structural reinforcement.

Classifications:

International (IPC 8-9): B65D1/02 B65D1/10 B65D1/42

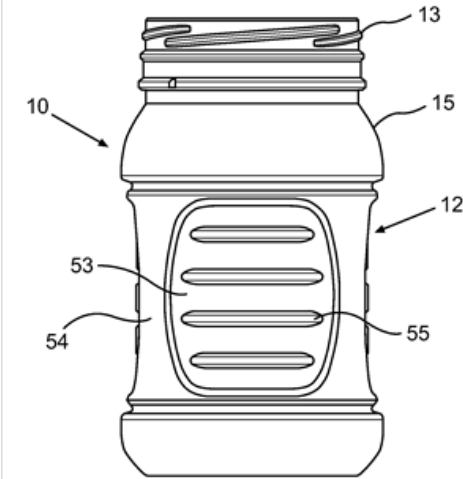
B65D8/04 (Advanced/Invention)

CPC: B65D79/005

European: B65D79/00B

US: 215/373 215/383 220/608 220/672 220/675

PatBase - US2011079574_AH



Family:

Publication number	Publication date	Application number	Application date
US2011079574 AA	20110407	US20090573900	20091006
US8602237 BB	20131210	US20090573900	20091006
WO11044097 A2	20110414	WO2010US51426	20101005
WO11044097 A3	20110915	WO2010US51426	20101005

Priority:

US20090573900 20091006

Probable Assignee: GRAHAM PACKAGING CO LP

Assignee(s): (std): LEWIS BENTON A ; WURSTER MICHAEL P ; KELLY MICHAEL T ; WALTEMYER ROBERT ; HOWELL JUSTIN A ; GRAHAM PACKAGING CO

Assignee(s): GRAHAM PACKAGING CO LP ; GRAHAM PACKAGING COMPANY L P ; BANK OF NEW YORK MELLON ; REYNOLDS GROUP HOLDINGS INC

Inventor(s): (std): HOWELL JUSTIN A ; KELLY MICHAEL T ; LEWIS BENTON A ; WALTEMYER ROBERT ; WURSTER MICHAEL P

Agent(s): BAKER BOTTS LLP; KNOBLE JOHN L

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

24) Family number: 49121564 (US2011147392A)

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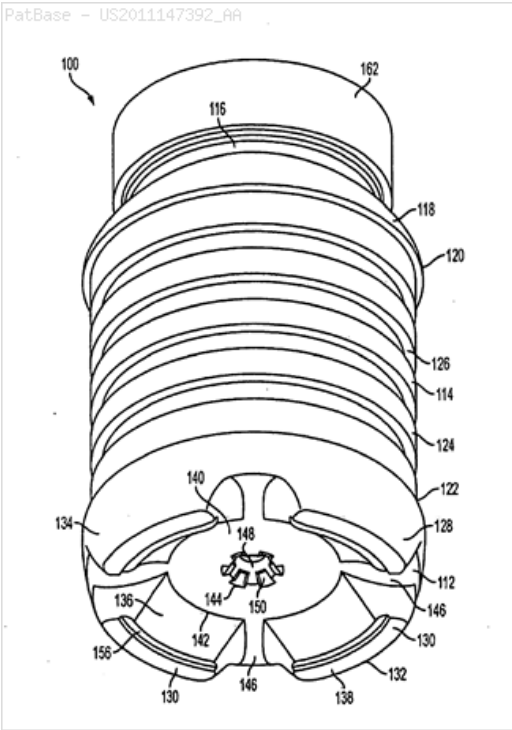
Title: MULTI-FUNCTIONAL BASE FOR A PLASTIC, WIDE-MOUTH, BLOW-MOLDED CONTAINER

Abstract: A container can have a body with an integrally formed base attached to the body. The base includes a concave annular wall extending from the container sidewall to a standing surface, and an inner wall extending from the standing surface to a substantially flat inner annular wall. The inner annular wall is recessed in the base and is substantially perpendicular to the container sidewall. The inner annular wall includes a centrally located dimple. The dimple includes a plurality of spaced apart and radially extending indented ribs. One or more of the ribs extend radially into a brace that tapers to meet the inner annular wall.

Classifications:

International (IPC 8-9): B65D1/02 B65D21/02 B65D79/00 B65D8/04

B65D8/12 (Advanced/Invention)
CPC: B29D22/003 B65D1/0276 B65D1/0284 B65D21/0231 B65B61/24
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B29L2031/716 B65B3/022 B65B7/28 B65B63/08
European: B65D1/02D2C B65D1/02D2E B65D21/02E12B B65D79/00B
US: 220/606



Family:

Publication number	Publication date	Application number	Application date
US2011147392 AA	20110623	US20110038986	20110302

Priority:

US20010284795P 20010419	US20020124734 20020417	US20030444616 20030523
US20040851083 20040524	US20090406491 20090318	US20110038986 20110302

Probable Assignee: BANK OF NEW YORK MELLON

Assignee(s): (std): OGG RICHARD K ; TOBIAS JOHN W ; TRUDE GREG

Assignee(s): REYNOLDS GROUP HOLDINGS INC ; BANK OF NEW YORK MELLON ; GRAHAM PACKAGING CO LP

Inventor(s): (std): OGG RICHARD K ; TOBIAS JOHN W ; TRUDE GREG

25) Family number: 49552457 (US2011217494A)

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Title: FLEXIBLE STANDING RING FOR HOT-FILL CONTAINER

Abstract: A blow-molded plastic container comprising a base portion having a flexible standing ring radially extending therefrom. The flexible standing ring is disposed about a lowest most portion of the container and operable to support the container on a surface. The flexible standing ring defines an annular groove thereabout that collapses in response to internal vacuum forces and/or external loading forces. The container further comprises a body portion that extends from an upper portion to the base, such that the upper portion, the body portion and the base cooperate to define a receptacle chamber within the container into which product can be filled.

Classifications:

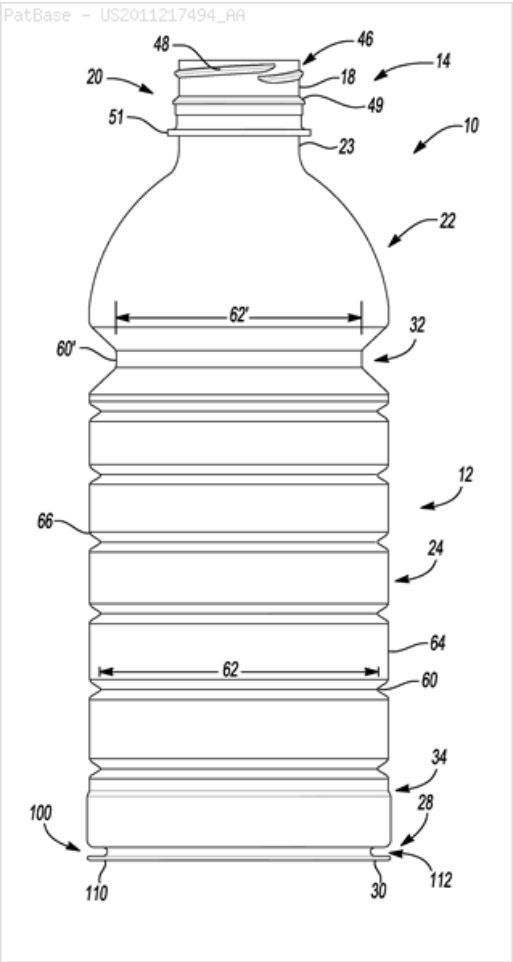
International (IPC 8-9): B29D22/00 B65D1/02

B65D1/42 (Advanced/Invention)

CPC: Y10S215/90 B65D1/0276 B65D79/005 Y10T428/1352

European: B65D1/02D2C B65D79/00B

US: 215/374 215/377 215/900 220/606 220/632 428/35.7 428/35.700P



Family:

Publication number	Publication date	Application number	Application date
BR112012022347 A2	20160705	BR20121122347	20110303
CA2791605 AA	20120828	CA20112791605	20110303
CA2791605 C	20171128	CA20112791605	20110303
CO6602135 A2	20130118	CO20120150189	20120903
MX2012010203 A1	20130226	MX20120010203	20110303
US2011217494 AA	20110908	US20100717259	20100304
US8181804 BB	20120522	US20100717259	20100304
WO11109623 A2	20110909	WO2011US27034	20110303
WO11109623 A3	20120301	WO2011US27034	20110303

Priority:

US20100717259 20100304 WO2011US27034 20110303

Probable Assignee: AMCOR GROUP GMBH

Assignee(s): (std): AMCOR LTD ; LANE MICHAEL T

Assignee(s): AMCOR GROUP GMBH ; AMCOR LIMITED

Inventor(s): (std): LANE MICHAEL T ; LANE MICHEL T

Inventor(s): MICHAEL T LANE

Agent(s): MACRAE AND CO; SILVANA MARIA LOPEZ DIAZ; HARNESS DICKEY AND PIERCE PLC; ERJAVAC STANLEY M ET AL

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

26) Family number: 50480125 (US2012012592A)

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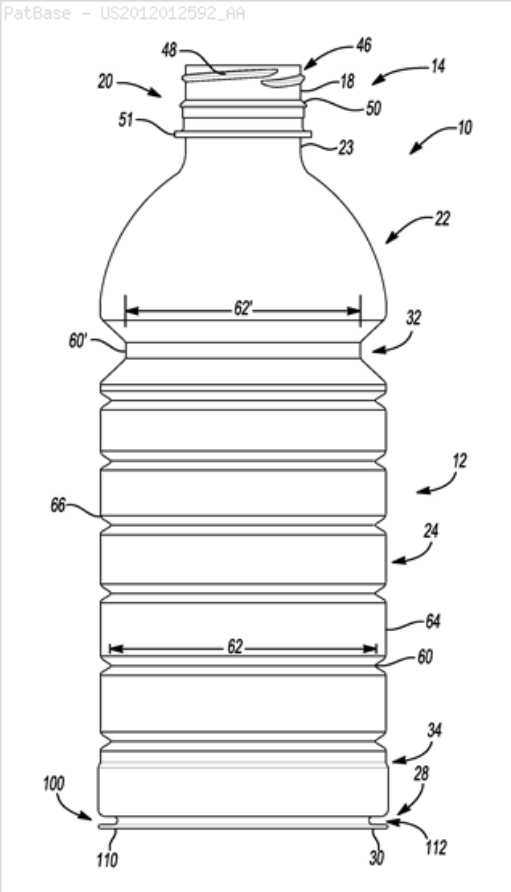
Title: CONTROLLED BASE FLASH FORMING A STANDING RING

Abstract: A blow-molded plastic container comprising a base portion having a flexible standing ring radially extending therefrom. The flexible standing ring is disposed about a lowest most portion of the container and operable to support the container on a surface. The flexible standing ring defines an annular groove thereabout that collapses in response to internal vacuum forces and/or external loading forces. The container further comprises a body portion that extends from an upper portion to the base, such that the upper portion, the body portion and the base cooperate to define a receptacle chamber within the container into

which product can be filled.

Classifications:

International (IPC 8-9): B29C49/48 B29C49/54 B65D1/02 B65D1/42 B65D79/00 B65D8/04 (Advanced/Invention); B29C49/04 B29C49/06 B29C49/12 B29C49/62 B29K23/00 B29K67/00 B29L31/00 (Advanced/Non-invention)
CPC: B29C49/54 B29C49/04 B29C49/06 B29C49/12 B29C49/4802 B29C2049/4807 B29C2049/622 B29K2023/065 B29K2023/12 B29K2067/003 B29L2031/7158 B65D1/0276 B65D79/005 B65D2501/0036
European: B65D1/02D2C B65D79/00B L29C49/04 L29C49/06 L29C49/12 L29C49/54 L29C49/62B L29K23/06B9 L29K23/12 L29K67/00B L29L31/7158 L65D501/02Y1C
US: 1/1 220/660 425/525 425/525S



Family:

Publication number	Publication date	Application number	Application date
CO6680633 A2	20130531	CO20130023196	20130205
MX2013000557 A1	20130530	MX20130000557	20110713
US2012012592 AA	20120119	US20110181659	20110713
US2014212537 AA	20140731	US20140242457	20140401
US9254604 BB	20160209	US20140242457	20140401
WO12009416 A2	20120119	WO2011US43824	20110713
WO12009416 A3	20120329	WO2011US43824	20110713

Priority:

US20100364827P 20100716 US20110181659 20110713 WO2011US43824 20110713
US20140242457 20140401

Probable Assignee: AMCOR GROUP GMBH

Assignee(s): (std): AMCOR LTD ; HOWE CHRISTOPHER ; LISCH GEORGE DAVID ; MAKI KIRK EDWARD ; PATCHEAK TERRY D

Assignee(s): AMCOR GROUP GMBH ; AMCOR LIMITED

Inventor(s): (std): HOWE CHRISTOPHER ; LISCH GEORGE DAVID ; LISCH GEROGGE DAVOD ; MAKI KIRK EDWARD ; MAKI KIRKI EDWARD ; PATCHEAK TERRY D

Inventor(s): TERRY D PATCHEAK ; KIRK EDWARD MAKI ; KIRKI EDWARD MAKI ; CHRISTOPHER HOWE ; GEORGE DAVID LISCH ; GEROGGE DAVOD LISCH

Agent(s): SILVANA MARIA LOPEZ DIAZ ; HARNESS DICKEY AND PIERCE PLC ; SNYDER JEFFREY L ET AL

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

27) Family number: 50833361 (US2013270214A)

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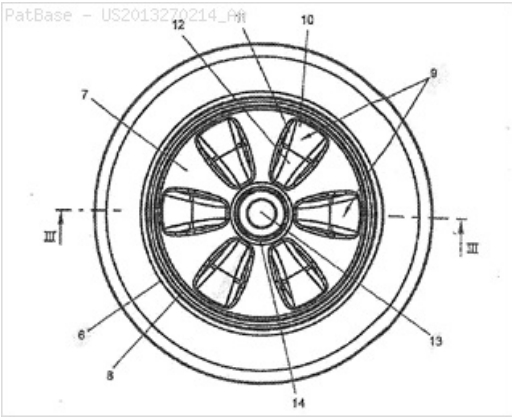
Title: BOTTOM STRUCTURE FOR A PLASTIC BOTTLE

Abstract: This invention relates to a base for a plastic bottle, especially for beverages under pressure, comprising an annular heel (6) which preferably is integral with the side wall (2) of the bottle, and a concave section (7) that is surrounded by, and integral with, the heel (6), wherein the concave section (7) comprises reinforcing elements arranged in a star pattern and increasing its rigidity, wherein the reinforcing elements are formed by convex areas (9) of the concave section (7) and the concave section (7) including the convex area (9) have essentially the same wall thickness.

Classifications:

International (IPC 8-9): B65D1/02 B65D23/00 B66D (Advanced/Invention)

CPC: B65D23/001 B65D1/0261 B65D1/0276 B65D1/0284
European: B65D1/02D2C B65D1/02D2E
US: 215/377



Family:

Publication number	Publication date	Application number	Application date
AT510506 A1	20120415	AT20100001577	20100922
AT510506 B1	20130115	AT20100001577	20100922
AU2011304660 AA	20120329	AU20110304660	20110921
AU2011304660 BB	20150514	AU20110304660	20110921
BR112013006898 A2	20160712	BR20131106898	20110921
CN103180212 A	20130626	CN201180051059	20110921
CN103180212 B	20161228	CN201180051059	20110921
DE502011009118 D1	20160428	DE201150009118T	20110921
EP2619097 A1	20130731	EP20110758410	20110921
EP2619097 B1	20160316	EP20110758410	20110921
JP2013538760 T2	20131017	JP20130529574T	20110921
JP5921553 B2	20160524	JP20130529574T	20110921
US2013270214 AA	20131017	US20110825545	20110921
US9580206 BB	20170228	US20110825545	20110921
WO12038075 A1	20120329	WO2011EP04717	20110921
ZA201301973 A	20131127	ZA20130001973	20130315

Priority:

AT20100001577 20100922 EP20110758410 20110921 WO2011EP04717 20110921

Probable Assignee: RED BULL GMBH

Assignee(s): (std): CONCIN ROLAND ; HUELS PETER ; KESSLER TILMANN ; KUTSCHEID ANDREA ; RED BULL GMBH ; WEBER TRINKFASS GABRIELE

Inventor(s): (std): HULS PETER ; WEBER TRINKFASS GABRIELE ; KUTSCHEID ANDREA ; KESSLER TILMANN ; HUELS PETER ; CONCIN ROLAND

Inventor(s): PETER HUELS ; ROLAND CONCIN ; TILMANN KESSLER ; WEBERTRINKFASS GABRIELE ; ANDREA KUTSCHEID ; GABRIELE WEBER TRINKFASS

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; BOEHMERT AND BOEHMERT ANWALTSPARTNERSCHAFT MBB PATENTANWAELTE RECHTSANWAELTE; METTEN KARL HEINZ; FUKAMI PATENT OFFICE PC; MARTIN R; TECHMARK A LAW CORP; METTEN KARL HEINZ ET AL

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

28) Family number: 50907927 (US2013213926A)

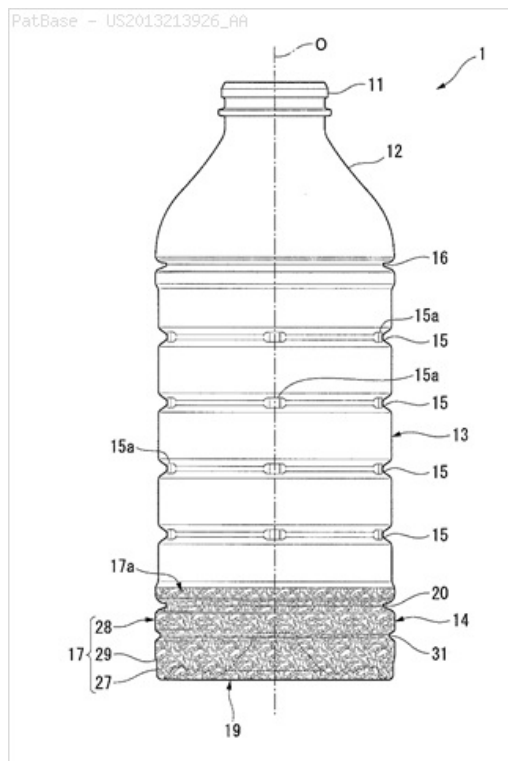
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Title: BOTTLE

Abstract: The present invention relates to a bottle which is formed of a synthetic resin material into a cylindrical shape with a bottom. A bottom wall portion of a bottom of the bottle includes: a ground contact portion; a rising peripheral wall portion; a ring-shaped movable wall portion; and a depressed peripheral wall portion. The movable wall portion is rotatably disposed about a connecting part with the rising peripheral wall portion so as to move the depressed peripheral wall portion upward, and a concave and convex portion is formed over an entire circumference of the rising peripheral wall portion.

Classifications:

International (IPC 8-9): A47G19/22 B65D1/02 B65D23/00 B65D79/00
B65D90/02 (Advanced/Invention)
CPC: B65D23/00 A47G19/2205 B65D1/0276 B65D79/005 B65D2501/0036
US: 1/1 215/371

**Family:**

Publication number	Publication date	Application number	Application date
AU2011309320 AA	20120405	AU20110309320	20110922
AU2011309320 BB	20160114	AU20110309320	20110922
CA2813075 AA	20130327	CA20112813075	20110922
CA2813075 C	20180410	CA20112813075	20110922
CN103189277 A	20130703	CN201180046839	20110922
CN103189277 B	20150114	CN201180046839	20110922
DE602011037420 D1	20170608	DE201160037420T	20110922
EP2623428 A1	20130807	EP20110828928	20110922
EP2623428 A4	20140326	EP20110828928	20110922
EP2623428 B1	20170426	EP20110828928	20110922
JP2012076748 A2	20120419	JP20100220706	20100930
JP2013023277 A2	20130204	JP20110163102	20110726
JP5452438 B2	20140326	JP20100220706	20100930
JP5789440 B2	20151007	JP20110163102	20110726
KR101813049 B1	20171229	KR20137011053	20110922
KR20140125280 A	20141028	KR20137011053	20110922
TW201233593 A	20120816	TW20110134710	20110926
TWI561435 B	20161211	TW20110134710	20110926
US2013213926 AA	20130822	US20110824872	20110922
US9085387 BB	20150721	US20110824872	20110922
WO12043371 A1	20120405	WO2011JP71597	20110922

Priority:

JP20100220706 20100930 JP20110163102 20110726 EP20110828928 20110922
 WO2011JP71597 20110922

Probable Assignee: YOSHINO KOGYOSHO CO LTD

Assignee(s): (std): IMAI HIROAKI ; ITOKAWA JUNICHI ; KURIHARA GORO ; NAKAYAMA TADAYORI ; YOSHINO KOGYOSHO CO LTD

Assignee(s): YOSHINO KOGYOSHO CO ; YOSHINO KOGYOSHO CO LTD ; YOSHINO KOGYOSHO CO

Inventor(s): (std): IMAI HIROAKI ; ITOKAWA JUNICHI ; KURIHARA GORO ; NAKAYAMA TADAKAZU ; NAKAYAMA TADAYORI

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SIM AND MCBURNEY; MARKS AND CLERK; STREHL SCHUEBEL HOPF AND PARTNER MBB PATENTANWALTE EUROPEAN PATENT ATTORNEYS; NONY; OLIFF PLC; SHIGA MASATAKE ET AL

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

Title: BOTTLE

Abstract: Provided is a bottle including a bottom part having a bottom wall part. The bottom wall part includes a grounding part located at the outer circumferential edge thereof, a standing peripheral wall part connecting to the grounding part from a radial inner side of the bottle and extending upward, an annular movable wall part projecting from an upper end of the standing peripheral wall part toward the radial inner side of the bottle, and a depression peripheral wall part extending upward from an inner end of the movable wall part in a radial direction of the bottle. The movable wall part is disposed to freely pivot around a connection part connected with the standing peripheral wall part so as to move the depression peripheral wall part in an upward direction, and the depression peripheral wall part is formed to have multiple stages.

Classifications:

International (IPC 8-9): B65D1/02 B65D1/42 B65D23/00 B65D79/00 B65D90/02 (Advanced/Invention);

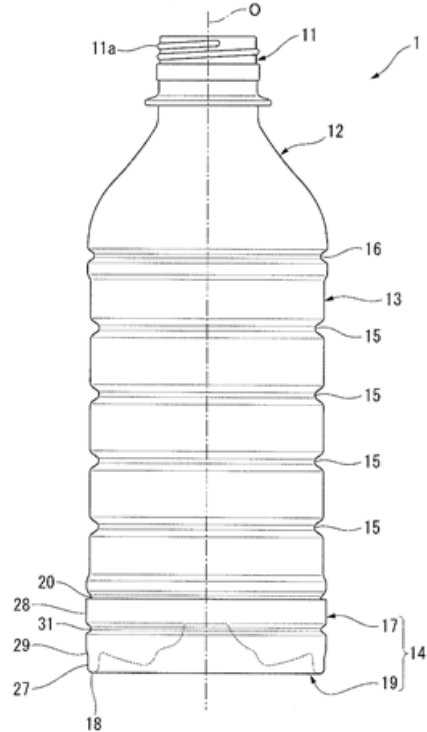
B65D1/02 (Core/Invention)

CPC: B65D23/00 B65D1/0261 B65D1/0276 B65D79/005

European: B65D1/02D2

US: 1/1 215/371

PatBase - US2013220968_AA



Family:

Publication number	Publication date	Application number	Application date
AU2011321582 AA	20120503	AU20110321582	20111021
AU2011321582 BB	20160303	AU20110321582	20111021
CA2815782 AA	20130424	CA20112815782	20111021
CN103180213 A	20130626	CN201180051398	20111021
CN103180213 B	20150211	CN201180051398	20111021
EP2634106 A1	20130904	EP20110836160	20111021
EP2634106 A4	20170111	EP20110836160	20111021
JP2012091817 A2	20120517	JP20100239946	20101026
JP2012091825 A2	20120517	JP20100240943	20101027
JP2012091826 A2	20120517	JP20100240944	20101027
JP5489953 B2	20140514	JP20100240944	20101027
JP5568439 B2	20140806	JP20100239946	20101026
JP5568440 B2	20140806	JP20100240943	20101027
KR101826117 B1	20180206	KR20137011184	20111021
KR20140125281 A	20141028	KR20137011184	20111021
TH130407 A	20131220	TH20131002168	20111021
TW201233594 A	20120816	TW20110138731	20111025
TWI526368 B	20160321	TW20110138731	20111025
US2013220968 AA	20130829	US20110881273	20111021
US9242762 BB	20160126	US20110881273	20111021
WO12057026 A1	20120503	WO2011JP74302	20111021

Priority:

JP20100239946 20101026 JP20100240943 20101027 JP20100240944 20101027
WO2011JP74302 20111021

Probable Assignee: YOSHINO KOGYOSHO CO LTD

Assignee(s): (std): IMAI HIROAKI ; NAKAYAMA TADAYORI ; YOSHINO KOGYOSHO CO LTD

Assignee(s): YOSHINO KOGYOSHO CO ; YOSHINO KOGYOSHO CO LTD ; YOSHINO KOGYOSHO CO

Inventor(s): (std): NAKAYAMA TADAYORI ; IMAI HIROAKI ; NAKAYAMA TADAKAZU

Agent(s): PHILLIPS ORMONDE FITZPATRICK; SIM AND MCBURNEY; MARKS AND CLERK; NONY; OLIFF PLC; SHIGA MASATAKE ET AL

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

30) Family number: 51042120 (US2013206719A)

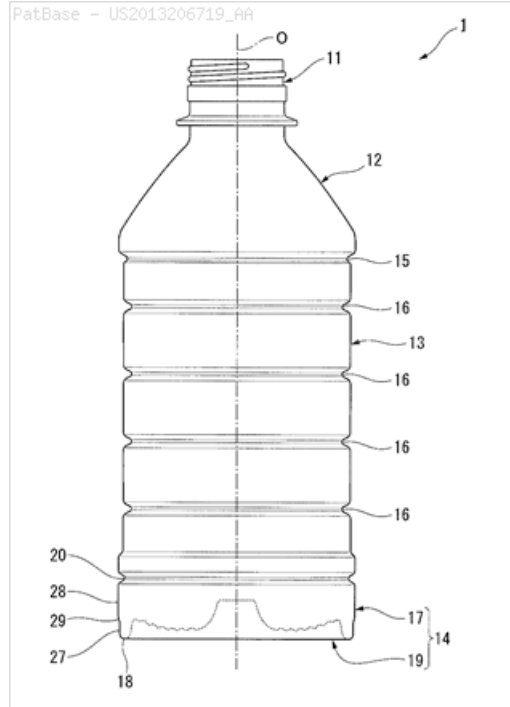
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Title: BOTTLE

Abstract: There is provided a bottle formed of a synthetic resin material into a cylindrical shape with a bottom, a bottom wall portion of the bottom includes: a ground contact portion which is positioned at an outer circumferential edge portion; a rising peripheral wall portion which is connected to the ground contact portion from an inner side of a bottle radial direction and extends upward; an annular movable wall portion which protrudes from an upper end portion of the rising peripheral wall portion to the inner side of the bottle radial direction; and a depressed peripheral wall portion which extends upward from an inner end portion of the movable wall portion in the bottle radial direction.

Classifications:**International (IPC 8-9):** B65D1/02 B65D1/40 B65D1/42 B65D8/04

B65D90/36 (Advanced/Invention)

CPC: B65D1/0276 B65D79/005 B65D90/36 B65D2501/0036**European:** B65D1/02D2**US:** 215/381**Family:**

Publication number	Publication date	Application number	Application date
AU2011321522 AA	20120503	AU20110321522	20111025
AU2011321522 BB	20160310	AU20110321522	20111025
CA2815354 AA	20130419	CA20112815354	20111025
CA2815354 C	20180327	CA20112815354	20111025
JP2012091827 A2	20120517	JP20100240945	20101027
JP2012111546 A2	20120614	JP20100264169	20101126
JP5886521 B2	20160316	JP20100264169	20101126
TW201242855 A	20121101	TW20110138953	20111026
TWI576293 B	20170401	TW20110138953	20111026
US2013206719 AA	20130815	US20110880241	20111025
WO12057158 A1	20120503	WO2011JP74578	20111025

Priority:

JP20100240945 20101027 JP20100264169 20101126 WO2011JP74578 20111025

Probable Assignee: YOSHINO KOGYOSHO CO LTD**Assignee(s):** (std): IMAI HIROAKI ; NAKAYAMA TADAYORI ; TANAKA TOSHIMASA ; YOSHINO KOGYOSHO CO LTD**Assignee(s):** YOSHINO KOGYOSHO CO**Inventor(s):** (std): IMAI HIROAKI ; NAKAYAMA TADAKAZU ; NAKAYAMA TADAYORI ; TANAKA TOSHIMASA**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; SIM AND MCBURNEY; SHIGA MASATAKE ET AL

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

31) Family number: 53039492 (US2013043202A)

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Title: PLASTIC CONTAINERS, BASE CONFIGURATIONS FOR PLASTIC CONTAINERS, AND SYSTEMS, METHODS, AND BASE MOLDS THEREOF**Abstract:** Plastic containers, base configurations for plastic containers, and systems, methods, and base molds thereof. Plastic

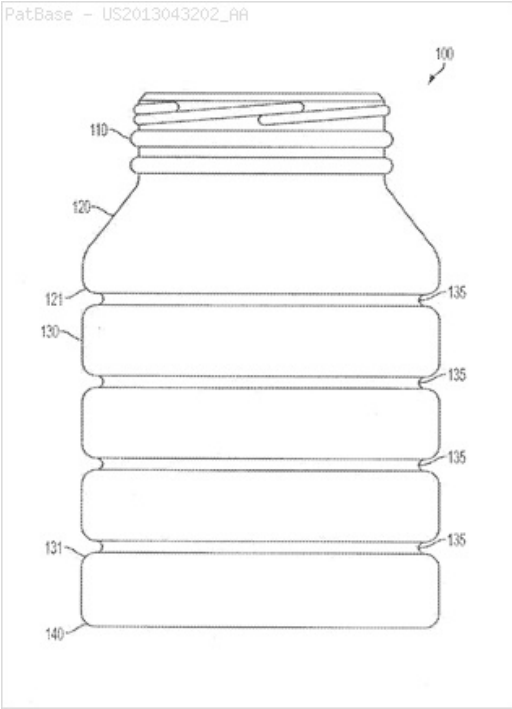
containers have base portions constructed and operative to accommodate internal pressures within the container due to elevated temperature processing, such as hot-filling, pasteurization, and/or retort processing. Plastic containers can also be constructed and operative to accommodate internal pressures within the filled container resulting from subjecting the filled plastic container to cooling or cool-down processing.

Classifications:

International (IPC 8-9): B29C45/00 B29C49/06 B65B3/04 B65D1/02 B65D1/40 B65D79/00 (Advanced/Invention); B29C49/06 B29L31/00 (Advanced/Non-invention)

CPC: B65D79/005 B29C49/06 B29L2031/7158 B29L2031/716 B65D1/0276 B65D2501/0036

US: 215/40 53/467



Family:

Publication number	Publication date	Application number	Application date
AU2012295330 AA	20130221	AU20120295330	20120810
AU2012295330 BB	20170413	AU20120295330	20120810
AU2017201841 AA	20170406	AU20170201841	20170317
AU2017201845 AA	20170406	AU20170201845	20170317
CA2845561 AA	20140214	CA20122845561	20120810
EP2744715 A1	20140625	EP20120823679	20120810
EP2744715 A4	20150422	EP20120823679	20120810
MX2014001829 A1	20140227	MX20140001829	20120810
NZ618924 A	20151127	NZ20120618924	20120810
US2013043202 AA	20130221	US20110210358	20110815
US9994378 BB	20180612	US20110210358	20110815
WO13025463 A1	20130221	WO2012US50251	20120810

Priority:

US20110210358 20110815 AU20120295330 20120810 WO2012US50251 20120810
AU20170201841 20170317 AU20170201845 20170317

Probable Assignee: GRAHAM PACKAGING CO LP

Assignee(s): (std): BYSICK SCOTT E ; GRAHAM PACKAGING CO ; GRAHAM PACKAGING CO L P ; WURSTER MICHAEL P

Assignee(s): GRAHAM PACKAGING COMPANY L P ; BANK OF NEW YORK MELLON ; GRAHAM PACKAGING CO LP

Inventor(s): (std): BYSICK SCOTT E ; WURSTER MICHAEL P

Inventor(s): MICHAEL P WURSTER ; SCOTT E BYSICK

Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; RUSCHKE HANS EDVARD; BAKER BOTTS LLP; CARMICHAEL JAMES T ET AL

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

32) Family number: 54626761 (US2013219831A)

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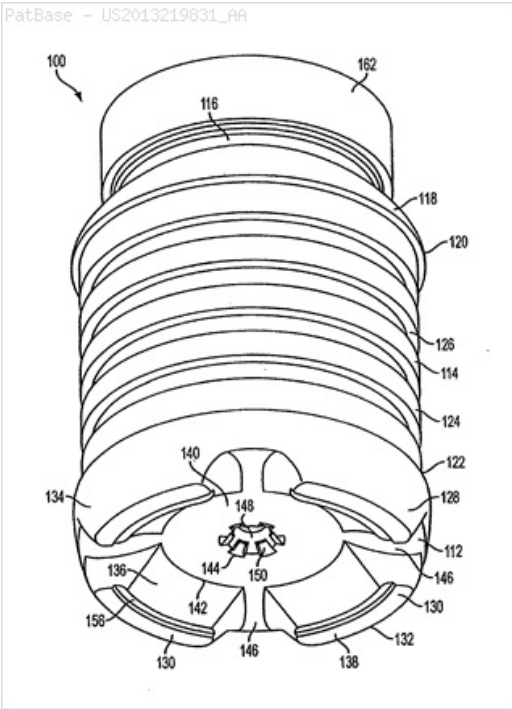
Title: MULTI-FUNCTIONAL BASE FOR A PLASTIC, WIDE-MOUTH, BLOW-MOLDED CONTAINER

Abstract: A container can have a body with an integrally formed base attached to the body. The base includes a concave annular wall extending from the container sidewall to a standing surface, and an inner wall extending from the standing surface to a substantially flat inner annular wall. The inner annular wall is recessed in the base and is substantially perpendicular to the container sidewall. The inner annular wall includes a centrally located dimple. The dimple includes a plurality of spaced apart and radially extending indented ribs. One or more of the ribs extend radially into a brace that tapers to meet the inner annular wall.

Classifications:

International (IPC 8-9): B29D22/00 B65B1/02 B65B1/04 B65B3/02 B65B61/24 B65D1/02 B65D21/02 B65D79/00 (Advanced/Invention)

CPC: B29D22/003 B65D1/0276 B65D1/0284 B65D21/0231 B65B61/24
B29C49/4252 B29C49/4273 B29C49/70 B29L2022/00 B29L2031/716
B65B7/28 B65B63/08 B65D79/005 B65B3/022
US: 264/529 53/453 53/467



Family:

Publication number	Publication date	Application number	Application date
US2013219831 AA	20130829	US20130770824	20130219
US9522749 BB	20161220	US20130770824	20130219

Priority:

US20010284795P 20010419	US20020124734 20020417	US20030444616 20030523
US20040851083 20040524	US20080250856 20081014	US20130770824 20130219

Probable Assignee: GRAHAM PACKAGING CO LP
Assignee(s): (std): GRAHAM PACKAGING CO
Assignee(s): GRAHAM PACKAGING CO LP ; BANK OF NEW YORK MELLON
Inventor(s): (std): OGG RICHARD K ; TOBIAS JOHN W ; TRUDE GREG
Agent(s): BAKER BOTTS LLP

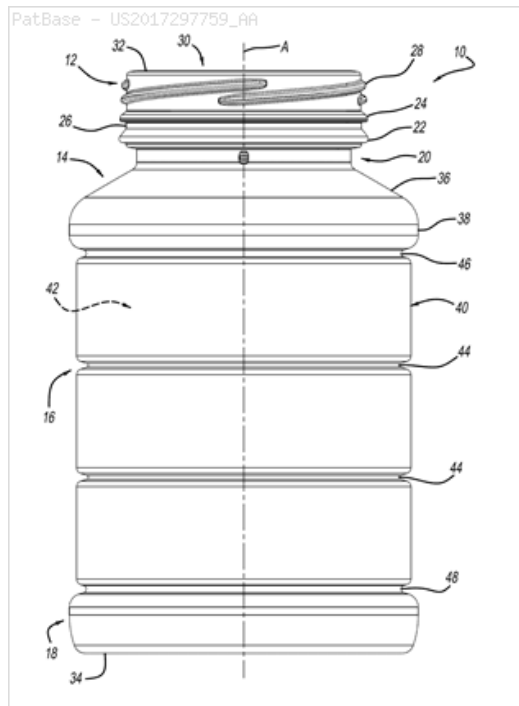
33) Family number: 67826790 (US2017297759A) © PatBase

Title: MULTI-FUNCTION CONTAINER BASE

Abstract: A container includes a finish, a shoulder portion, a body, and a base portion. The finish defines an opening. The shoulder portion extends from the finish. The body extends from the shoulder portion and defines a chamber. The base portion extends at an end of the body opposite to the shoulder portion and is moveable from an as-blown position to an expanded position and from the expanded position to a retracted position. The base portion includes a standing ring, a pivot area, and a central area. The pivot area is disposed between the standing ring and the central area. The pivot area is configured to flex and move the central area along the longitudinal axis when the base portion moves from the as-blown position to the expanded position, and from the expanded position to a retracted position.

Classifications:

International (IPC 8-9): B29C49/06 B65D1/02 B65D21/02 B65D21/032
B65D41/04 B65D50/00 B65D79/00 (Advanced/Invention)
International (IPC 1-7): B65D1/02 B65D21/032
CPC: B65D1/0276 B65D1/0215 B65D1/0246 B65D21/0231 B65D41/04
B65D79/005



Family:

Publication number	Publication date	Application number	Application date
BR112017007810 A2	20171219	BR20171107810	20141017
CA2963628 AA	20160421	CA20142963628	20141017
CO20170004473 A2	20170719	CO20170004473	20170503
EP3206956 A1	20170823	EP20140904005	20141017
EP3206956 A4	20180418	EP20140904005	20141017
JP2017537850 T2	20171221	JP20170519678T	20141017
MX2017004478 A1	20171116	MX20170004478	20141017
US2017297759 AA	20171019	US20140517073	20141017
WO16060680 A1	20160421	WO2014US61096	20141017

Priority:

WO2014US61096 20141017

Probable Assignee: AMCOR GROUP GMBH

Assignee(s): (std): AMCOR GROUP GMBH ; AMCOR LTD

Assignee(s): BATES PETER A ; MCFARLANE RONALD

Inventor(s): (std): BATES PETER A ; MCFARLANE RONALD ; PETER A BATES ; RONALD MCFARLANE

Agent(s): GOWLING WLG CANADA LLP; CAROLINA MERCEDES DAZA MONTALVO; WITTE WELLER AND PARTNER
PATENTANWALTE MBB; HARA KENZO WORLD PATENT AND TRADEMARK; FADIPE ABHA T 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

34) Family number: 62728391 (US2016176605A) © PatBase

Title: DEFORMATION-RESISTANT CONTAINER WITH PANEL INDENTATIONS

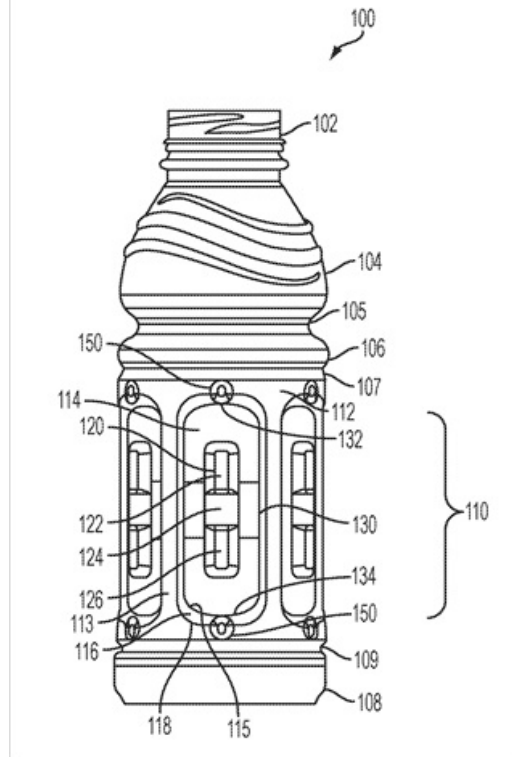
Abstract: Plastic container has a container body having an outer surface and defining a longitudinal axis, at least one recessed panel defined in the container body having an outer perimeter and recessed relative to the outer surface of the container body, the perimeter including opposing longitudinal sides and transverse ends, a transition region defined along the perimeter of the recessed panel, the transition region extending between the recessed panel and the outer surface, and at least one indentation formed in the transition region proximate at least one transverse end of the outer perimeter, the indentation having a height, a width, and a depth, the height of the indentation extending beyond the transition region. The indentation can prevent or reduce container failure due to external forces, such as side loading during a hot-fill process.

Classifications:

International (IPC 8-9): B65D1/02 B65D1/40 B65D1/42
B65D79/00 (Advanced/Invention)

CPC: B65D79/005 B65D1/40 B65D2501/0018 B65D1/0276
B65D2501/0036

US: 220/669

**Family:**

Publication number	Publication date	Application number	Application date
CA2972041 AA	20170622	CA20152972041	20151221
MX2017008332 A1	20171128	MX20170008332	20151221
US2016176605 AA	20160623	US20150976581	20151221
WO16106181 A1	20160630	WO2015US67013	20151221

Priority:

US20140095580P 20141222 US20150976581 20151221 WO2015US67013 20151221

Probable Assignee: GRAHAM PACKAGING CO LP

Assignee(s): (std): GRAHAM PACKAGING CO

Assignee(s): GRAHAM PACKAGING CO LP ; HUNTER TRAVIS A ; PRITCHETT RAYMOND A ; BANK OF NEW YORK MELLON

Inventor(s): (std): HUNTER TRAVIS A ; PRITCHETT RAYMOND A ; RAYMOND A PRITCHETT ; TRAVIS A HUNTER

Agent(s): NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; HULSEBERG DANIEL J

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

35) Family number: 64500849 (WO17076617A1)

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Title: CONTAINER PROVIDED WITH A CURVED INVERTIBLE DIAPHRAGM

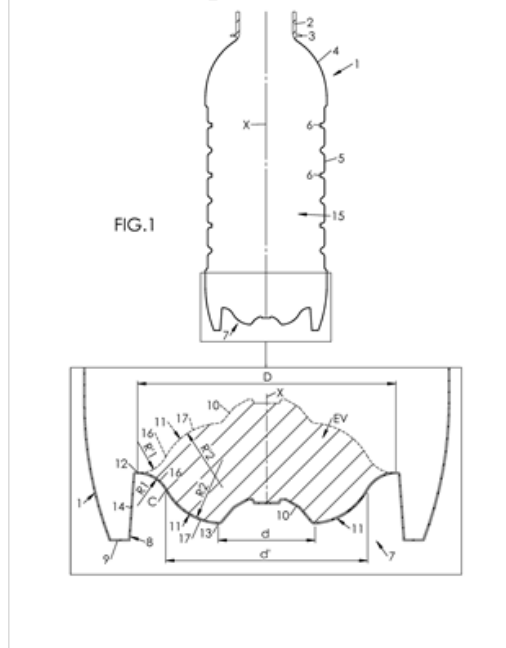
Abstract: Container (1) made of a plastic material, provided with a base (7) including a standing ring (8) forming a support flange (9) and a diaphragm (11) extending from the standing ring (8) to a central portion (10), said diaphragm (11) being capable of standing in an outwardly- inclined position, wherein the diaphragm (11) connects to the standing ring (8) at an outer junction (12) forming an outer articulation of the diaphragm (11); wherein the diaphragm (11) connects to the central portion (10) at an inner junction (13) forming an inner articulation of the diaphragm (11); whereby said diaphragm (11) is invertible with respect to the standing ring (8) from the outwardly-inclined position to an inwardly- inclined position; and wherein, in the outwardly-inclined position, the diaphragm (11) has an outer curved portion (16) and an inner curved portion (17) of opposite curvatures.

Classifications:

International (IPC 8-9): B65B61/24 B65D1/02

B65D79/00 (Advanced/Invention)

CPC: B65D79/005 B67C2003/226 B65D1/0276

**Family:**

Publication number	Publication date	Application number	Application date
■ CN107787292 A	20180309	CN201680036662	20160622
■ CN107848656 A	20180327	CN201680043085	20161017
■ EP3109176 A1	20161228	EP20150305969	20150623
■ EP3109177 A1	20161228	EP20150306750	20151104
■ WO16207213 A1	20161229	WO2016EP64413	20160622
■ WO17076617 A1	20170511	WO2016EP74837	20161017

Priority:

EP20150305969 20150623 EP20150306750 20151104 WO2016EP64413 20160622
 WO2016EP74837 20161017

Probable Assignee: SIDEL PARTICIPATIONS

Assignee(s): (std): SIDEL PARTICIPATIONS

Inventor(s): (std): GODET FLORIAN ; PROTAIS PIERRICK

Agent(s): SILORET PATRICK

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC 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