

#### Search history

Search FT=((container OR bottle) AND ((base OR bottom) W5 (diaphragm\* OR curve OR spherical OR concave OR convex))) and PD<20140821  
1: and IC=(B65D1\* OR B65D23\*) (Results 1630)

Search 1 AND (FT = push\* OR press\*) (Results 1160)  
2:

Search 2 AND (FT = (vacuum OR blown) W5 (reduc\* OR absorption)) (Results 53)  
3:

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

**Abstract:** Source: US2002153343A [EN] A blow molded **container** having a multi-functional base which enables use of the **container** in both hot-fill operations and pasteurization/retort operations and enables efficient vertical stacking of like **containers**. To this end, a portion of the base is capable of flexing upwardly and/or downwardly in response to variations in **pressures** in a filled and sealed **container**. Structurally, the **base** has a discontinuous **concave** outer annular wall forming a discontinuous standing ring and an inner annular wall functioning as a flex panel. The inner annular wall connects outwardly to a plurality of radial webs extending at an elevation above the standing ring and connects inwardly to an anti-inverting, upwardly-projecting dome. Preferably, a shoulder extends radially inward on the inward facing side of the outer annular wall above a level of the standing ring to facilitate vertical stacking of **containers** having like bases.

**Classifications:**

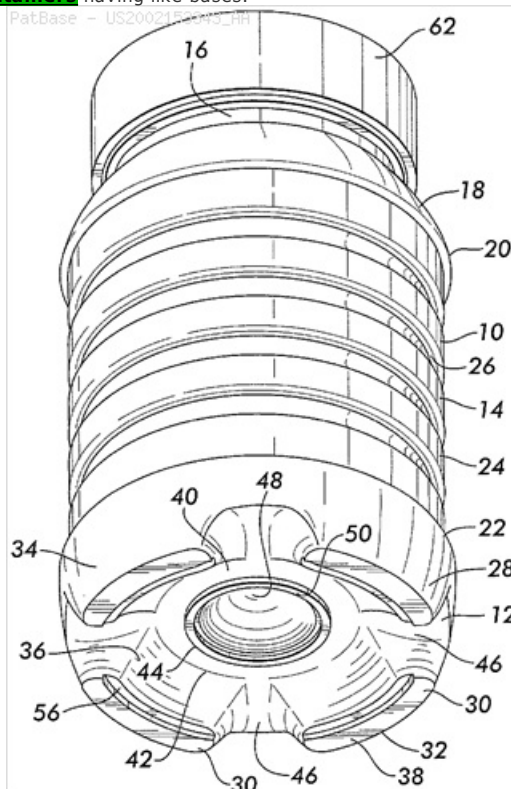
**International (IPC 8-9):** B65D1/02 B65D21/02  
B65D79/00 (Advanced/Invention)

**International (IPC 1-7):** B65D6/28 B65D8/04 B65D90/12

**CPC:** B29C49/06 B29C49/12 B29C49/4273 B29C49/541 B65B61/24  
B65D1/0276 B67C3/045 B67C2003/226 B65D79/005 B65D1/0284  
B65D21/0231 B65B3/022 B65B7/28 B65B63/08

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

**US:** 206/501 215/375 215/382 220/606 220/606S 220/609



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2002153343 AA    | 20021024         | US20020124734      | 20020417         |
| US6612451 BB       | 20030902         | US20020124734      | 20020417         |

**Priority:**

US20010284795P 20010419 US20020124734 20020417

**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 ; OGG RICHARD K ; TOBIAS JOHN W ; GRAHAM PACKAGING COMPANY L P

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

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

**Abstract:** A blow molded **container** (10) having a multi-functional base (12) which enables use of the **container** (10) in both hot-fill operations and pasteurization/retort operations and enables efficient vertical stacking of like **containers** (10). To this end, a portion of the base (12) is capable of flexing upwardly and/or downwardly in response to variations in **pressures** in a filled and sealed **container** (10). Structurally, the **base** (12) has a discontinuous **concave** outer annular wall (28) forming a discontinuous standing ring (38) and an inner annular wall (40) functioning as a flex panel. The inner annular wall (30) connects outwardly to a plurality of radial webs (46) extending at an elevation above the standing ring (38) and connects inwardly to an anti-inverting, upwardly-projecting dome (48). Preferably, a shoulder (56) extends radially inward on the inward facing side (36) of the outer annular wall (28) above a level of the standing ring (38) to facilitate vertical stacking of **containers** (10, 10a, 10b) having like bases (12, 12a).

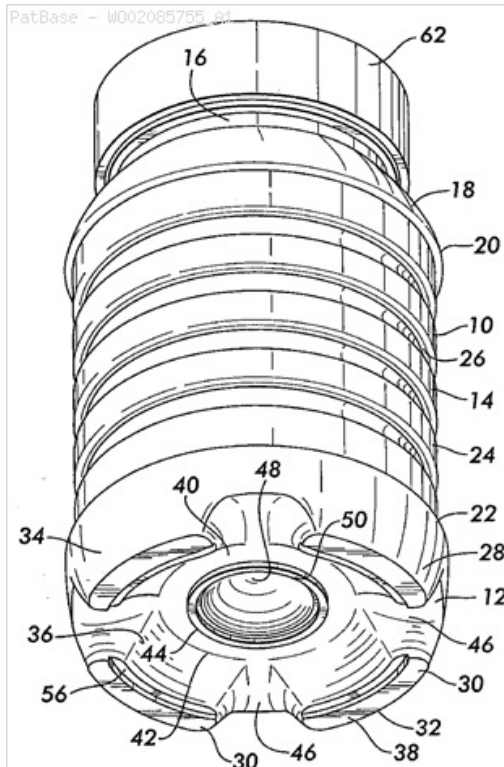
**Classifications:**

**International (IPC 8-9):** B65D1/02 B65D1/10 B65D21/02 B65D23/00 B65D79/00 B65D90/02 B65D90/12 (Advanced/Invention)

**International (IPC 1-7):** B65D1/02 B65D1/10 B65D21/02 B65D23/00 B65D90/02 B65D90/12

**CPC:** B29C49/06 B29C49/12 B29C49/4273 B29C49/541 B65B61/24 B65D1/0276 B67C3/045 B67C2003/226 B65D79/005 B65D1/0284 B65D21/0231 B65B3/022 B65B7/28 B65B63/08

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



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2002257159 AA    | 20021105         | AU20020257159      | 20020416         |
| AU2002257159 BB    | 20070301         | AU20020257159      | 20020416         |
| BRPI0208977 A      | 20040420         | BR2002PI08977      | 20020416         |
| CA2444041 AA       | 20031015         | CA20022444041      | 20020416         |
| CN1224558 C        | 20051026         | CN20028010311      | 20020416         |
| CN1511105 A        | 20040707         | CN20028010311      | 20020416         |
| EP1387804 A1       | 20040211         | EP20020726748      | 20020416         |
| EP1387804 A4       | 20050302         | EP20020726748      | 20020416         |
| HU0303845 AB       | 20040329         | HU20030003845      | 20020416         |
| JP2004526642 T2    | 20040902         | JP20020583294T     | 20020416         |
| MXPA03009531 A1    | 20041206         | MX2003PA09531      | 20020416         |
| NO20034666 A       | 20031217         | NO20030004666      | 20031017         |
| NO20034666 A0      | 20031017         | NO20030004666      | 20031017         |
| NZ528901 A         | 20040924         | NZ20020528901      | 20020416         |
| PL367261 A1        | 20050221         | PL20020367261      | 20020416         |
| WO02085755 A1      | 20021031         | WO2002US11788      | 20020416         |

**Priority:**

US20010284795P 20010419 WO2002US11788 20020416

**Probable Assignee:** GRAHAM PACKAGING CO

**Assignee(s):** (std): GRAHAM PACKAGING CO ; GRAHAM PACKAGING CO L ; GRAHAM PACKAGING CO L P ; GRAHAM PACKAGING CO LP ; GRAHAM PACKAGING COMPANY ; GRAHAM PACKAGING COMPANY L

**Assignee(s):** GRAHAM PACKAGING COMPANY L P ; TOBIAS JOHN W ; OGG RICHARD K

**Inventor(s):** (std): OGG RICHARD K ; OGG R K ; OGG RICHARD ; TOBIAS JOHN W ; TOBIAS J W ; RICHARD K OGG

**Inventor(s):** RK OGG ; R K OGG ; J W TOBIAS ; JOHN W TOBIAS ; JW TOBIAS

**Agent(s):** DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FINLAYSON AND SINGLEHURST

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

**Title:** **CONTAINER**, METHOD, AND APPARATUS TO PROVIDE FRESHER PACKED COFFEE

**Abstract:** Source: US2003010787A [EN] A fresh packaging system for roast and ground coffee having a top load capacity of at least about 16 pounds (7.3 Kg) comprising a **container** with a closed bottom, an open top, and a body enclosing a perimeter between the bottom and the top. A protuberance is continuously disposed around the perimeter of the body proximate to the top and forms a ridge external to the body. A flexible closure is removeably attached and sealed to the protuberance so that the closure seals the interior volume of the **container**. The **container** bottom and **container** body are constructed from a material having a tensile modulus number ranging from at least about 35,000 to at least about 650,000 pounds per square inch (at least about 2,381 to at least about 44,230 atm).

**Classifications:**

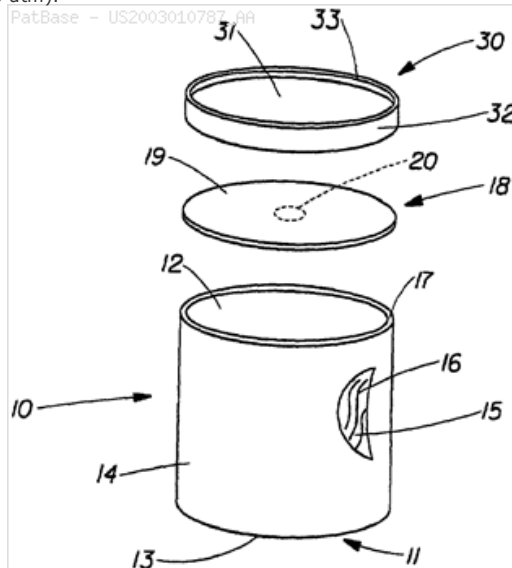
**International (IPC 8-9):** B65D1/00 B65D1/46 B65D21/02 B65D23/10 B65D25/24 B65D25/28 B65D25/52 B65D41/04 B65D43/02 B65D43/10 B65D47/06 B65D51/14 B65D51/16 B65D51/20 B65D53/04 B65D77/20 B65D79/00 B65D81/20 B65D81/26 B65D83/00 B65D85/00 (Advanced/Invention); B65D81/26 (Advanced/Non-invention); B65D (Subclass/Invention)

**International (IPC 1-7):** A23C9/12 A47J33/00 B65D21/02 B65D23/10 B65D25/28 B65D25/52 B65D43/02 B65D43/10 B65D51/16 B65D51/20 B65D53/04 B65D79/00 B65D81/20 B65D81/26

**CPC:** B65D21/0217 B65D21/0219 B65D23/102 B65D25/525 B65D43/0212 B65D51/1644 B65D51/165 B65D51/20 B65D79/005 B65D81/266 B65D2205/00 B65D2251/0018 B65D2251/0093 B65D2543/00027 B65D2543/00092 B65D2543/00101 B65D2543/00194 B65D2543/00296 B65D2543/00407 B65D2543/00527 B65D2543/00537 B65D2543/0062 B65D2543/00685 B65D2543/0074 B65D2543/00796

**European:** B65D21/02E7 B65D21/02E7A B65D23/10B B65D25/52A B65D43/02S3E B65D51/16D2 B65D51/16D2A B65D51/20 B65D79/00B L65D205/00 L65D251/00Y2F L65D251/00Y6M L65D543/00Y1A L65D543/00Y1F2C L65D543/00Y1F2D L65D543/00Y1F4C3 L65D543/00Y1M6 L65D543/00Y2K1 L65D543/00Y8D1N L65D543/00Y8D3 L65D543/00Y8S1B2 L65D543/00Y8S1D2 L65D543/00Y8S3B4 L65D543/00Y8S3D2 L65D81/26F

**US:** 220/258.3 220/258.300S 220/366.1 220/495.03 220/912 426/110 426/118 426/127 426/35 426/35P



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| BRPI0210135 A      | 20040608         | BR2002PI10135      | 20020603         |
| BRPI0417024 A      | 20070206         | BR2004PI17024      | 20041202         |
| CA2445852 AA       | 20031028         | CA20022445852      | 20020603         |
| CA2445852 C        | 20080916         | CA20022445852      | 20020603         |
| CA2547719 AA       | 20060531         | CA20042547719      | 20041202         |
| CA2547719 C        | 20100622         | CA20042547719      | 20041202         |
| CN100448757 C      | 20090107         | CN20028011241      | 20020603         |
| CN1512949 A        | 20040714         | CN20028011241      | 20020603         |
| DE602004038000 D1  | 20120726         | DE200460038000T    | 20041202         |
| EP1395501 A1       | 20040310         | EP20020732013      | 20020603         |
| EP1395501 B1       | 20161109         | EP20020732013      | 20020603         |
| EP1697223 A1       | 20060906         | EP20040812699      | 20041202         |
| EP1697223 B1       | 20120530         | EP20040812699      | 20041202         |
| EP1697223 B8       | 20120704         | EP20040812699      | 20041202         |
| HK1097239 A1       | 20130308         | HK20070102199      | 20070227         |
| HK1097239 A3       | 20070622         | HK20070102199      | 20070227         |
| JP2004528244 T2    | 20040916         | JP20030501764T     | 20020603         |
| JP2007513026 T2    | 20070524         | JP20060542718T     | 20041202         |
| JP4152877 B2       | 20080917         | JP20030501764T     | 20020603         |
| MXPA03011151 A1    | 20040227         | MX2003PA11151      | 20020603         |
| PL364551 A1        | 20041213         | PL20020364551      | 20020603         |
| RU2003137849 A     | 20050310         | RU20030137849      | 20020603         |
| RU2278063 C2       | 20060620         | RU20030137849      | 20020603         |
| US2003010787 AA    | 20030116         | US20020155338      | 20020524         |
| US2004137110 AA    | 20040715         | US20030726309      | 20031202         |
| US7169418 BB       | 20070130         | US20020155338      | 20020524         |
| US7169418 C1       | 20091201         | US20020155338      | 20020524         |
| US7169418 C2       | 20091229         | US20020155338      | 20020524         |
| US7169419 BB       | 20070130         | US20030726309      | 20031202         |
| WO02098759 A1      | 20021212         | WO2002US17413      | 20020603         |
| WO05056401 A1      | 20050623         | WO2004US40247      | 20041202         |

**Priority:**

EP20040812699 20041202 US20010295666P 20010604 US20020155338 20020524  
US20030726309 20031202 WO2004US40247 20041202 WO2002US17413 20020603

**Probable Assignee:** FOLGER COFFEE CO

**Assignee(s):** (std): DALTON DAVID ANDREW ; FOLGERS COFFEE CO ; FOLGER COFFEE CO ; FOLGER COFFEE COMPANY ; PROCTER AND GAMBLE ; WEAVER KERRY LLOYD ; MANSKE THOMAS JAMES ; MANSKE THOMAS JAMES JR ; THE PROCTER AND GAMBLE COMPANY ; FOLGERS COFFEE COMPANY

**Assignee(s):** THE FOLGER COFFEE COMPANY ; MUNGER SAMEER ; SMITH JAMES DAVID ; ZEIK DOUGLAS BRUCE ; KNUDSEN JEANNETTE L ; PROCTER AND GAMBLE CO ; THE FOLGERS COFFEE COMPANY ; FLOYD JENNIFER RUTH ; FOLGER COFFEE CO ORRVILLE ; EKONOMON ADAM ESQ ; BARRY AISHA ; BONO JAMES LEE

**Inventor(s):** (std): MANSKE THOMAS JAMES ; WEAVER KERRY LLOYD ; SMITH JAMES D ; DALTON DAVID A ; BONO JAMES L ; ZEIK DOUGLAS BRUCE ; THOMAS JAMES MANSKE JR ; SMITH JAMES DAVID ; RALSTON FLOYD JENNIFER RUTH ; MUNGUR SAMEER ; MANSKE THOMAS JAMES JR ; MANSKE JR THOMAS JAMES ; KERRY LLOYD WEAVER ; JAMES D SMITH ; FLOYD JENNIFER RUTH RALSTON ; FLOYD JENNIFER RUTH ; DAVID ANDREW DALTON ; DAVID A DALTON ; DALTON DAVID ANDREW ; BONO JAMES LEE ; BARRY AISHA ; SMIT DZHEJMS DEHVID ; MUNGUR SAMIR ; FLOJD DZHENNIFER RUT ; DEHLTON DEHVID EHNDRJU ; BONO DZHEJMS LI ; BEHRR I AJSHA ; JAMES L BONO

**Inventor(s):** JAMES DAVID SMITH ; AISHA BARRY ; DALTON DAVID ANDREW LOVELAND ; JENNIFER RUTH FLOYD ; JAMES LEE BONO ; MANSKE THOMAS JAMES JR MASON ; SAMEER MUNGUR ; JR THOMAS JAMES ; MANSKE ; WEAVER KERRY LLOYD FLORENCE

**Agent(s):** DIMOCK STRATTON LLP; BLAKE CASSELS AND GRAYDON LLP; CABINET PLASSERAUD; NARGOLWALLA CYRA; INGRID N; PETER D; CARL J

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

**Title:** Hot-fillable multi-sided blow-molded container

**Abstract:** Source: US2003000911A [EN] A plastic blow molded bottle or wide mouth jar useful in containing hot-filled beverages or food products. The container has a multi-sided sidewall which is capable of accommodating vacuum associated with hot filling, capping and cooling of the container, which is reinforced to resist unwanted deformation, and which enables a label to be aesthetically displayed on the container sidewall. To this end, the sidewall comprises a plurality of panels which include outwardly bowed arcuate sections, as formed, which flatten to accommodate induced vacuum. Thus, a label can be supported on the sidewall with very few voids, or like sunken areas, behind the label to ensure that the label is prominently displayed on the aesthetically appealing novel container configuration.

**Classifications:**

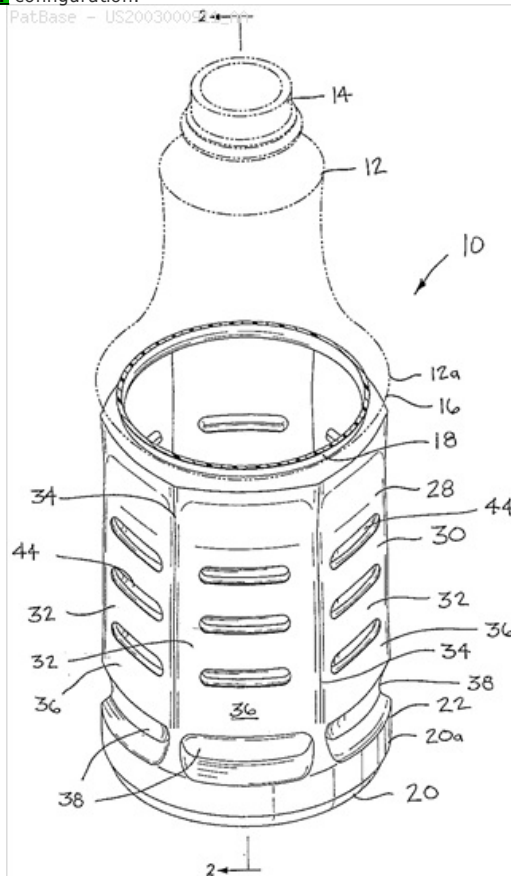
**International (IPC 8-9):** B29C49/00 B65D1/02 B65D1/44 B65D23/00 B65D79/00 (Advanced/Invention); B65D1/02 B65D1/40 B65D79/00 (Core/Invention)

**International (IPC 1-7):** B29C49/00 B65D1/02 B65D23/00 B65D79/00 B65D90/02 B65D90/12

**CPC:** B65D1/0223 B65D1/44 B65D79/005 B65D2501/0036 B65D2501/0081

**European:** B65D1/02D B65D1/44 B65D79/00B L65D1/02F L65D501/02Y1C L65D501/02Y9

**US:** 215/374 215/379 215/381 215/382 215/383 215/384



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2002310462 AA    | 20030303         | AU20020310462      | 20020619         |
| AU2002310462 AB    | 20041111         | AU20020310462      | 20020619         |
| AU2002310462 BB    | 20071213         | AU20020310462      | 20020619         |
| BRPI0210677 A      | 20040810         | BR2002PI10677      | 20020619         |
| CA2451200 AA       | 20031218         | CA20022451200      | 20020619         |
| CA2451200 C        | 20070904         | CA20022451200      | 20020619         |
| EP1401739 A1       | 20040331         | EP20020737540      | 20020619         |
| EP1401739 A4       | 20040825         | EP20020737540      | 20020619         |
| MXPA04000020 A1    | 20040521         | MX2004PA00020      | 20020619         |
| NZ530774 A         | 20060428         | NZ20020530774      | 20020619         |
| PL366909 A1        | 20050207         | PL20020366909      | 20020619         |
| US2003000911 AA    | 20030102         | US20020135315      | 20020429         |
| US2004016716 AA    | 20040129         | US20030621059      | 20030716         |
| US6929138 BB       | 20050816         | US20030621059      | 20030716         |
| WO03002430 A1      | 20030109         | WO2002US19436      | 20020619         |

**Priority:**

US20010301200P 20010627      US20020135315 20020429      US20030621059 20030716  
WO2002US19436 20020619

**Probable Assignee:** MELROSE DAVID MURRAY

**Assignee(s):** (std): GRAHAM PACKAGING CO ; GRAHAM PACKAGING CO L ; GRAHAM PACKAGING CO L P ; GRAHAM PACKAGING CO LP ; GRAHAM PACKAGING COMPANY ; KELLEY PAUL ; MOERSDORF SCOTT ; MELROSE DAVID M ; GRAHAM PACKAGING COMPANY L

**Assignee(s):** MELROSE DAVID MURRAY ; DEUTSCHE BANK AG ; DEUTSCHE BANK CAYMAN ISLANDS BRANCH AG ; DEUTSCHE BANK CAYMAN ISLANDS BRANCH SECOND LIEN CO ; DEUTSCHE BANK CAYMAN ISLANDS BRANCH SECOND LIEN COLLATERAL AGENT AG AS ; GRAHAM PACKAGING COMPANY L P

**Inventor(s):** (std): KELLEY PAUL ; MELROSE DAVID M ; MELROSE DAVID MURRAY ; MOERSDORF SCOTT ; PAUL KELLEY

**Inventor(s):** SCOTT MOERSDORF ; DAVID M MELROSE

**Agent(s):** SHELSTON IP; SHELSTON IP PTY LTD; FINLAYSON AND SINGLEHURST; HOWSON AND HOWSON

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

SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

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

**Abstract:** Source: US2003196926A [EN] A blow molded container having a multi-functional base which enables use of the container in both hot-fill operations and pasteurization/retort operations and enables efficient vertical stacking of like containers. To this end, a portion of the base is capable of flexing upwardly and/or downwardly in response to variations in pressures in a filled and sealed container. Structurally, the base has a continuous or discontinuous concave outer annular wall forming a continuous or discontinuous standing ring and an inner annular wall functioning as a flex panel. The inner annular wall connects outwardly to a plurality of radial webs extending at an elevation above the standing ring and connects inwardly to a central dimple. Preferably, the inner periphery of the annular wall is heat-set and biaxially oriented.

**Classifications:**

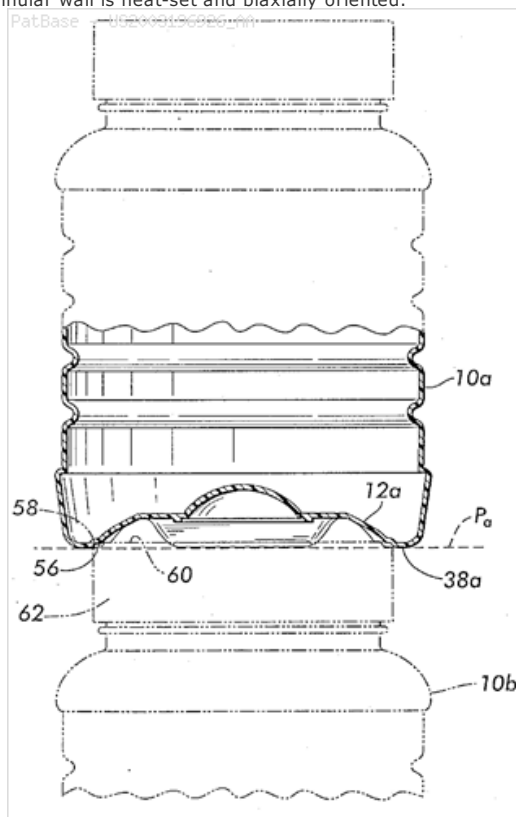
**International (IPC 8-9):** B65D1/02 B65D21/02  
B65D79/00 (Advanced/Invention)

**International (IPC 1-7):** B65D21/00 B65D85/62

**CPC:** B65D1/0284 B65D21/0231 B65D79/005

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

**US:** 206/509



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2003196926 AA    | 20031023         | US20030444616      | 20030523         |

**Priority:**

US20010284795P 20010419      US20020124734 20020417      US20030444616 20030523

**Probable Assignee:** GRAHAM PACKAGING CO LP

**Assignee(s):** DEUTSCHE BANK AG ; DEUTSCHE BANK CAYMAN ISLANDS BRANCH AG ; GRAHAM PACKAGING CO ;  
DEUTSCHE BANK CAYMAN ISLANDS BRANCH SECOND LIEN CO ; GRAHAM PACKAGING CO LP ;  
DEUTSCHE BANK CAYMAN ISLANDS BRANCH SECOND LIEN COLLATERAL AGENT AG AS ; OGG  
RICHARD K ; TRUDE GREG ; TOBIAS JOHN W

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

**Title:** GLASSY CARBON THERMOPLASTIC COMPOSITIONS

**Abstract:** Source: US2004101642A [EN] A thermoplastic composition such as a polyester composition including polyethylene terephthalate polymers containing glassy carbon, and the preforms, **bottles**, sheets, rods, tubes, films and other articles made from these compositions. Also, polyester compositions are provided which have a certain individual or combination of properties, including low coefficient of static friction, low coefficient of static friction and low haze or high Lss or low positive bss or a combination thereof, and those having low Lss and low positive bss at given reheate rates.

**Classifications:**

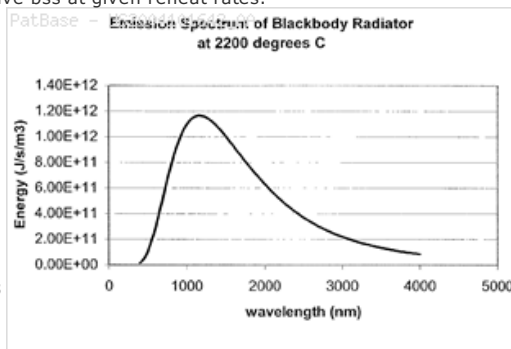
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**International (IPC 1-7):** B29B11/08 B29C45/00 B29C49/06 B29K67/00 B29K701/12 B29L22/00 B32B1/02 C08J5/00 C08K3/04 C08K7/18 C08L35/02 C08L67/00 C08L67/02 C08L67/04

**CPC:** Y10T428/1352 B29B2911/1402 B29B2911/14026 B29B2911/14033 B29B2911/1404 B29B2911/14106 B29B2911/14133 C08K7/18 C08K2201/016 Y10T428/31786 C08K3/04

**European:** C08K3/04 L29B911/14B2B L29B911/14B2D L29B911/14B2F L29B911/14B2H L29B911/14B4L L29B911/14B4N M08K201/016 M08K7/18

**US:** 428/35.7 428/35.700P 428/48 428/480 428/480S



**Family:**

| Publication number | Publication date | Application number | Application date |
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| AR041377 AA        | 20050511         | AR2003P103477      | 20030924         |
| BRPI0305204 A      | 20040831         | BR2003PI05204      | 20031121         |
| CA2437230 AA       | 20040526         | CA20032437230      | 20030814         |
| CA2596420 AA       | 20040526         | CA20032596420      | 20030814         |
| CN1502658 A        | 20040609         | CN200310117925     | 20031126         |
| CN1982372 A        | 20070620         | CN200610165997     | 20031126         |
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| KR20040047662 A    | 20040605         | KR20030084455      | 20031126         |
| MXPA03009296 A1    | 20050411         | MX2003PA09296      | 20031010         |
| TW200417462 A      | 20040916         | TW20030124732      | 20030908         |
| US2004101642 AA    | 20040527         | US20020304227      | 20021126         |

**Priority:**

CA20032437230 20030814 CA20032596420 20030814 US20020304227 20021126

**Probable Assignee:** EASTMAN KODAK CO

**Assignee(s):** (std): EASTMAN CHEM CO ; EASTMAN CHEMICAL CO

**Assignee(s):** EASTMAN CHEMICAL COMPANY ; EASTMAN KODAK CO ; HOWELL EARL EDMONDSON ; HOWELL EARL EDMONDSON JR ; QUILLEN DONNA RICE ; STAFFORD STEVEN LEE

**Inventor(s):** (std): EARL EDMONDSON HOWELL JR ; HOWELL E E JR ; HOWELL EARL EDMONDSON ; HOWELL EARL EDMONDSON JR ; QUILLEN D R ; QUILLEN DONNA RICE ; STAFFORD S L ; STAFFORD STEVEN LEE ; LEE QUILLEN DONNA RICE HOWELL ; SL STAFFORD ; EE HOWELL JR ; DR QUILLEN

**Inventor(s):** D R QUILLEN ; E E HOWELL JR ; S L STAFFORD ; QUILLEN DONNA RICE HOWELL EARL EDMONDSON JR ; JR ; EARL EDMONDSON HOWELL ; DONNA RICE QUILLEN ; STEVEN LEE STAFFORD ; QUILLEN DONNA RICE HOWELL EARL EDMONDSON JR STAFFORD STEVEN LEE ; QUILLEN DONNA RICE HOWELL EARL EDMONDSON JR STAFFO

**Agent(s):** GOWLING LAFLEUR HENDERSON LLP

**Designated states:** AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

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

**Abstract:** Source: US2004211746A [EN] 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:**

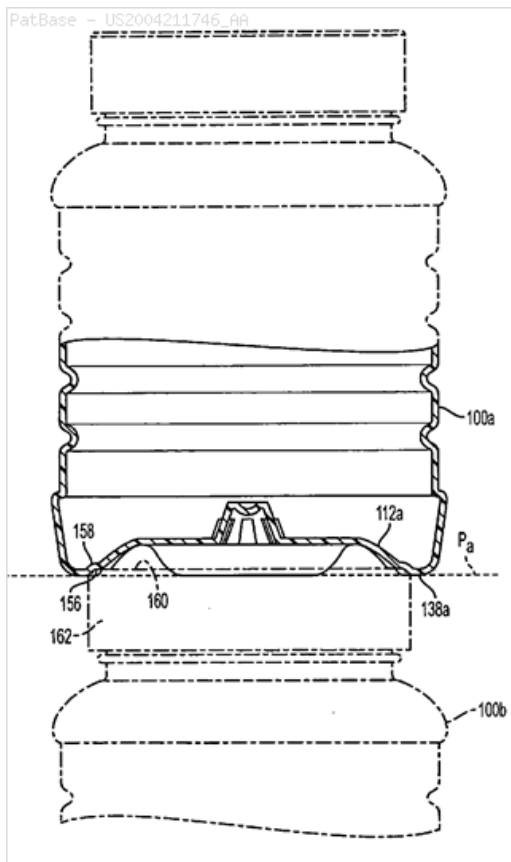
**International (IPC 8-9):** B65D1/02 B65D21/02 B65D79/00 B65D90/12 (Advanced/Invention)

**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 |
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| US2004211746 AA    | 20041028         | US20040851083      | 20040524         |
| US7543713 BB       | 20090609         | US20040851083      | 20040524         |

**Priority:**

US20010284795P 20010419 US20020124734 20020417 US20040851083 20040524  
US20030444616 20030523

**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): TRUDE GREG ; TOBIAS JOHN W ; OGG RICHARD K

**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:** Source: US2004232103A [EN] 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

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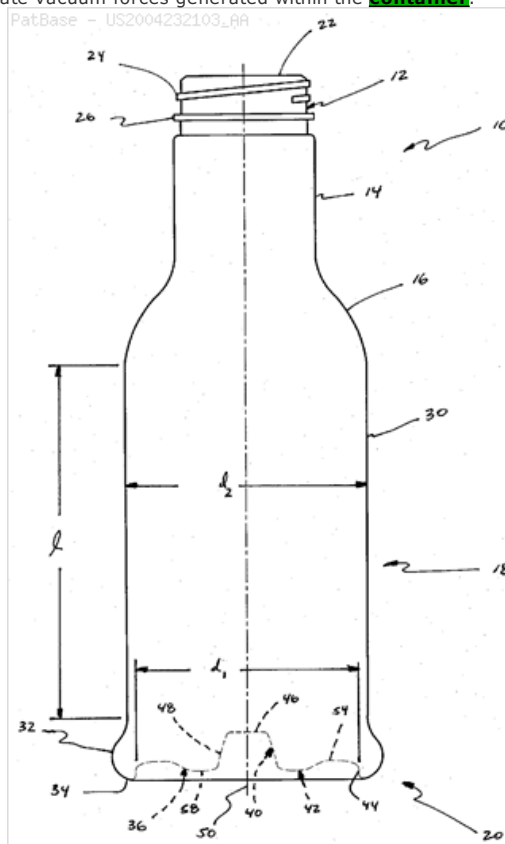
B65D1/0276 B65D2501/0036

**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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| AT427889 E         | 20090415         | AT20040750969T     | 20040430         |
| AT476368 E         | 20100815         | AT20050758519T     | 20050613         |
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| AU2004242590 BB    | 20100909         | AU20040242590      | 20040430         |
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| AU2005331254 BB    | 20120119         | AU20050331254      | 20050613         |
| AU2009314369 AA    | 20100520         | AU20090314369      | 20091028         |
| AU2009314369 BB    | 20140515         | AU20090314369      | 20091028         |
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| AU2010278853 BB    | 20140515         | AU20100278853      | 20100730         |
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| DK1893496 T3      | 20101108 | DK20050758519T  | 20050613 |
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| EP2459456 A4      | 20130109 | EP20100805103   | 20100730 |
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| EP3066010 A4      | 20170517 | EP20140859477   | 20141104 |
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| KR101205287 B1    | 20121127 | KR20077027634   | 20050613 |
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| RU2318710 C2      | 20080310 | RU20050140293   | 20040430 |
| RU2381968 C2      | 20100220 | RU20070144105   | 20050613 |
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| WO06118584 A1     | 20061109 | WO2005US20853   | 20050613 |
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| WO11014759 A3 | 20110603 | WO2010US43885 | 20100730 |
| WO15069620 A1 | 20150514 | WO2014US63812 | 20141104 |
| WO18005816 A1 | 20180104 | WO2017US40034 | 20170629 |

**Priority:**

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| US20050116764  | 20050428 | US20030445104  | 20030523 | WO2009US62301 | 20091028 |
| WO2004US13341  | 20040430 | WO2010US43885  | 20100730 | WO2005US20853 | 20050613 |
| US20130072377  | 20131105 | WO2014US63812  | 20141104 | US20160198668 | 20160630 |

**Probable Assignee:** AMCOR GROUP GMBH

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

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

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

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

**Agent(s):** GRIFFITH HACK; WRAYS; MACRAE AND CO; SILVANA MARIA LOPEZ DIAZ; WITTE WELLER AND PARTNER PATENTANWALTE MBB; GAHLERT STEFAN ET AL; GAHLERT STEFAN; WITTE WELLER AND PARTNER; ISERN JORGE; 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



**Title:** SYNTHETIC RESIN HEAT-RESISTANT BOTTLE TYPE CONTAINER

**Abstract:** Source: US2007075031A [EN] A slender synthetic resin heat-resistant bottle type container having a circumferential draw ratio of 2.8 or less, for example, comprises at least one pressure reduction absorbing panel (5) provided at a container body part, wherein the pressure reduction absorbing panel is provided with at least one convex portion (6) having a width larger at a lower side than at an upper side as viewed in a circumferential direction of the container. Alternatively, each pressure reduction absorbing panel has a border line bulged toward a container bottom part. This causes a resin to be smoothly stretched even at mold surface portions corresponding to concave and convex portions of a container body part surface upon blow molding. These avoid a defective appearance of the container and do not adversely affect heat resistance thereof.

**Classifications:**

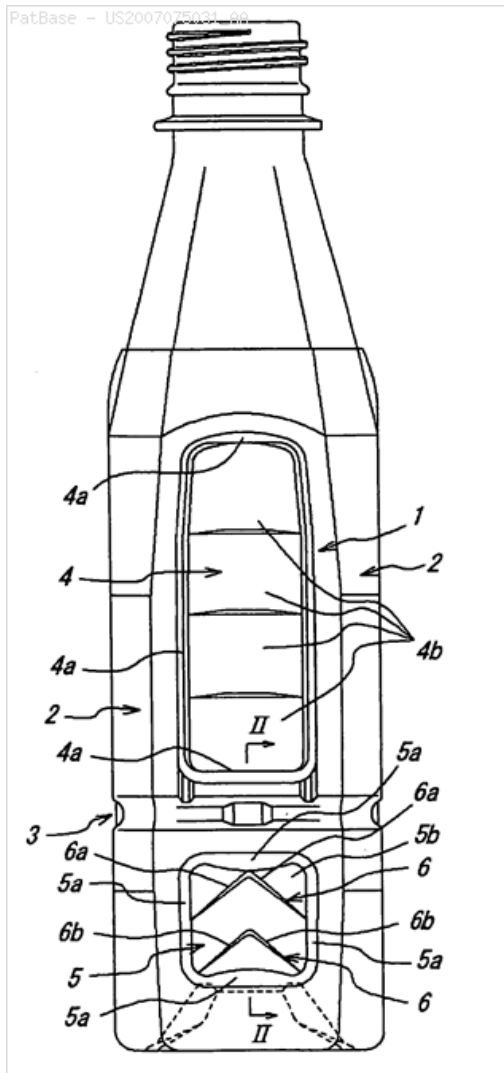
**International (IPC 8-9):** B29C49/48 B65D1/00 B65D1/02 B65D1/26 B65D1/40 B65D90/02 (Advanced/Invention); B29C49/06 B65D1/00 B65D1/02 B65D1/26 (Advanced/Non-invention); B65D1/00 B65D1/02 B65D1/22 B65D90/02 (Core/Invention); B29C49/06 (Core/Non-invention)

**International (IPC 1-7):** B65D1/02

**CPC:** B29C49/06 B65D1/0223 B65D2501/0081

**European:** B65D1/02D L29C49/06 L65D501/02Y9

**US:** 215/379 215/381 215/382 215/384 220/669 220/675



**Family:**

| Publication number | Publication date | Application number | Application date |
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| US2007075031 AA    | 20070405         | US20040580608      | 20041124         |
| US7552834 BB       | 20090630         | US20040580608      | 20041124         |
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