

1) Family number: 29780822 (US1767475A)

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Title: VACUUM SEALING MACHINE

Abstract: I claim is :- 4 1. In a vacuum sealing machine the combination of a vacuum chamber adapted to receive a vessel through the bottom thereof, oppositely disposed dies in said chamber for sealing a vessel, one of said dies being adapted to cooperate with the vessel to close the bottom of said chamber, a pump for exhausting the air therefrom, and driving means common to said pump and to said dies to operate them in sequence. 2. In a vacuum sealing machine, the combination of a vacuum chamber, a pump for exhausting air from said chamber, split members at the bottom of said chamber, means for raising the upper end of a vessel through said split members, devices for closing said split members about the wall of said vessel to close said chamber and to hold said vessel in position, a pin for locking said members in closed position, and a die adapted to cooperate with said split members for sealing said vessel in said chamber. 3. In a vacuum sealing machine, the combination of a vacuum chamber, a pump for exhausting air from said chamber, a pair of members at the bottom of said chamber pivoted together at one end and adapted to swing toward and away from each other about said pivot, means for raising the mouth of a vessel through said members, devices for closing said members about the wall of said vessel with the mouth of the vessel in the vacuum chamber to permit said pump to exhaust the air from said vessel, and mechanism for sealing said vessel in said chamber. 4. In a vacuum sealing machine, the combination of a vacuum chamber, a pump for exhausting air from said chamber, a pair of members at the bottom of said chamber pivoted together at one end and adapted to swing toward and away from each other about said pivot in a horizontal plane, means for raising the mouth of a vessel through said members, devices for closing said members about the wall of said vessel with the mouth of the vessel in the vacuum chamber to permit said pump to exhaust the air from said vessel, a pin adapted to pass through the free ends of the members and lock them in closed position, and mechanism for sealing said vessel in said chamber. 5. In a vacuum sealing machine, the combination of a vacuum chamber, a pump for exhausting air from said chamber, a pair of members at the bottom of said chamber pivoted at one end, the other end of said members being adapted to swing toward and away from each other about said pivot, means for raising the mouth of a vessel having a closure thereon through said members, devices for closing said members about the wall of said vessel with the closure and the mouth of the vessel in the vacuum chamber to permit said pump to exhaust the air from said vessel, and mechanism for sealing said closure on said vessel in said chamber. 6. In a vacuum sealing machine, the combination of a shaft, means for driving said shaft, a plurality of cams on said shaft, a cylinder mounted above said shaft, a piston in said cylinder operatively connected to said shaft means adapted to form an air tight chamber, said means comprising a pair of die members operated by one of said cams and adapted to encircle the side wall of a vessel, a conduit connecting the space above said members with said cylinder for exhausting air therefrom, and a valve controlled by another of said cams to open the upper end of said cylinder to atmosphere substantially at the termination of the exhausting stroke of the piston. 7. In a vacuum sealing machine, the combination of a shaft, means for driving said shaft, a plurality of cams on said shaft, a cylinder mounted above said shaft, a piston in said cylinder operatively connected to said shaft, means adapted to form an air tight chamber, said means comprising a pair of members operated by one of said cams and adapted to encircle the side wall of a vessel and form an air tight joint therewith, a conduit connecting the space above said members with said cylinder for exhausting the air therefrom, a valve controlled by another of said cams to open said cylinder to atmosphere substantially at the termination of the downward stroke of the piston, and sealing means for sealing said vessel when said piston has reached substantially its downward position. 8. In a vacuum sealing machine, the combination of a vacuum chamber adapted to receive a vessel through the bottom thereof, a split member at the bottom of said chamber adapted to cooperate with the side wall of a vessel to close the chamber, a pump having its cylinder adjacent said chamber for exhausting air therefrom, an open conduit to connect said chamber with said cylinder at all times, a positively operated valve in said cylinder for connecting it to atmosphere to break the vacuum therein and for closing it during a substantial portion of the downward stroke of the piston and driving means for said pump. 9. In a vacuum sealing machine, the combination of a vacuum chamber adapted to receive a vessel through the bottom thereof, a split die at the bottom of said chamber adapted to cooperate with the side wall of a vessel to close the chamber, a pump having its cylinder adjacent said chamber for exhausting air therefrom, an open conduit to connect said chamber with said cylinder at all times, a positively operated valve in said cylinder for connecting it to atmosphere while the piston is in predetermined positions and for closing it during the downward stroke thereof, a die in said chamber adapted to cooperate with said split die to seal said vessel, and mechanism for operating said pump, said split die, and said cooperating die in sequence. 10. In a vacuum sealing machine, the combination of oppositely disposed sealing dies adapted to seal a closure on a vessel, one of said dies being formed of a pair of members adapted to open to receive a vessel therebetween and to close about the side wall of the vessel to form an air tight joint between the vessel and said members prior to the sealing of the closure on the vessel, means for enclosing the space above said die member, a pump for exhausting the air in the space above said pair of members, and means for operating said dies. 11. In a vacuum sealing machine, the combination of an upper sealing die member adapted to move downwardly to engage a closure on a vessel, a second die member formed of a plurality of parts adapted to move relatively to each other to encircle the side wall of a vessel, means on said second die member to form a substantially hermetic seal with the side wall of the vessel, means for moving said parts, and means to move said upper die downwardly to press a closure against said second die member to seal it on a vessel. 12. In a vacuum sealing machine, the combination of an upper sealing die adapted to move downwardly to engage a closure on a vessel, a second die formed of a plurality of parts adapted to move relatively to each other to encircle the side wall of a vessel, resilient means attached to said parts to contact with the side wall of the vessel to form a hermetic seal thereabout, means for moving said parts, and means to move said upper die downwardly to press a closure against said second die to seal it on a vessel. 13. In a vacuum sealing machine, the combination of an upper sealing die adapted to move downwardly to engage a closure on a vessel, a second die formed of a plurality of parts adapted to move relatively to each other to encircle the side wall of a vessel, gaskets attached to the inner edges of said parts to contact with the side wall of the vessel to form a substantially hermetic seal thereabout, means for moving said parts, means to move said upper die downwardly to press a closure against said second die to seal it therebetween, means forming an enclosed chamber above said second die and means for exhausting air from the said chamber prior to the sealing operation. 14. In a vacuum sealing machine, the combination of an upper sealing die adapted to engage a closure on a vessel, a second die formed of a pair of members hinged at one end, a yoke attached to said members eccentrically with respect to said hinge, means forming an enclosed chamber above said second die, means for moving said yoke relative to said hinge to open and close said members to engage and disengage the side wall of a vessel, a pump for exhausting the air from the space above said members, devices for bringing said upper die into cooperation with said members to seal a vessel, and means for locking said members in closed position during the sealing operation. 15. In a vacuum sealing machine, the combination of an upper sealing die, a second die formed of a pair of members having apertures at their respective ends, a bolt anchored in said machine and extending through the apertures at one end of said members to form a hinged structure, a yoke attached to said members to open and close them about said bolt, means for inserting a vessel, having a closure thereon, between said members with the closure in engagement therewith, means forming an enclosed space above said members, a pump to exhaust the air from the space above said members, and devices for moving said upper sealing die into engagement with the closure to seal same on vessel. 16. In a vacuum sealing machine, the combination of an upper sealing die, a second die formed of a pair of members having apertures at their respective ends, a bolt anchored in said machine and extending through the apertures at one end of said members to form a hinge structure, a yoke attached to said members to open and close them about said bolt, means for inserting a vessel, having a closure thereon, between said members whereby a hermetic seal is formed between said vessel and said members, locking means adapted to engage the apertures in the free ends of said members to lock them in closed position, means forming an enclosed space above said members, a pump to exhaust the air from said space, and devices for moving said upper sealing die into engagement with

the closure to seal same on vesse . 17. In a vacuum sealing machine for hermetically sealing beaded closures on vessels, the combination of an upper sealing die adapted to lit over a closure and engage the bead thereon, a second die formed of a plurality of members movable relative to each other, means for inserting a vessel between said members, devices for closing said second die members about said vessel with the die engaging the bead on the closure, locking means to hold said members in closed position, gaskets fixed to said die members to contact with the side wall of the vessel to prevent air from leaking therebetween, an enclosed chamber formed about said die members, a pump to exhaust air from the space above said members, and mechanism for advancing said upperdie into engagement with the closure and said second die to form a side seal on said vessel, . 18. In a vacuum sealing machine for hermetically sealing beaded closures on vessels, the combination of an upper sealing ,die adapted to fit over a closure and engage the bead thereon, a second die formed of a plurality of members movable relative to each other, means for inserting a vessel between said members, devices for closing said second die members about said vessel with the die engaging the bead on the closure, locking means to hold said members in closed position, gaskets fixed beneath said die members and extending inwardly beyond the edge thereof to contact with the side wall of the vessel and prevent air from leaking therebetween, means for enclosing the space about said die members comprising a ring gasket engaging the upper surface of said members, a pump to exhaust air from the space above said members, and mechanism for advancing said upper die into engagement with the closure and said second die to form a side seal on said vessel. 19. In a vacuum sealing machine, _devices for movin a vessel to sealing position, a split die adapted to engage said vessel about its upper end below the closure thereon, a gasket on said split die engaging said vessel and forming an air tight joint t erewith, an upper die adapted to engage said closure and cooperate with said split die to form a hermetic seal on said vessel, a housing extending about said upper die, a ring gasket engaging said housing and said split die to prevent entry of air therebetween, said hous- ing, said gaskets and said split die forming with the vessel and the frame of the machine an air tight chamber above said vessel, means for exhausting the air from said chamber, and means for operating said dies for sealing said vessel. 20. In a vacuum sealing machine, devices for moving a vessel to sealing position, a split die adapted to engage said vessel about its upper end below the closure thereon, devices for locking said split die in position about said container, gaskets on said split die engaging said vessel and forming an air tight joint therewith, an upper die adapted to engage said closure and cooperate with said split die to form a hermetic seal on said vessel, a housing extending about said upper die, a ring gasket engaging said housing and said split die to prevent entry of air therebetween, said housing, said gaskets and said split die formin with the vessel and the frame of the machine an air tight chamber above said vessel, means for exhausting the air from said chamber, and means for operating said dies for scaling said vessel. 21. In a vacuum sealing machine, devices for raising a vessel to sealing position, a split die adapted to engage said raised vessel about its upper end below the closure thereon, a gasket on said split die engaging said vessel and forming an air tight joint therewith, an upper die adapted to engage said closure and cooperate with said split die to form a hermetic seal on said vessel, a housing extending about said upper die, a ring gasket engaging firmly said housing and said split die to prevent entry of air therebetween, means for adjusting the position of said ring gasket, said housing, said gaskets and said split die to form with the vessel and the frame of the machine an air tight chamber above said vessel, a pump for exhausting the air from said chamber, and means for operating said dies for sealing said vessel. 22. In a machine for forming side seals on vessels, the combination of oppositely disposed sealing dies, one of said dies comprising a pair of members hinged at one end, whereby their free ends may open and close about the upper part of a vessel, the inner surface of said die members being shaped to accommodate the bead of a closure, means cooperating with said pair of members to form a seal between said members and the side wall of the vessel, means to press said other die downwardly to engage the bead and press it against the lower die to expel the gasket therefrom and to seal the vessel. 23. In a machine for forming side seals on vessels, the combination of oppositely disposed sealing dies, one of said dies comprising a pair of members hinged at one end, a yoke eccentrically attached to each of said members and adapted to open and close the die about the upper side wall of a vessel, the inner surface of said members being shaped to accommodate the bead of a closure, means to press said other die downwardly to engage the bead and press it against the lower die to expel the gasket therefrom and to seal the vesse . 24. In a sealing machine, the combination of a chamber open at its bottom portion, a pair of cooperating members hinged to each other and adapted to encircle the upper portion of a vessel to substantially enclose said chamber with the upper end of the vessel therein, and a ringasket adapted to engage said means and said chamber to form an air tight connection therebetween. 25. In a vacuum sealing machine, the combination of a chamber open at its bottom portion, a pair of cooperating members hinged to each other and adapted to encircle the upper portion of a vessel to substantially enclose said chamber with the mouth of the vessel therein, a ring gasket adapted to move downwardly to engage said members to form an air tight connection with said chamber, and devices for moving said gasket when said members have closed about a vessel. 26. In a vacuum sealing machine, the combination of a vacuum chamber adapted to receive a vessel through the bottom thereof, oppositely disposed sealing dies in said chamber for sealing a vessel, one of said dies being adapted to cooperate with the vessel to close the bottom of said chamber by forming an airtight seal between said die and a container, and means for exhausting the air from said chamber. 27. In a vacuum sealing machine, the combination of a vacuum chamber adapted to receive a vessel through an open portion, thereof, sealing dies in said chamber for forming a side seal on a vessel, one of said dies hermetically closing the open portion of said chamber by encircling the side wall of the vessel, and means for exhausting the air from said chamber prior to the sealing operation. 28. In a vacuum sealing machine, the combination of oppositely disposed sealing dies adapted to seal a closure on a vessel, one of said dies comprising a plurality of members adapted to open to receive a vessel and to close about the side wall of the vessel to form an air tight joint between the vessel and said members prior to the sealing of the closure on the vessel, a chamber about said plurality of members adapted to enclose the upper end of the container, and means for operating said dies to form a side seal between said closure and the side wall of said vessel. 29. In a vacuum sealing machine, a vacuum chamber comprising an upper portion attached to the framework of the machine, a die adapted to encircle the side wall of a vessel and to form therewith the bottom of said chamber, means to form a seal between said die and the vessel, a ring gasket forming a part of the side wall of the chamber and closing the space between said upper portion and said die, means to cooperate with said die to effect a seal on said vessel, and means to move said ring gasket downwardly to engage said die. . 30. In a vacuum sealing machine, the combination of a vacuum chamber comprising an upper portion attached to the framework of the machine, a die adapted to encircle the side wall of a vessel and to form therewith the bottom of said chamber, means to form a seal between said die and the vessel, a ring asket forming a part of the side walls of die chamber and adapted to close the space between said upper portion and said die, and means for moving said gasket downwardly into engagement with said die. 31. In a vacuum sealing machine, the combination of a vacuum chamber, a pump for exhausting air from said chamber, a lit member at the bottom of said chamber means for raising the upper end of a vessel through said split member, devices for closing said split member about the wall of said vessel to close said chamber and to hold said vessel in position, a pin for locking said split member in closed position, and mechanism for sealing said vessel in said chamber. 32. In a vacuum sealing machine for hermetically sealing beaded closures on vessels, a vacuum chamber comprising an upper portion, means movable with respect to said upper portion of the vacuum chamber to encircle the sidewall of a vessel and to form therewith the bottom of said chamber, means for forming a seal between said movable means and said vessel, and a ring gasket forming a part of the sidewall of the chamber and closing the space between said upper portion and said movable means. 33. In a vacuum sealing machine, the combination of a vacuum chamber adapted to receive a vessel through the bottom thereof, die members adapted to close about the vessel to form an air-tight seal therewith and to form the bottom of said vacuum chamber with the vessel extending partially therethrough, means for exhausting the air from said chamber, and devices adapted to cooperate with said die members to seal a closure to the vessel

Classifications:

International (IPC 8-9): F04B39/08 (Advanced/Invention);

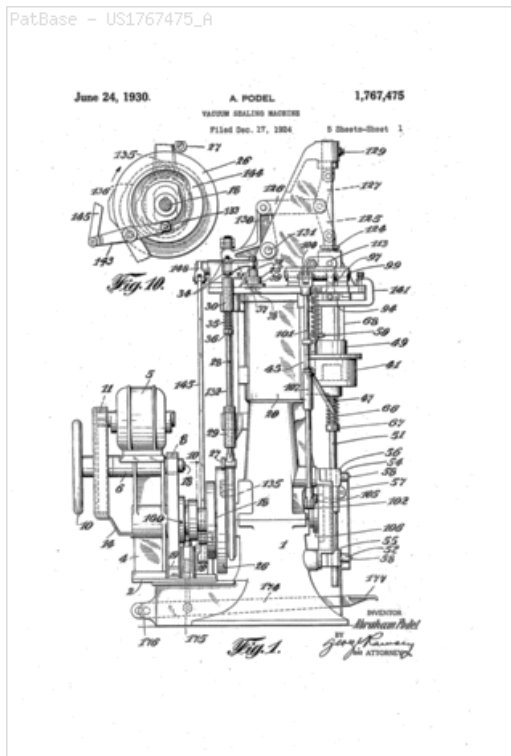
F04B39/08 (Core/Invention)

International (IPC 1-7): F04B39/08

CPC: F04B39/08

European: 64B22A F04B39/08

US: 53/101 53/88 53/89

**Family:**

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Probable Assignee:

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Inventor(s): (std):

ABRAHAM PODEL

Inventor(s):

PODEL ABRAHAM

2) Family number: 22894143 (US2963834A)

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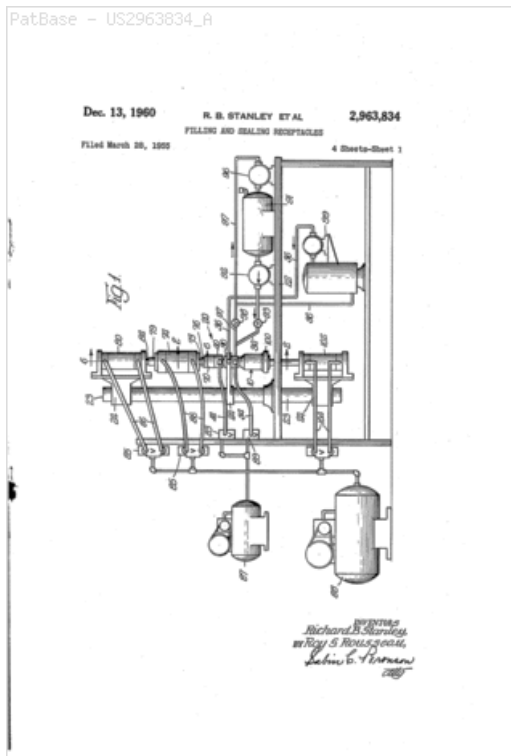
Title: FILLING AND SEALING RECEPTACLES

Abstract: (Claim 1) 1. A device for filling and sealing a container which has a mouth closed by a cap seated thereon, said cap having a concentric well extending partially within said container comprising, a bell means for seating on the container and forming a hermetic seal encircling the mouth, means for raising the cap from the container to open the mouth, means for evacuating said bell means and container while the cap is lifted, means for introducing material through said bell means into said container, an expandable collet having crimping lips extendable into the well of the cap, and reciprocable means mounted within the collet for expanding the collet to force said crimping lips outwardly against the inner surface of the well, causing the cap to expand outwardly under the mouth thereby sealing the cap to the container.

Classifications:**International (IPC 8-9):** B65B31/00 (Advanced/Invention);

B65B31/00 (Core/Invention)

International (IPC 1-7): B65B31/04 B65D83/14**CPC:** B65B31/003**European:** B65B31/00A**US:** 53/330 53/470 53/88

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Publication number	Publication date	Application number	Application date
US2963834 A	19601213	US19550497196	19550328

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Probable Assignee: KARTRIDG PAK CO**Assignee(s):** (std): KARTRIDG PAK CO**Assignee(s):** THE KARTRIDG PAK CO**Inventor(s):** (std): ROUSSEAU ROY S ; STANLEY RICHARD B**3) Family number: 29750624 (US2002110625A)**

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Title: CONTINUOUS PACKAGING IN ENCLOSED CONDUITS

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

Classifications:

International (IPC 8-9): A22C17/00 A22C17/08 A22C17/10 A22C18/00 A23B4/00 A23B4/12 A23B4/16 A23B4/18 A23B4/20 A23B4/24 A23B4/26 A23K1/18 A23L1/015 A23L1/27 A23L1/31 A23L1/312 A23L1/313 A23L1/317 A23L1/48 A23L13/00 A23L13/20 A23L13/30 A23L13/60 A23L3/015 A23L3/34 A23L3/3418 A23L3/3445 A23L35/00 A23L5/20 A23L5/40 A23P1/00 A23P1/02 A23P1/10 A61L2/16 B01D21/02 B01D21/26 B04B3/04 B32B37/00 B60K6/12 B61J1/08 B65B25/06 B65B31/00 B65B31/02 B65B47/02 B65B55/00 B65B55/12 B65B7/16 B65D21/00 B65D21/06 B65D5/42 B65D6/10 B65D77/20 B65D81/00 B65D81/20 B65D81/26 B65D81/28 B65D85/00 B65G47/61 C10L1/18 C10L5/00 C10L5/40 C12C3/04 F02B57/08 G01N21/00 G01N31/12 G01N33/12 G06Q30/00 (Advanced/Invention); B04B1/20 (Advanced/Non-invention); A23B4/00 A23B4/12 A23B4/14 A23B4/26 A23L1/015 A23L1/27 A23L1/31 A23L1/317 A23L3/015 A23L3/34 A23P1/02 A61L2/16 B01D21/02 B32B37/00 B65B25/00 B65B31/02 B65B7/16 B65D21/06 B65D6/00 B65D77/10 B65D81/20 B65D81/26 B65D81/28 B65D85/00 B65G47/61 C10L1/18 C10L5/00 C10L5/40 C12C3/04 F02B57/08 G01N21/00 G01N31/12 G01N33/12 G06Q30/00 (Advanced/Invention); B04B1/20 (Advanced/Non-invention); A23B4/00 A23B4/12 A23B4/14 A23B4/26 A23L1/015 A23L1/27 A23L1/31 A23L1/317 A23L3/015 A23L3/34 A23P1/02 A61L2/16 B01D21/02 B32B37/00 B65B25/00 B65B31/02 B65B7/16 B65D21/06 B65D6/00 B65D77/10 B65D81/20 B65D81/26 B65D81/28 B65D85/00 B65G47/61 C10L1/18 C10L5/00 C10L5/40 C12C3/04 F02B57/08 G01N21/00 G01N31/12 G01N33/12 G06Q30/00 (Advanced/Invention); B04B1/20 (Advanced/Non-invention); A23B4/00 A23B4/12 A23B4/14 A23B4/26 A23L1/015 A23L1/27 A23L1/31 A23L1/317 A23L3/015 A23L3/34 A23P1/02 A61L2/16 B01D21/02 B32B37/00 B65B25/00 B65B31/02 B65B7/16 B65D21/06 B65D6/00 B65D77/10 B65D81/20 B65D81/26 B65D81/28 B65D85/00 B65G47/61 C10L1/18 C10L5/00 C10L5/40 C12C3/04 F02B57/08 G01N21/00 G01N31/12 G01N33/12 G06Q30/00 (Advanced/Invention); B04B1/20 (Advanced/Non-invention); A23B4/00 A23B4/12 A23B4/14 A23B4/26 A23L1/015 A23L1/27 A23L1/31 A23L1/317 A23L3/015 A23L3/34 A23P1/02 A61L2/16 B01D21/02 B32B37/00 B65B25/00 B65B31/02 B65B7/16 B65D21/06 B65D6/00 B65D77/10 B65D81/20 B65D81/26 B65D81/28 B65D85/00 B65G47/61 C10L1/18 C10L5/00 C10L5/40 C12C3/04 F02B57/08 G01N21/00 G01N31/12 G01N33/12 G06Q30/00 (Advanced/Invention); 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Probable Assignee: SAFEFRESH TECHNOLOGIES LLC

Assignee(s): (std): ATKINSON KEVAN J ; CASE READY SOLUTIONS LLC ; GARWOOD ANTHONY J ; GARWOOD ANTHONY J M ; STEPHENS ROBERT M ; SAFEFRESH TECHNOLOGIES LLC ; AGB LLC ; GARWOOD NICHOLAS J

Assignee(s): STONE MICHAEL ; TIMMERMAN SF LLC ; MILLER ANDREW W ; AMERICAN BEEF PROCESSING LLC ; ANTHONY J GARWOOD ; GARWOOD ANTHONY JM ; FEFRESH TECHNOLOGIES LLC SA

Inventor(s): (std): ANTHONY J ; ANTHONY J GARWOOD ; ATKINSON KEVAN J ; ANTHONY JM GARWOOD ; ANTHONY J M GARWOOD ; GARWOOD ANTHONY J ; STEPHENS ROBERT M ; GARWOOD ANTHONY J M ; GARWOOD NICHOLAS J

Inventor(s): GARWOOD ANTHONY JM ; ROBERT M STEPHENS ; KEVAN J ATKINSON ; GARWOOD ANTHONY

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

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

4) Family number: 64460321 (US2018093287A)

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Title: OMEGA-3 SPRAY

Abstract: A pump assembly cap includes an accumulator reservoir configured for fluid communication with a container through a one-way inlet valve. An actuator including a dispensing passage having a dispensing orifice. A delivery path extended from the one-way inlet valve, through the accumulator reservoir, the one-way outlet valve, and to the dispensing orifice. The delivery path includes a sealed configuration and an opened configuration. In the sealed configuration, the actuator is in a ready position and the accumulator reservoir includes a first volume, the one-way outlet valve hermetically seals the accumulator reservoir, and the one-way inlet valve is closed. In the opened configuration, the actuator is moved to a dispensing position and the accumulator reservoir includes a second volume less than the first volume, the hermetic seal of the one-way outlet is open, and the one-way inlet valve is closed.

Classifications:

International (IPC 8-9): B05B11/00 B05C17/005 B65D47/00

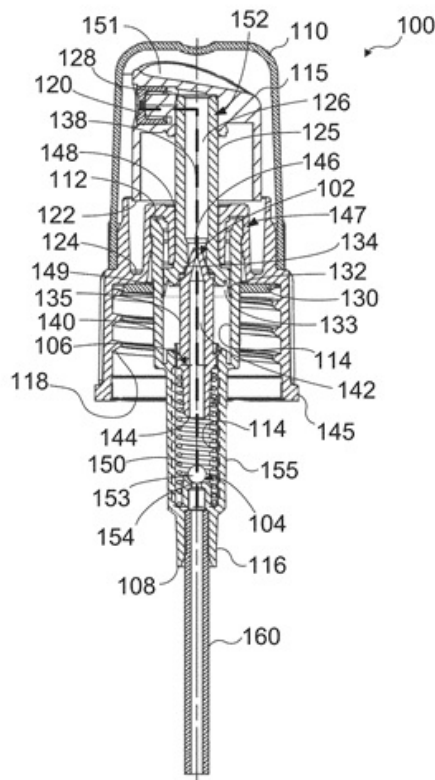
B65D47/34 (Advanced/Invention);

A23D7/00 A23K20/158 (Advanced/Non-invention)

CPC: B05B11/3008 B05C17/005 A23D7/003 B05B11/3039

A23K20/158 B05B11/304 B05B11/00412 B05B11/3047 B65D47/00

US: 1/1 222/321.9

**Family:**

Publication number	Publication date	Application number	Application date
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WO16205408 A1	20161222	WO2016US37683	20160615

Priority:

US20150175934P 20150615 WO2016US37683 20160615 US20170836047 20171208

Probable Assignee: PLANT BASED CO

Assignee(s): (std): DHIR RAJAT ; PLANT BASED CO

Inventor(s): (std): DHIR RAJAT

Agent(s): SCHWEGMAN LUNDBERG AND WOESSNER PA; PERDOK MONIQUE M ET AL

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

5) Family number: 22784664 (US2947904A)

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Title: MACHINE FOR SUPPLYING A CHARGE OF PROPELLANT TO AN AEROSOL CONTAINER AND FOR SEALING THE LATTER

Abstract: (Claim 1) A machine of the character described comprising: a seat adapted to receive and support in upright position a container having a top opening with a valved closure loosely resting therein, an operating head positioned above the seat, -means for producing relative movement between the seat and the head to bring about; engagement between the head and the container, means on the head for producing a seal around the top opening of the container when the head is engaged with the latter, means on the head for lifting the closure free from the top opening of the container, walled passages leading into a chamber in the head totally of said chamber for introducing a predetermined quantity of propellant through the head into the container while the closure is lifted, means for thereafter lowering the closure and means on the head for thereafter crimping the closure to the container to form a hermetic seal therewith while the top opening of the container remains sealed with respect to the head.

Classifications:

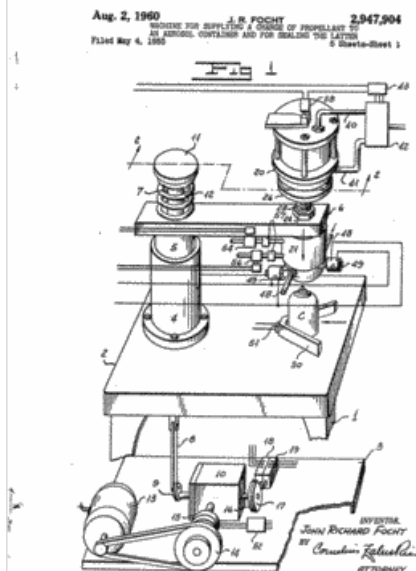
International (IPC 8-9): B65B31/00 (Advanced/Invention); B65B31/00 (Core/Invention)

International (IPC 1-7): B65B31/04

CPC: B65B31/003

European: B65B31/00A

US: 141/20 141/284 53/109 53/330 53/470 53/55 53/88

**Family:**

Publication number	Publication date	Application number	Application date
US2947904 A	19600802	US19550505880	19550504

Priority:

US19550505880 19550504

Probable Assignee:	PRECISION VALVE CORP
Assignee(s): (std):	PRECISION VALVE CORP
Inventor(s): (std):	RICHARD FOCHT JOHN
Inventor(s):	FOCHT JOHN RICHARD

6) Family number: 26140267 (GB1027597A)

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Title: IMPROVED PROCESS AND APPARATUS FOR PACKAGING A LIQUID-CONTAINING FOOD PRODUCT

Abstract: 1,027,597. Bottling. OWENS-ILLINOIS Inc. Dec. 18, 1962 [Dec. 18, 1961], No. 47841/62. Heading B8T. [Also in Division A2] Liquid food in a closed vessel 11 is heated, e.g. by an electric heater 12, to a sterilizing temperature which is above the atmospheric boiling point of the liquid, and the pressure in the vessel is maintained sufficient to prevent boiling; a container 35 to be filled is placed at least partially within a filling chamber 32 maintained under a gaseous pressure whereby to prevent substantial boiling of the liquid on transforming it to the container from the vessel; after the filling operation the container is sealed by a closure 41, the pressure in the chamber then released and the sealed container removed from the chamber. The apparatus of Fig. 1 comprises a rotary filler and includes a number of filling chambers 32 with intermediate chambers 24 circumferentially spaced around the vessel. The latter has correspondingly spaced openings 16 each controlled by a cam-actuated slide valve 18 shown in the container filling position in Fig. 1 with the opening 16 closed. The containers are supported on vertically reciprocable pads 44 carried by a rotary table 47, and are embraced by holders 49. Each closure 41 is held by a magnet 40 on a piston 33. In one position of the slide valve 18 the opening 16 coincides with an opening 23 in a tubular part of the valve, and whilst in this position a piston 30 is raised by cam means to draw liquid into a chamber 24 via a valve opening 22. When a container has been lifted into engagement with a seal 34 on the bottom of the filling chamber steam under pressure is fed to the chamber from the vessel 11 by pipes 37 and 38. Valve 18 is then moved radially outward to close opening 16, and the piston 30 is lowered to force liquid from outlet 21 to the container. When the valve 18 is retracted the piston 33 is lowered by cam means to force a closure on to the container mouth. Pipe 37 is opened to atmosphere and the sealed container lowered and transferred to a heated lehr 57. The latter ensures that the liquid is maintained at sterilizing temperature for a sufficient period to ensure sterilization of the container and closure. The filler of Fig. 2 (not shown) is non-rotary, but the containers are supplied on a turntable 47 and raised against a seal 81 on the filling chamber. A valve 67 controls liquid flow to a passage 66 and slide valve 74 by which liquid passes directly from the vessel 11 and valve 74 to the chamber 32 and container. A piston 79 has a magnet 40 for holding a closure, and is normally spring-urged upwardly but is lowered to receive closures which are fed by a reciprocatory trough 80a through an opening 80. The cam filling apparatus of Fig. 5 (not shown) includes a closing head 100 supporting a magnetic chuck 102 which carries a can cover 103; the head has seamers 105 to seal the cover to the can. A tube 108 is expanded by compressed air on to the can wall to provide a seal. A modification is described in which a container is partly received within the filling chamber and is sealed by an expansible tube of the kind mentioned above; alternatively the container may be received wholly within the filling chamber and sealed therein by a resilient ring, compressed between the base of the chamber and the container-supporting pad.

Classifications:**International (IPC 8-9):** B65B55/02 B65B55/06 B65B55/14

B67C7/00 (Advanced/Invention);

B67C3/26 (Advanced/Non-invention);

B65B55/02 B67C7/00 (Core/Invention);

B67C3/02 (Core/Non-invention)

International (IPC 1-7): A23L3/02 B65B31/02 B65B55/14 B67C3/26

B67C7/00

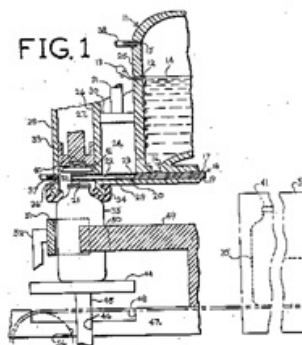
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B67C2003/2648 B67C2003/2691 B67C2003/2697

European: B65B55/02 B65B55/14 B67C7/00C L67C3/26L

L67C3/26U1 L67C3/26U5

FK

**Family:**

Publication number	Publication date	Application number	Application date
AT251440 B	19670110	AT19620009883	19621218
AU2537762 A1	19640618	AU19620025377	19621212
AU2537762 B1	19640618	AU19620025377	19621212
BE646943 A	19640817	BE19640646943	19640423
CH426602 A	19661215	CH19620014822	19621218
GB1027597 A	19660427	GB19620047841	19621218
LU42893 A	19630218		19621218

Priority:

US19610160203 19611218

Probable Assignee: OWENS ILLINOIS W C**Assignee(s):** (std): OWENS ILLINOIS GLASS CO ; OWENS ILLINOIS W C**Assignee(s):** OWENS ILLINOIS WC ; OWENS ILLINOIS GLASS COMPANY**Inventor(s):** (std): HERBERT ALEXANDER BARNBY**Inventor(s):** HERBERT ALEXANDER BARNDT ; ALEXANDER BARNBY HERBERT**7) Family number: 20523570** (GB784922A)

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Title: Improvements in or relating to a machine and method for supplying a charge of propellant to an aerosol container and for thereafter sealing the latter

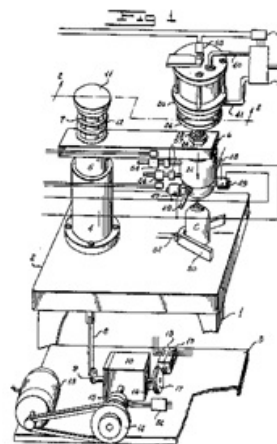
Abstract: 784,922. Filling and closing aerosol containers. PRECISION VALVE CORPORATION. Jan. 25, 1956 [May 4, 1955], No. 2465/56. Class 125(2). In filling an aerosol container having a valved closure, the mouth of the container carrying the closure loosely is sealed to a filling head, the closure is lifted clear of the mouth, propellant is supplied to the container, the closure is lowered to the container and then sealed thereon, and lastly the seal between the head and the container mouth is broken. Preferably the closure is of the type which is expanded into engagement with the mouth as disclosed in Specification 680,067 [Group XXIX]. As shown, the head comprises upper and lower cylinders 20, 21 fixed to an arm 6 carried at the top of a vertically slidable rod 8 reciprocated by a continuously-running motor 13 through a brakeclutch mechanism 15, gear box 10 and a crank 13. In operation, a container C is placed in a locating member 50 and actuates a switch 51 which causes a timer to be energized. The timer first actuates a control 52 which throws in clutch 15 and crank 13 moves through half a revolution to lower the arm 6, the clutch being then thrown out by a switch 18 actuated by a cam 16 driven from gear box 10. At this stage the shoulder of the container seals against a gasket 53 at the bottom of cylinder 21 and the closure X seals against a gasket 30 carried by a cylindrical flange 29 depending from the lower piston 28. The timer now opens a solenoid valve 54 in pipe 45 so that vacuum is applied above piston 28, this vacuum being communicated through a bore 55 to the upper side of the closure to hold it against the gasket 30. The timer then opens a solenoid valve 56 to admit pressurized air through pipe 46 below the piston 28 which is thus raised carrying the closure with it. The timer then opens twin valves 49 so that propellant flows into the container through pipes 48 which are tangential to the inner bore of block 27 to reduce foaming. After filling valves 49 close and vent valves 57 in pipes 45, 46 are opened so that a spring 44 lowers piston 28 and the closure is freed from the gasket and enters the container mouth. The timer then actuates a valve 42 so that pressure air passes through pipe 40 to the upper side of piston 37 in the upper cylinder 20. The piston descends and a plunger 39 depending therefrom expands fingers 35 so that the closure is expanded into the container mouth. When the piston 37 reaches its lowest point, it opens a switch 58 which reverses valve 42 so that pressure air flows through pipe 41 to raise the piston 37. The timer then actuates control 52 so that the crank 13 makes another half-turn to raise the arm 6 and then the clutch is thrown out by a cam 17 actuating switch 19. In a modified form the head may be fixed and the container support movable vertically.

Classifications:**International (IPC 8-9):** B65B31/00 (Advanced/Invention);

B65B31/00 (Core/Invention)

International (IPC 1-7): B65B31/04 B67C3/00**CPC:** B65B31/003**European:** B65B31/00A

784922 COMPLETE SPECIFICATION
5 SHEETS
This drawing is a reproduction of
the Original as a reduced scale.
SHEET 1



Family:

Publication number	Publication date	Application number	Application date
GB784922 A	19571016	GB19560002465	19560125

Priority:

19550504

Probable Assignee:

PRECISION VALVE CORP

Assignee(s): (std):

PRECISION VALVE CORP

8) Family number: 11235345 (DE4310084A1)

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Title: VACUUM SYSTEM FOR REUSABLE CONTAINERS, BAGS AND FILMS OF PLASTIC ETC. FOR THE PRESERVING STORAGE OF ANY TYPE OF FOOD AND LUXURY FOOD FOR DAILY DOMESTIC NEEDS

Abstract: The vacuum system for reusable containers, bags and films of plastic etc. is excellently suited to the preserving storage of any type of food and luxury food for daily domestic needs. Particularly in conjunction with refrigerating appliances, the consumability and shelf life of food and the like which normally perishes rapidly is considerably lengthened by the exclusion of air. The containers are of simple design and, especially in conjunction with container magazines, are extremely user-friendly since the generation of the preserving vacuum is triggered fully automatically upon insertion of the system container into the container magazine. All container lids belonging to the system can be easily put on and taken off as they form a firm connection with the system container only upon generation of negative pressure. The highly preserving action is achieved by utilising atmospheric pressure, whereby the substances to be preserved are closely encased by highly elastic material with the complete exclusion of harmful air or in the case of vessels made of solid materials by adaptation of the vessel to the contents, which is achieved by continuous adjustability of the vessel lid or vessel bottom. The container system is particularly cost-effective by virtue of the fact that the containers can be of pressureless design owing to the utilisation of atmospheric pressure, and thereby... from a large number of reasonably priced and... Original abstract incomplete.

Classifications:

International (IPC 8-9): A47G19/30 B65D81/20

B65D81/24 (Advanced/Invention);

A47G19/00 B65D81/20 B65D81/24 (Core/Invention)

International (IPC 1-7): A47G19/30 B65B31/00 B65B57/00

B65D45/02 B65D47/00 B65D53/00

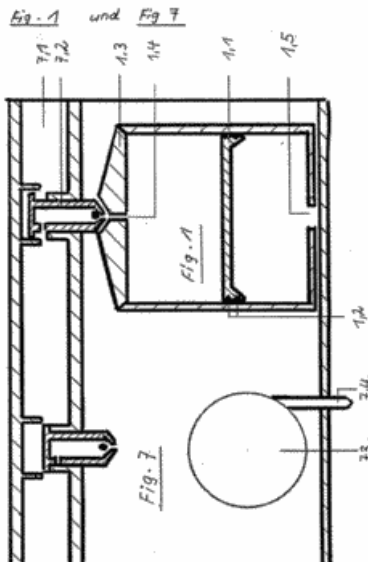
CPC: Y02W30/807 B65D81/2007 A47G19/30 B65D81/245

European: A47G19/30 B65D81/20B B65D81/24B

PatBase - DE4310084_A1

ZEICHNUNGEN SEITE 1

Nummer: DE 43 10 084 A1
Int. Cl. 7: A 47 G 19/30
Offenlegungstag: 28. September 1994



Family:

Publication number	Publication date	Application number	Application date
DE4310084 A1	19940929	DE19934310084	19930327

Priority:

DE19934310084 19930327

Probable Assignee: MEYER HERMANN**Assignee(s):** (std): MEYER HERMANN**Assignee(s):** MEYER HERMANN 44577 CASTROP RAUXEL DE**Inventor(s):** (std): MEYER HERMANN**Inventor(s):** MEYER HERMANN 44577 CASTROP RAUXEL DE**9) Family number: 36080719 (US2009101172A)**

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Title: SYSTEM AND AUTOMATIC METHOD FOR EXTRACTION OF GASEOUS ATMOSPHERIC CONTAMINANTS WITH TOXIC PROPERTIES, WHICH ARE RETAINED IN POLYURETHANE FOAM (PUF) FILTERS

Abstract: The present invention provides a system and method for automatic extraction of gaseous atmospheric contaminants (for example HAPs and PCBs) with toxic properties, which are retained in polyurethane foam filters (PUF) that consists of: An automatic extraction device, which allows extracting chemicals compounds of interest using a sequence of organic solvents where the PUF must be immersed in, by means of a process of extraction based on compression and decompression cycles of the PUF; and A drying device which permits to dry the cleaned PUF, from the previous process, by means of sweeping the solvent with hot gaseous ultra pure N₂, eliminating the solvent until achieving the dryness of the PUF.

Classifications:

International (IPC 8-9): B01D11/02 B08B3/08 B09B3/00 B29B17/02 B29K105/04 B29K105/06 B29K75/00 B29L31/14

G05D23/00 (Advanced/Invention);

B29K105/04 B29K105/06 B29K75/00 B29L31/14 (Advanced/Non-invention);

B01D11/02 B08B3/08 B09B3/00 B29B17/02

G05D23/00 (Core/Invention)

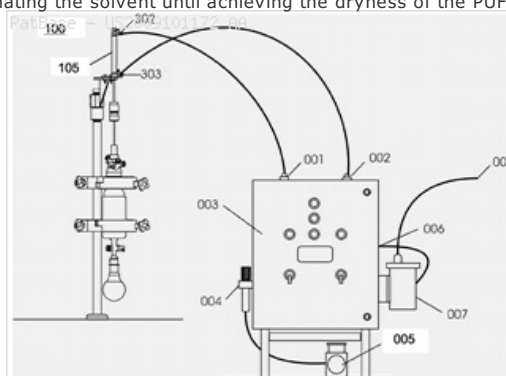
CPC: Y02W30/622 B29B17/02 B09B3/0058 B29B2017/0203

B29B2017/0293 B29K2075/00 B29K2105/04 B29K2105/065

B29L2031/14

European: B09B3/00F B29B17/02 L29B17/02B L29B17/02Z9

L29K105/04 L29K105/06B L29K75/00 L29L31/14

US: 134/16 134/16P 422/109 422/109S 422/119 422/119S 422/267 422/267S**Family:**

Publication number	Publication date	Application number	Application date
CL2006000588 A1	20070323	CL20060000588	20060316
CL46744 B	20100617	CL20060000588	20060316
CN101405093 A	20090408	CN200780009267	20070315
EP2000223 A2	20081210	EP20070730495	20070315
EP2000223 A4	20170517	EP20070730495	20070315
EP2000223 A9	20090318	EP20070730495	20070315
EP2000223 B1	20181121	EP20070730495	20070315
US2009101172 AA	20090423	US20070293123	20070315
WO07104822 A1	20070920	WO2007ES70055	20070315

Priority:

CL20060000588 20060316

WO2007ES70055 20070315

Probable Assignee: UNIVERSIDAD TECNICA FEDERICO SANTA MARIA

Assignee(s): (std): BARLOCCI PENNATI ANNA ; CERECEDA BALIC FRANCISCO ; CERECEDA BALIC GABRIEL ; DOROCHESI FERNANDOIS MARIO ; UNIV TECNICA FEDERICO SANTA MA ; UNIV TECNICA FEDERICO SANTA MARIA USM

Assignee(s): UNIVERSIDAD TECNICA FEDERICO SANTA MARIA ; UNIVERSIDAD TECNICA FEDERICO SANTA MARIA USM

Inventor(s): (std): GABRIEL CERECEDA BALIC ; MARIO DOROCHESI FERNANDOIS ; FRANCISCO CERECEDA BALIC ; CERECEDA BALIC GABRIEL ; DOROCHESI FERNANDOIS MARIO ; CERECEDA BALIC FRANCISCO

Inventor(s): FRANCISCO CERECEDA BALIC GABRIEL CERECEDA BALIC MARIO DOROCHESI FERNANDOIS

Agent(s): ALCAYAGA AND CIA; BARLOCCI ANNA; ZBM PATENTS ZEA BARLOCCI AND MARKVARDSEN; ERIC HANSCOM

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

10) Family number: 43751038 (US2009235924A)

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Title: RESERVOIR AND NEBULIZER

Abstract: A reservoir for a nebulizer, a nebulizer and a method of filling a reservoir are proposed. To avoid undesirable rises in pressure, a fluid chamber of the reservoir is pre-collapsed and filled with an initial amount of fluid which is less than the maximum volume of the fluid chamber. Preferably, before being filled, the fluid chamber is compressed and/or expanded by means of gas to a defined volume which is less than the maximum volume of the fluid chamber.

Classifications:

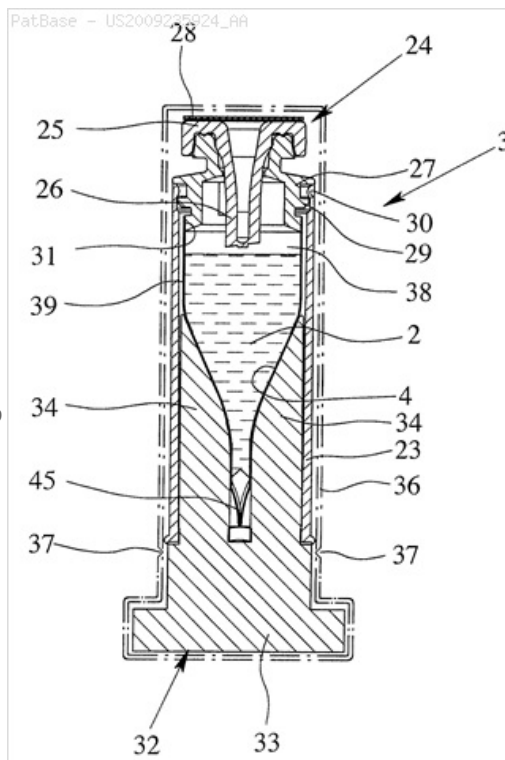
International (IPC 8-9): A61J1/05 A61J1/10 A61M11/00 A61M11/02 A61M11/08 A61M15/00 B05B B05B11/00 B05B11/04 B05B15/00 B05B9/00 B05B9/04 B65B3/16 B65B31/00 B65B7/14 B65D83/00 B65D83/42 B65D83/76 (Advanced/Invention); A61M15/00 (Advanced/Non-invention); A61J1/10 A61M11/00 A61M15/00 B05B11/00 B65D83/00 (Core/Invention); A61J1/10 A61M11/00 A61M15/00 B65D83/00 (Core/Non-invention); B05B (Subclass/Invention)

International (IPC 1-7): A61M11/00

CPC: A61M11/007 A61M11/08 A61M15/0021 A61M15/0035 A61M15/0065 A61M2202/0468 A61M2205/123 B05B11/0038 B05B11/00412 B05B11/0044 B05B11/00446 B05B11/3061 B05B11/3091 A61M11/02

European: A61M11/08 B05B11/00B2 B05B11/00B2F B05B11/00B5A2 B05B11/30P2 K61M11/00M2 K61M15/00A20 K61M15/00C1P1 K61M15/00D K61M202/04N K61M205/12B L05B11/00B5 L05B11/30H5

US: 1/1 128/200.14 128/200.140P 128/200.21 53/434 53/440 53/469 53/486 604/408 604/408S

**Family:**

Publication number	Publication date	Application number	Application date
AR070912 AA	20100512	AR2009P100938	20090316
AU2009226643 AA	20090924	AU20090226643	20090306
BRPI0909328 A2	20150818	BR2009PI09328	20090306
CA2717192 AA	20090924	CA20092717192	20090306
CL2009000627 A1	20100305	CL20090000627	20090316
CN101977693 A	20110216	CN200980109610	20090306
CO6310973 A2	20110822	CO20100115713	20100917
EA201001453 A1	20110429	EA20100001453	20090306
ECSP10010488 A	20101130	EC2010SP10488	20100917
ECSP100488 A	20101130	EC2010SP00488	20100917
EG26580 A	20140317	EG20100091472	20100901
EP2254704 A1	20101201	EP20090723193	20090306
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IL207810 A0	20101230	IL20090207810	20090306
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JP2011515132 T2	20110519	JP20110500068T	20090306
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MA32157 B1	20110301	MA20100033163	20100909
MX2010009838 A1	20100928	MX20100009838	20090306
PE18562009 A1	20091223	PE20090000379	20090313
PE20091856 A1	20091223	PE20090000379	20090313
SG189681 A1	20130531	SG20130019252	20090306
TN2010000407 A1	20111229	TN20100000407	20100907
TW200946412 A	20091116	TW20090108629	20090317
UA101364 C2	20130325	UA20100012135	20090306
US2009235924 AA	20090924	US20090405361	20090317
US2014190472 AA	20140710	US20130107304	20131216
US8650840 BB	20140218	US20090405361	20090317
US9623200 BB	20170418	US20130107304	20131216
UY31715 A1	20091110	UY20090031715	20090316
WO09115200 A1	20090924	WO2009EP01619	20090306
ZA201006056 A	20110831	ZA20100006056	20100825

Priority:

DE200810001446 20080317 DE200810014464 20080317 WO2009EP01619 20090306
US20090405361 20090317 US20130107304 20131216

Probable Assignee: BOEHRINGER INGELHEIM INT GMBH

Assignee(s): (std): SIGRIST MARTIN ; MATHE GERALD ; MEISENHEIMER MARTIN ; MOCK ELMAR ; HAUSMANN MATTHIAS ; LANCI ANTONIO ; SCHMIEDEL GUIDO ; GESER JOHANNES ; WITTE FLORIAN ; HOLAKOVSKY HOLGER ; LANCI ANTONINO ; BOEHRING INGELHEIM INT GMBH ; BOEHRINGER INGELHEIM GMBH ; BOEHRINGER INGELHEIM INT

Assignee(s): BOEHRINGER INGELHEIM INT GMBH ; BOEHRINGER INGELHEIM INTERNATIONAL GMBH

Inventor(s): (std): SIGRIST MARTIN ; MATHE GERALD ; MEISENHEIMER MARTIN ; MOCK ELMAR ; HAUSMANN MATTHIAS ; LANCI ANTONIO ; SCHMIEDEL GUIDO ; GESER JOHANNES ; WITTE FLORIAN ; LANCI ANTONINO ; HOLAKOVSKY HOLGER ; HOLOAKOVSKY HOLGER ; MARTIN MEISENHEIMER ; FLORIAN WITTE ; MATTHIAS HAUSMANN ; JOHANNES GESER ; HOLGER HOLAKOVSKY ; GUIDO SCHMIEDEL ; ANTONIO LANCI ; MARTIN SIGRIST ; GERALD MATHE ; ELMAR MOCK ; ANTONINO LANCI

Inventor(s): LANCI

Agent(s): SPRUSON AND FERGUSON; LUZ CLEMENCIA DE PAEZ; HAMMANN HEINZ; SIMON ELKE ANNA MARIA;
LIU SHEN AND ASSOCIATES; SPRUSON AND FERGUSON ASIA PTE LTD; ROBERTS MLOTKOWSKI
SAFRAN AND COLE PC INTELLECTUAL PROPERTY DEPARTMENT; SAFRAN AND COLE PC; DAVID S;
ROBERTS; HAECKEL STEFAN

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
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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
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