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(54) **BEVERAGE CONTAINER HOLDER**

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(52) **U.S. Cl.** **62/457.4**

(57) **ABSTRACT**

A holder for a beverage container, typically a can or a bottle, to provide supplemental cooling to the beverage. The holder includes a tab, pedestal, or other support means to support the bottom of the care or bottle above the holder bottom to create a space for an ice or an ice and water cooling medium. A sealing means between the holder and the beverage container permits the container and the holder to be tipped for drinking without spilling the ice or ice and water used to provide the cooling. Various seal means include single piece gaskets that fit on the holder, a seal ring that fits in a groove in the holder, a solid lip with a seal, multiple seal embodiments, and stretch membrane supports.

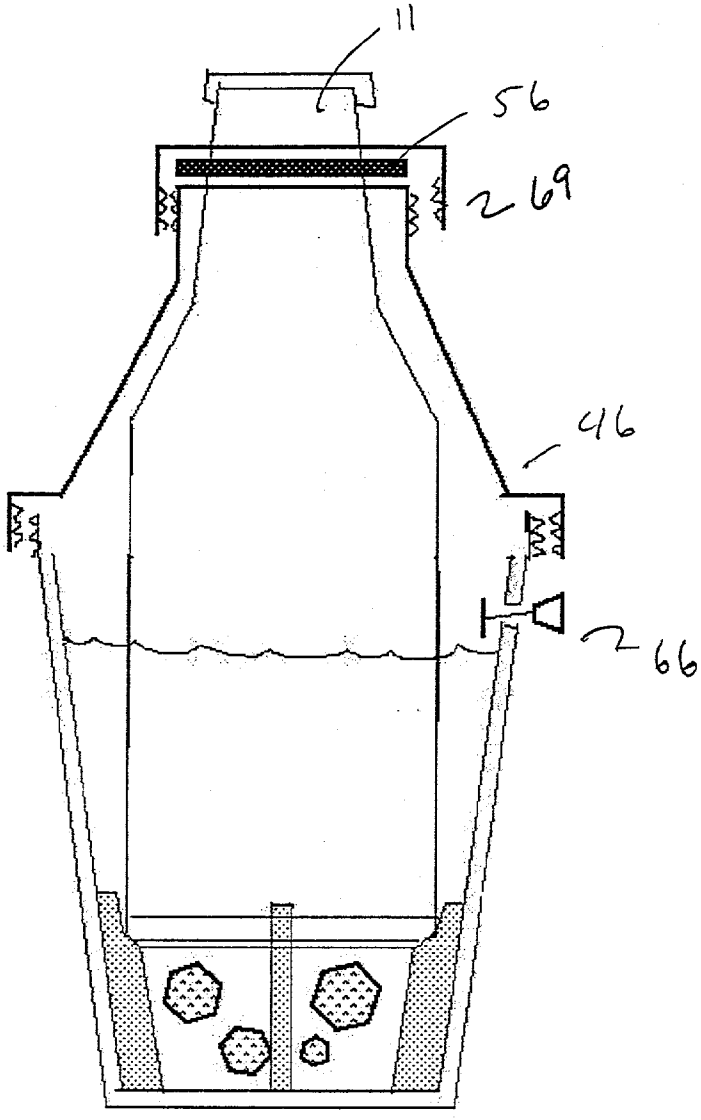


Fig 1.A

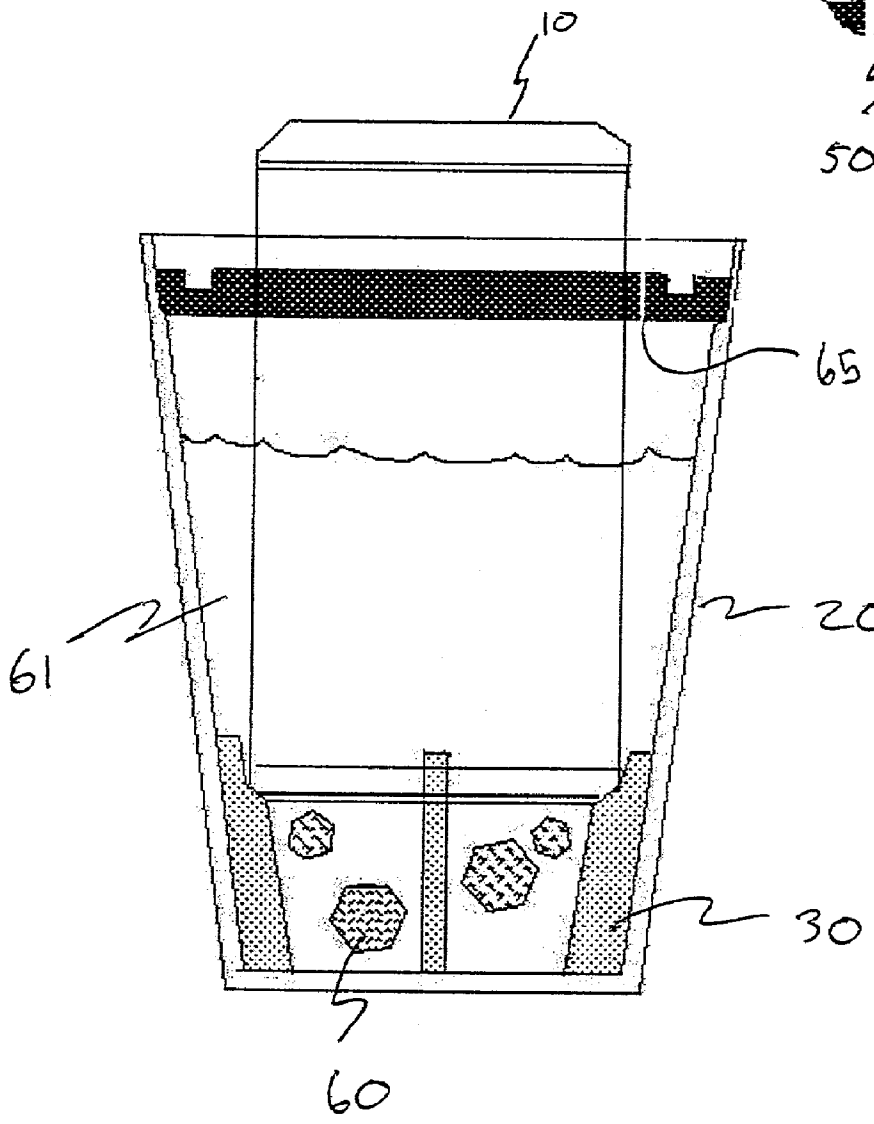


Fig 1.B

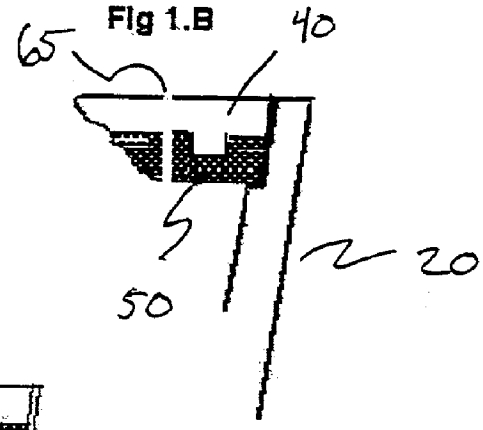


Fig 2.B

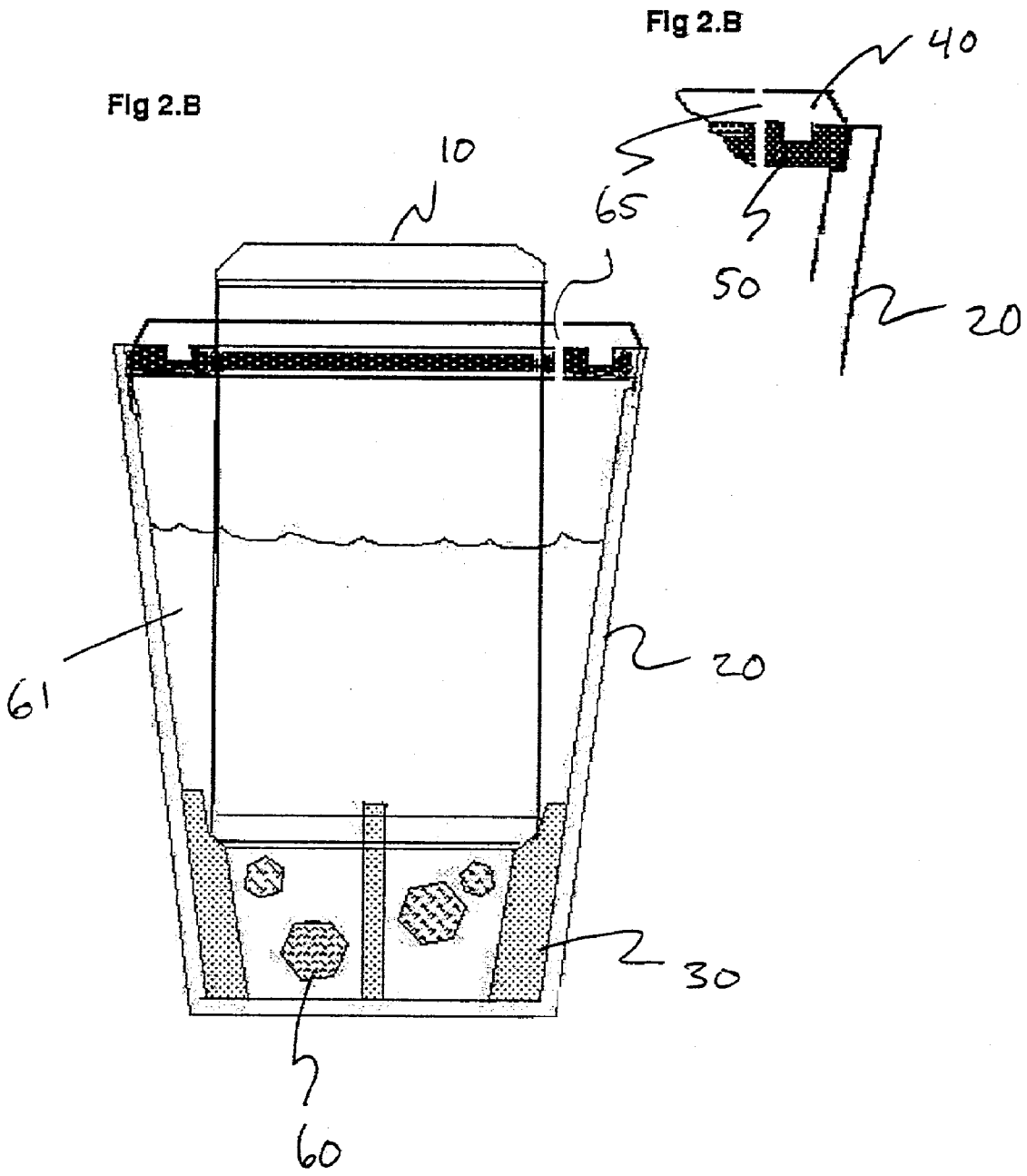


Fig 3.A

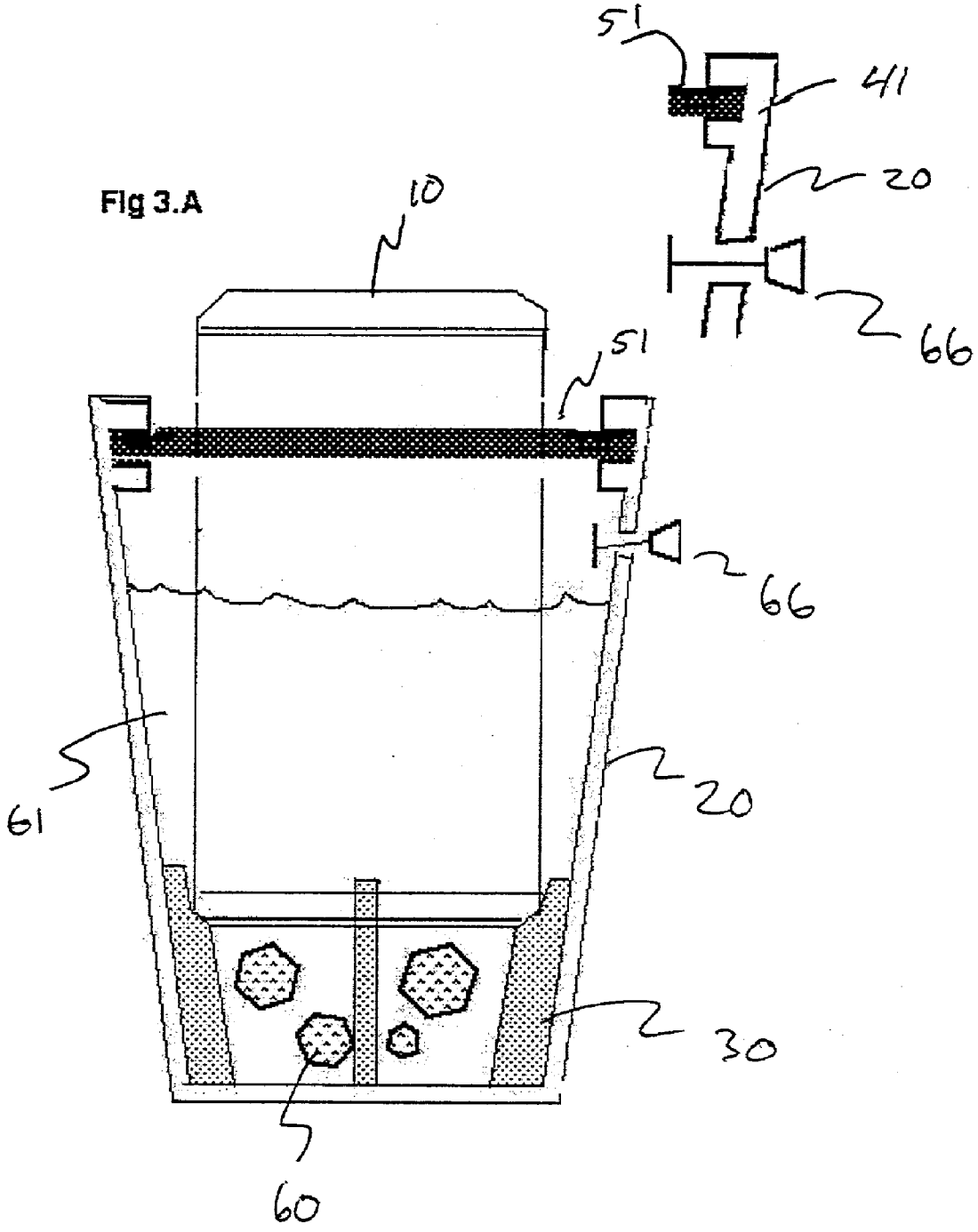


Fig 4.A

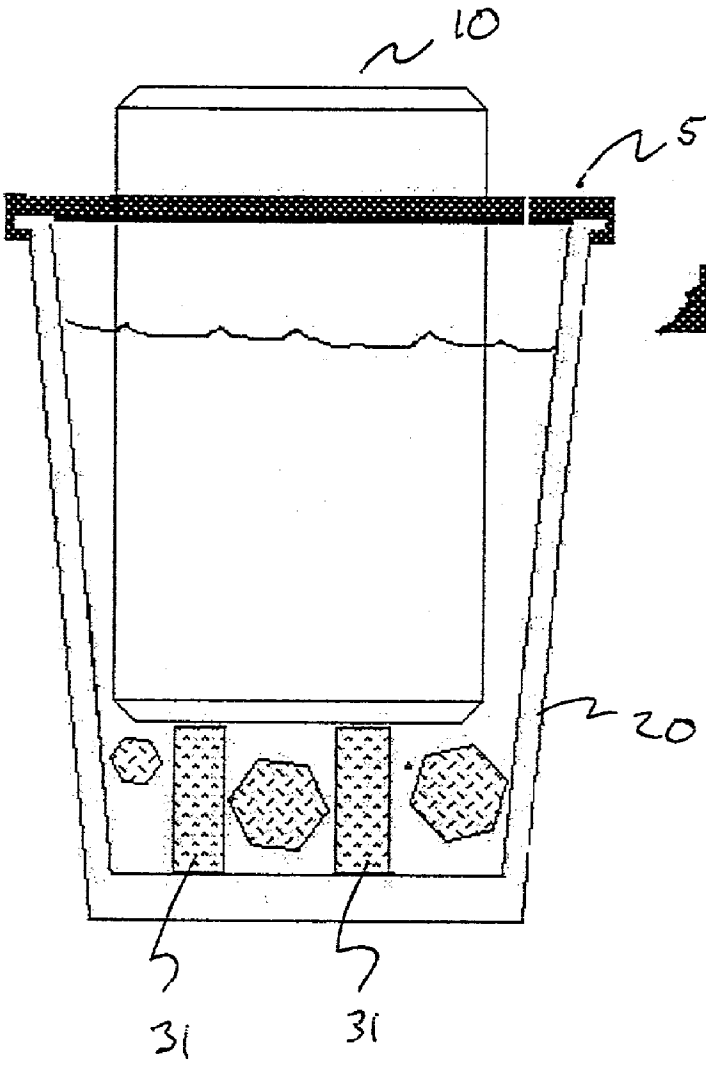


Fig 4.B

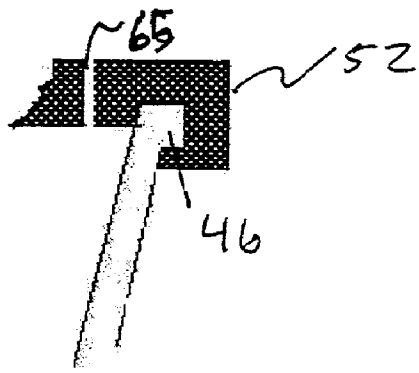


Fig 5.A

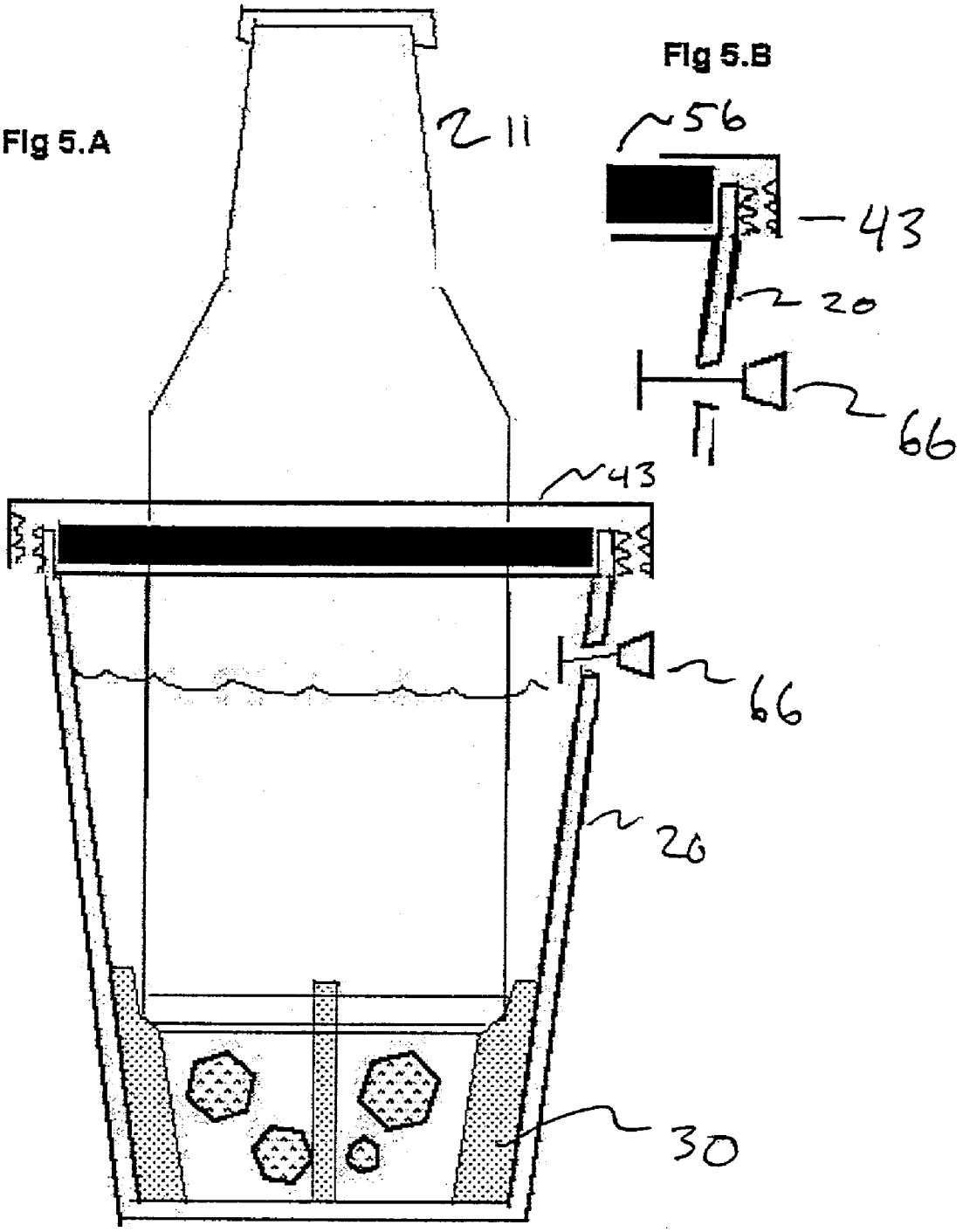


Fig 5.B

Fig. 6B

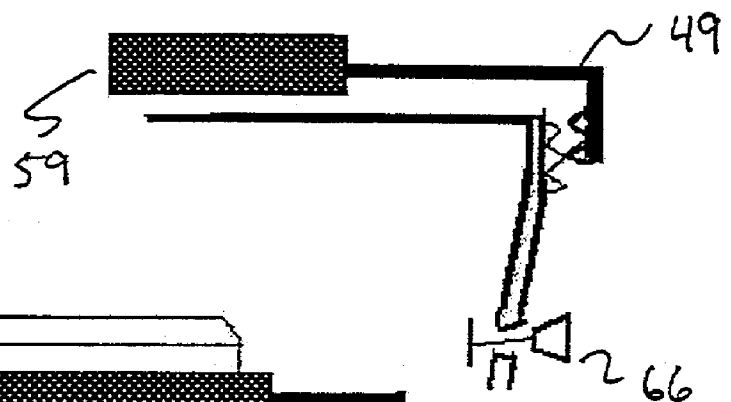


Fig 6A

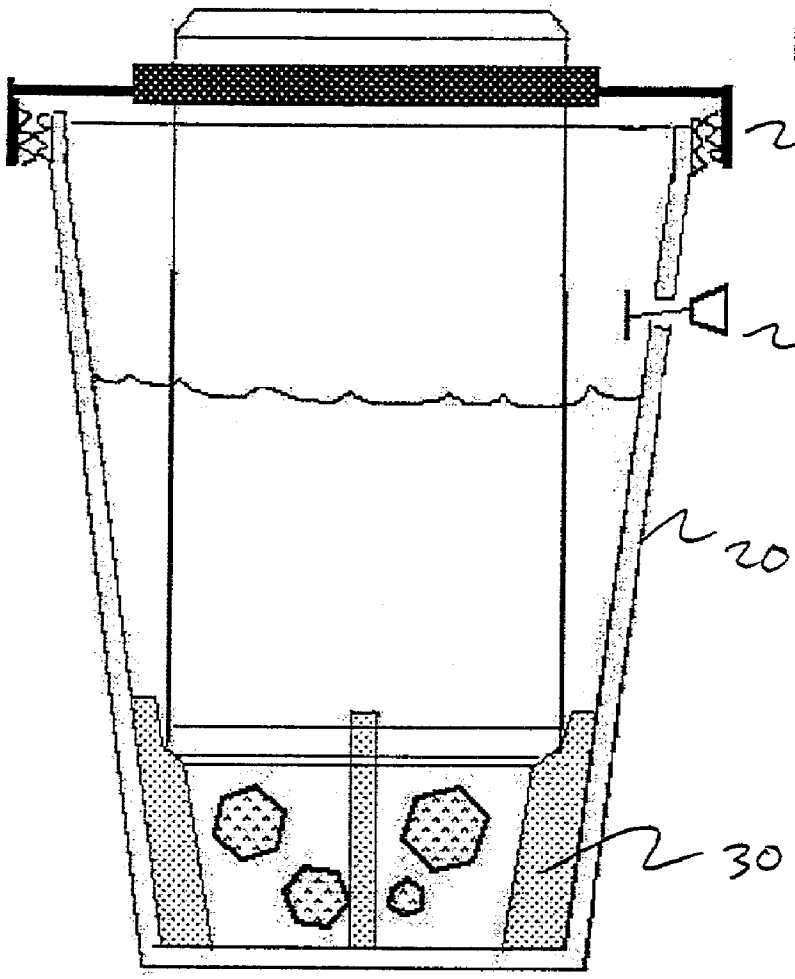


Fig 7A

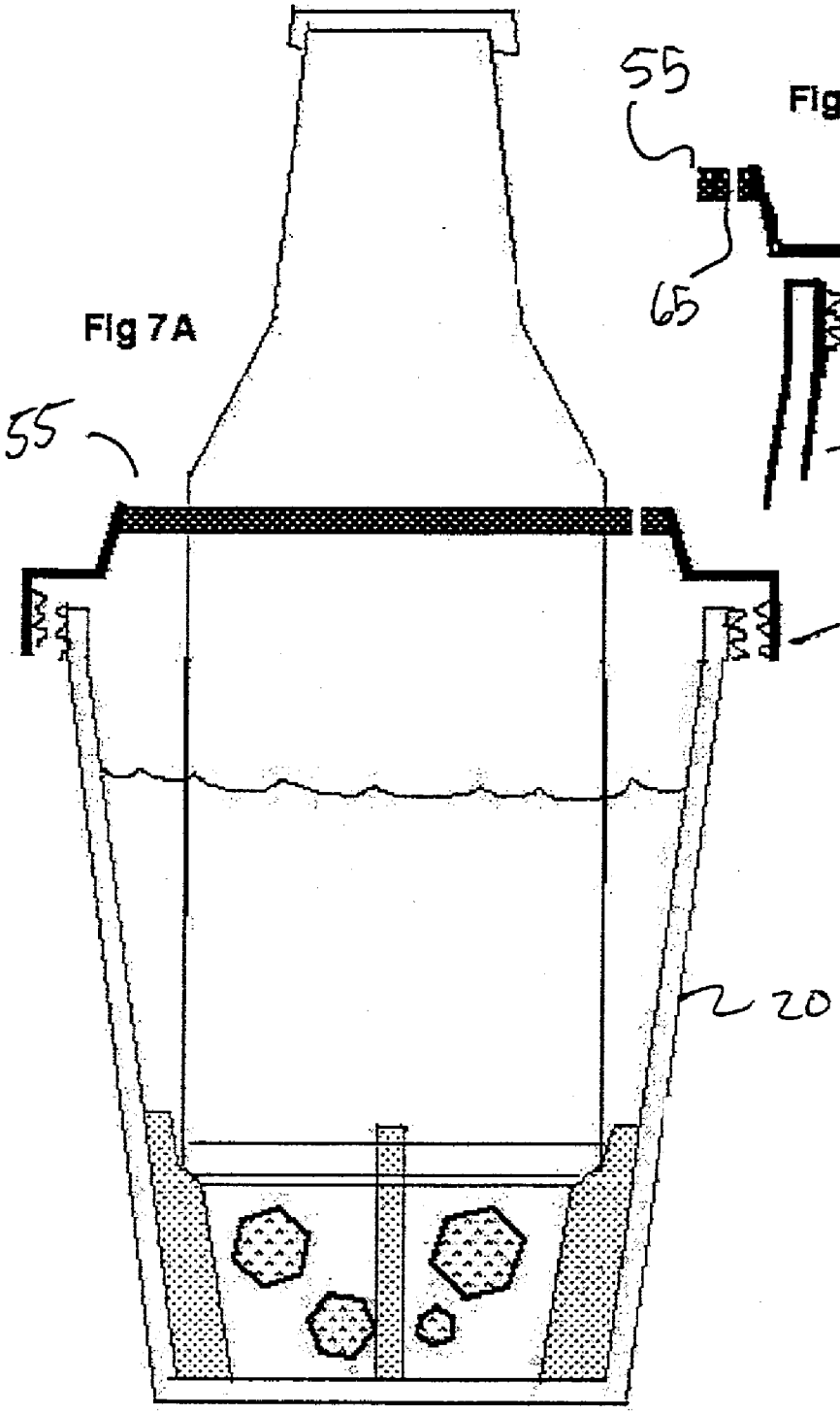


Fig 7B

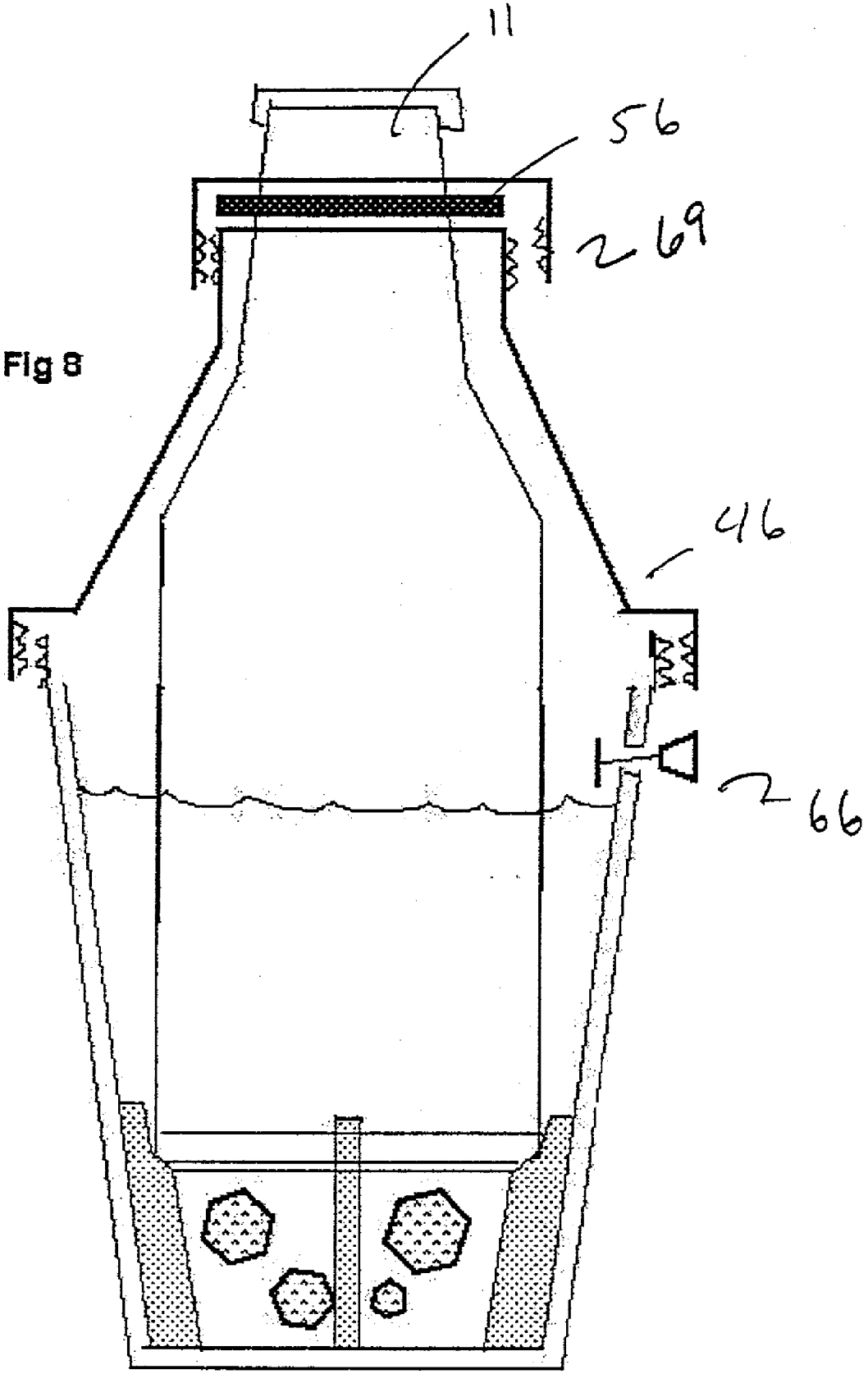


Fig 8

Fig. 9A

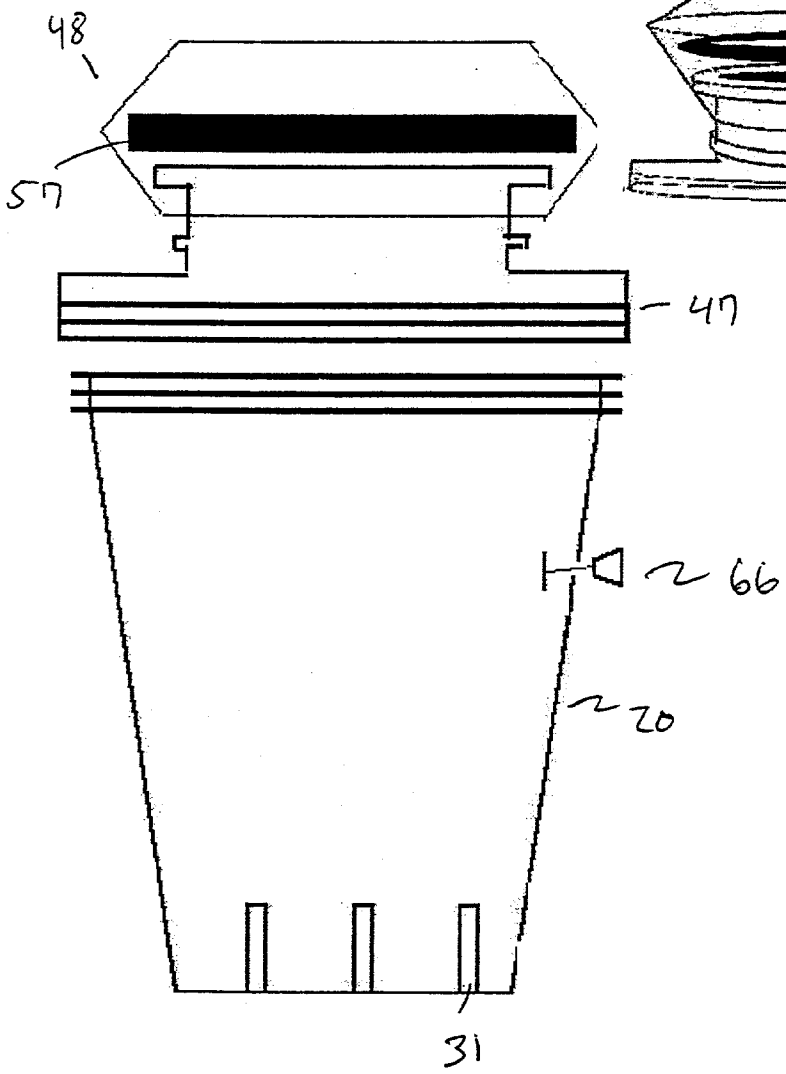


Fig. 9B

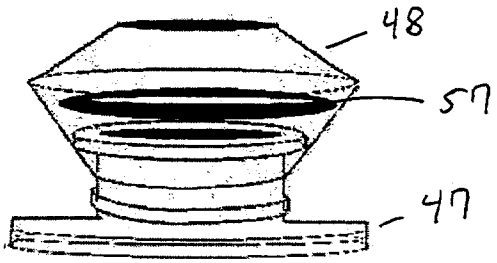


Fig. 10A

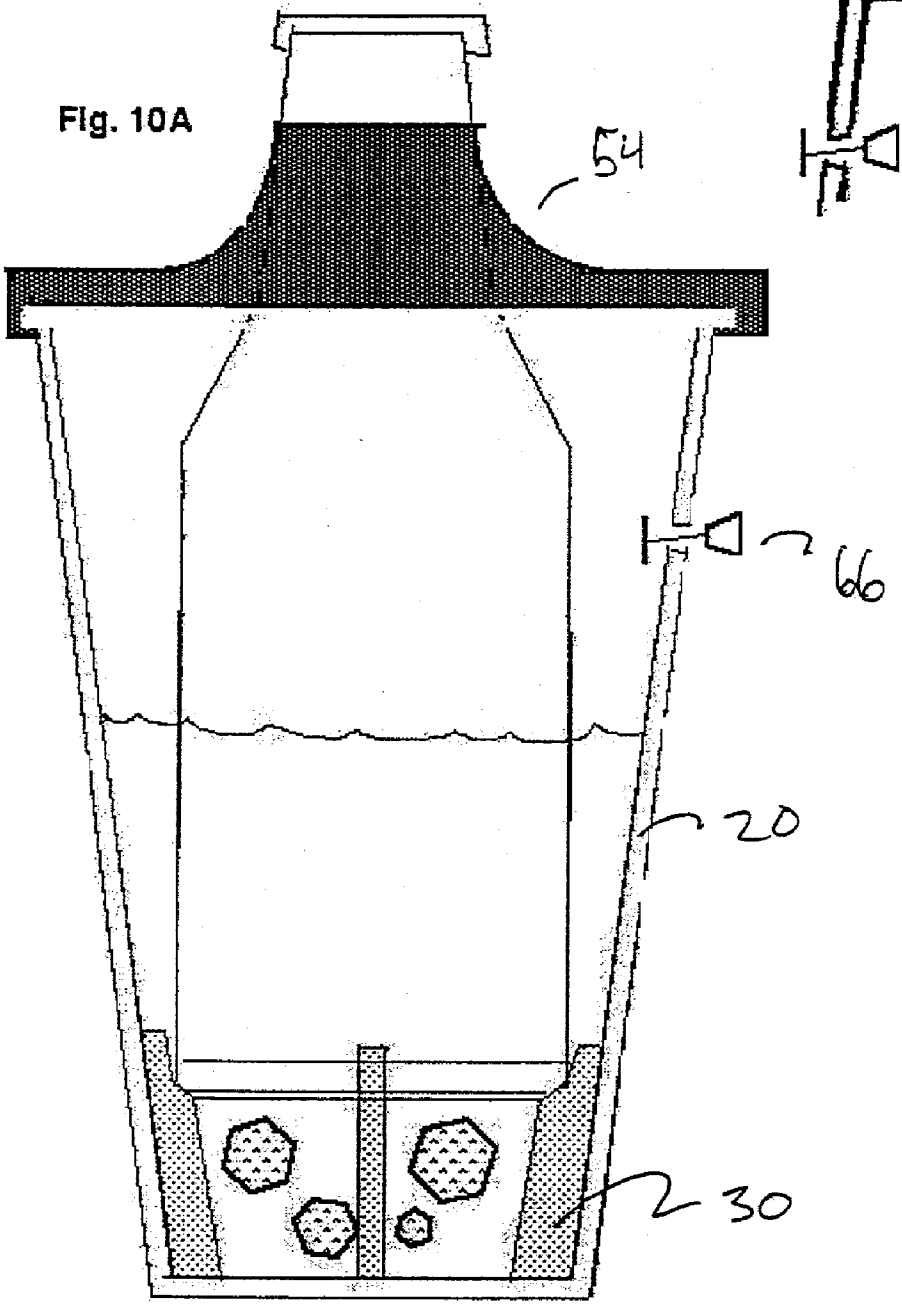
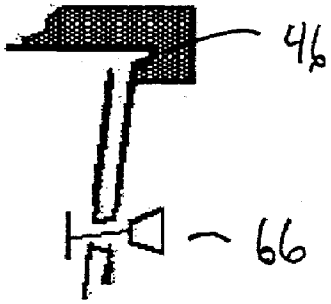


Fig. 10B



BEVERAGE CONTAINER HOLDER

FIELD OF INVENTION

[0001] This invention relates to a holder to keep beverage containers, such as cans and bottles, cool while allowing a user to drink from the can or bottle in the holder without spilling the ice or water used to provide the cooling.

BACKGROUND

[0002] An object of the current invention is to provide supplemental cooling to keep a beverage cold.

[0003] The embodiments of this invention permit a person to place a can or bottle into a holder along with ice or ice and ice water, and to periodically drink from the can or bottle. Various embodiments of sealing means permit the user to tip the holder and drink from the beverage container without spilling the ice or water. A beverage container is placed in the holder, and the seal means provides a sealed enclosure to hold the ice and water

[0004] The seal means is designed to fit tightly around a portion of the beverage container.

[0005] Typically, the holder cools the drink while it is being consumed. In some embodiments, the housing is outwardly tapered to allow ice water to surround a portion of the beverage container, and to permit the holder to fit into most cup holders such as those found in automobiles, boats, and golf carts.

[0006] The beverage container is typically supported above the bottom of the holder with tabs that support the bottom of the beverage container.

[0007] This offset provides space for a cooling medium such as ice or ice and water.

SUMMARY

[0008] The embodiments of the current invention include a tumbler housing which is larger than a beverage can or beverage bottle. The embodiments include a compliant seal means which establishes a relatively tight leak-proof seal between a portion of the beverage can or bottle and the housing. The housing typically includes a support means to support the bottom of the can or bottle above the housing bottom in order to create a space for an ice or an ice and water cooling medium. The seal means may be a single-piece that is attached to the housing. Various forms of seal containment means may be provided to support and to reinforce the seal.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] These and other objects and advantages of the present invention are set forth below and further made clear by reference to the drawings, wherein:

[0010] **FIG. 1A** is a side cross-sectional view of a can holder embodiment.

[0011] **FIG. 1B** is a detailed cross-sectional view of the sealing means and the seal containment means of the embodiment of **FIG. 1A**.

[0012] **FIG. 2A** is a side cross-sectional view of a can holder embodiment with a raised the seal containment means.

[0013] **FIG. 2B** is a detailed cross-sectional view of the sealing means and the seal containment means of the embodiment of **FIG. 2A**.

[0014] **FIG. 3A** is a side cross-sectional view of a can holder embodiment with a compliant sealing ring means.

[0015] **FIG. 3B** is a detailed cross-sectional view of the sealing means and the seal containment means of the embodiment of **FIG. 3A**.

[0016] **FIG. 4A** is a side cross-sectional view of a beverage container holder embodiment with a snap-on sealing means.

[0017] **FIG. 4B** is a detailed cross-sectional view of the sealing means and the seal containment means of the embodiment of **FIG. 4A**.

[0018] **FIG. 5A** is a side cross-sectional view of a beverage container holder embodiment with a screw-on sealing means.

[0019] **FIG. 5B** is a detailed cross-sectional view of the sealing means and the seal containment means of the embodiment of **FIG. 5A**.

[0020] **FIG. 6A** is a side cross-sectional view of another beverage container holder embodiment with a screw-on sealing means.

[0021] **FIG. 6B** is a detailed cross-sectional view of the sealing means and the seal containment means of the embodiment of **FIG. 6A**.

[0022] **FIG. 7A** is a side cross-sectional view of a beverage container holder embodiment with a screw-on cap seal containment means and top sealing means.

[0023] **FIG. 7B** is a detailed cross-sectional view of the sealing means and the seal containment means of the embodiment of **FIG. 7A**.

[0024] **FIG. 8** is a side cross-sectional view of a two-part bottle holder embodiment with a screw-on cap assembly, a screw-on cap seal containment means, and a top sealing means.

[0025] **FIG. 9A** is a side cross-sectional view of a two-part bottle holder embodiment with a screw-on cap assembly, a snap-down cap seal containment means, and a sealing means.

[0026] **FIG. 9B** is a detailed cross-sectional view of the sealing means and the seal containment means of the embodiment of **FIG. 9A**

[0027] **FIG. 10A** is a side cross-sectional view of a beverage container holder embodiment with a large membrane snap-on sealing means.

[0028] **FIG. 10B** is a detailed cross-sectional view of the sealing means and the seal containment means of the embodiment of **FIG. 10A**.

DESCRIPTION OF EMBODIMENT

Can Holder

[0029] Referring now to **FIG. 1A, a** can holder embodiment of the current invention includes a tumbler housing **20** that is designed to hold a beverage can **10**. The can is

supported above the bottom of the housing by three tabs **30** so that there is room below the can for ice or ice and water to be added to the housing in order to provide cooling to the can. The width of the housing is slightly larger than the can to permit an insulating air space and to permit additional ice and water to be in contact with a portion of the sides of the can. The housing has an upper opening that is larger than the can, and a seal containment means **40** is integral to the circumference of this upper opening so that the seal containment means provides support and constraint for a compliant sealing means **50** which is positioned below the seal containment means. The sealing means serves to hold the can in place as the holder is tipped for drinking from the can, and the sealing means prevents ice **60** and water **61** from escaping from the housing while the user is tipping the holder to drink from the can. A small slit **65** is placed in the seal to provide a vacuum release to permit the user to more easily remove the can or bottle from the holder.

[**0030**] The housing is preferably injection molded from polypropylene, although other materials and production methods may be employed. The housing is preferably in the shape of a tumbler with a bottom diameter of about 2.7 inches so that it will fit into a cup holder such as those found in automobiles, boats, and golf carts. In this embodiment, the can is supported at a height of about 1.4 inches above the bottom of the housing. The tabs are shown extending to the bottom of the housing in order to permit them to be fabricated with the housing by injection molding. Other support means including pedestals or shelves may be used. The housing has an overall height of about 5.1 inches, so that about 1.1 inches of a standard beverage can is exposed above the housing to permit the user to drink from the can. These dimensions support most 12-ounce beverage cans.

[**0031**] Referring now to **FIG. 1B, a** polypropylene seal containment means **40** is separately fabricated, preferably by injection molding. The compliant sealing means **50** is a Dynaflex G7940 thermoplastic rubber compound, Braton™ copolymer, or similar type of compliant material. One method of manufacturing the seal containment means subassembly is to mold the seal containment means and then to over-mould the compliant sealing means over the seal containment means. This process provides a good bond between the seal containment means and the compliant sealing means. The compliant sealing means and the polypropylene seal containment means may be assembled together with other methods such as glue. The subassembly is preferably then glued into the upper portion of the housing **20**.

[**0032**] In typical operation, either ice or an ice and water mixture is added to the holder before the can is placed in the container. The can is then pushed into the top opening until it contacts the tab supports. The sealing means engages the can as it is pushed into the housing, thereby creating a seal between the housing and the can.

Description of Embodiment

Bottle Holder

[**0033**] A bottle holder embodiment of the current invention may be produced in the same manner as in the above-described can holder embodiment. The bottle holder may have a taller housing and a slightly smaller opening in the compliant sealing means to accommodate a bottle.

Description of Embodiment

Raised Seal Containment

[**0034**] Referring now to **FIG. 2**A, another can holder embodiment of the current invention provides for a seal containment means **40** to be raised above the top of the tumbler housing **20** while the compliant sealing means **50** sits flush with the housing **20**

[**0035**] Referring now to **FIG. 2B, a** polypropylene seal containment means **40** is separately fabricated, preferably by injection molding. The compliant sealing means **50** is a Dynaflex G7940 thermoplastic rubber compound, Braton™ copolymer, or similar type of compliant material.

Description of Embodiment

Can Holder Seal Containment

[**0036**] Referring now to **FIG. 3**A, another can holder embodiment of the current invention includes a tumbler housing **20** holding a beverage can **10**. The can is supported above the bottom of the housing by three tabs **30**. In this embodiment, the slotted seal containment means **41** provides a groove to accept a compliant sealing ring **51**.

[**0037**] The slotted seal containment means may be fabricated separately and then attached to the housing, or both the housing and the seal containment means may be fabricated as a single unit.

[**0038**] Referring now to **FIG. 3**B, the compliant sealing ring **51** is a Dynaflex G7940 rubber seal, or similar type of compliant material. The compliant sealing ring may be inserted into the groove either before or after assembly of the slotted seal containment means to the housing.

Description of Embodiment

Bottle Holder Seal Containment

[**0039**] A bottle holder embodiment of the current invention may be produced in the same manner as the above-described can holder embodiment. The bottle holder may have a taller housing and a slightly smaller opening in the compliant sealing means to accommodate a bottle.

Description of Embodiment

Can Holder with Seal Lid

[**0040**] Referring now to **FIG. 4**A, another can holder embodiment of the current invention includes a seal lid **52** which snaps onto an external lip of the housing **20** to provide a seal to the can without requiring an additional seal containment means. In the illustration, the can is shown to be supported by a plurality of pedestals. Other can supporting means may be employed, including tabs as shown in previous illustrations.

[**0041**] Referring now to **FIG. 4**B, which is a cross sectional detail of this embodiment, the seal lid is grooved along its edge to provide a pressure fit on the external lip **46** of the housing.

Description of Embodiment

Bottle Holder Holder with Seal Lid

[**0042**] A bottle holder embodiment of the current invention may be produced in the same manner as the above-

described can holder embodiment. The bottle holder may have a taller housing, and the seal lid will typically have a slightly smaller opening to accommodate a bottle.

Description of Embodiment

Beverage Container Holder with Screw-on Seal Containment

[0043] Referring now to **FIG. 5**A, another beverage container holder embodiment of the current invention includes a screw on lid **43** which screws onto the threaded upper portion of the housing **20**. The housing includes a plug **66** to release the vacuum and permit easier removal of the bottle from the holder.

[0044] Referring now to **FIG. 5B, a** sealing ring **56** is held in place between the top of the housing and the lid. In this embodiment, the sealing ring **56** is not permanently attached to either the housing **20** or the screw on lid **43**.

[0045] This embodiment permits interchangeable lids to be used so that the holder can be used for either cans or bottles.

Description of Embodiment

Beverage Container Holder with Integral Screw-on Seal

[0046] Referring now to **FIG. 6**A, another beverage container holder embodiment of the current invention includes a screw on lid **49** which screws onto the threaded upper portion of the housing **20**.

[0047] Referring now to **FIG. 6**B, the sealing ring **59** is integral to the lid **49**. This embodiment permits interchangeable lids to be used so that the holder can be used for either cans or bottles.

Description of Embodiment

Bottle Holder with Integral membrane Screw-on Seal

[0048] Referring now to **FIG. 7**A, another bottle holder embodiment of the current invention includes a screw on lid **45** which screws onto the threaded upper portion of the housing **20**. The drawing illustrates an optional riser section on the lid with an integral membrane seal **55** so that a seal may be made on the bottle above the top of the holder. In an alternate embodiment, the riser section may be eliminated so that the membrane seal is integral to the lid.

[0049] Referring now to **FIG. 7**B, which is a cross sectional detail of this embodiment, the lid **45** includes a riser section with an integral membrane seal **55** so that a seal can be made on the bottle above the top of the holder.. The membrane opening stretches to accept a beverage bottle and closes snugly against the bottle sides.

Description of Embodiment

Bottle holder with neck seal integral to screw-on lid

[0050] Referring now to **FIG. 8**, another bottle holder embodiment of the current invention includes a screw on lid **46** which screws onto the threaded upper portion of the housing **20**. The lid includes a riser section which extends approximately half way up the neck of a beverage bottle supported in the holder. The top of the lid includes a second screw-on lid **69** which compresses a compliant seal **56** between the first and second lids. The housing contains a plug **66** for a vacuum release.

Description of Embodiment

Bottle holder with snap-down seal containment means integral to screw-on lid

[0051] Referring now to **FIG. 9**A, another bottle holder embodiment of the current invention includes a screw on lid **47** which screws onto the threaded upper portion of the housing **20**. A snap-down lid assembly **48** fits over a portion of the lid, so that a compliant seal **57** can be squeezed between the lid and the snap-down lid assembly thereby forced the compliant seal against a bottle when the snap-down lid assembly is pressed into the down position.

Description of Embodiment

Beverage Container Holder with Seal Membrane Lid

[0052] Referring now to **FIG. 10**A, another beverage container holder embodiment of the current invention includes a seal membrane lid **54**.

[0053] Referring now to **FIG. 10**B, which which is a cross sectional detail of this embodiment, the seal is grooved along its edge to provide a pressure fit on the external lip **46** of the housing. This embodiment permits interchangeable seal membrane lids to be used so that the holder can be used for either cans or bottles.

What is claimed is:

1. A holder for a beverage container comprising:

a housing such that the container will reside substantially inside the housing, the housing including

a bottom,

at least one container support means that supports the container above the bottom of the housing, thereby permitting a coolant medium to be placed in the housing, such that a substantial portion of the coolant medium is positioned below the beverage container,

at least one side wall having an inside surface and an exterior surface, the side wall creating an annular space between a portion of the exterior of the container and the inside surface of the side wall,

a top opening;

a sealing means integral to the housing such that the sealing means creates a seal between a portion of the exterior of the container and a portion of the housing, thereby preventing leakage of the coolant medium from the annular space when the housing is tilted: and

a seal containment means integral to the housing, such that the seal containment means holds the sealing means in place.

2. A holder for a beverage container comprising

a housing such that the container will reside substantially inside the housing, the housing including

a bottom,

at least one container support means that supports the container above the bottom of the housing, thereby permitting a coolant medium to be placed in the housing, such that a substantial portion of the coolant medium is positioned below the beverage container,

at least one side wall having an inside surface and an exterior surface, the side wall creating an annular space between a portion of the exterior of the container and the inside surface of the side wall,

a top opening;

a sealing means integral to a portion of the inside surface of the housing side wall such that the sealing means creates a seal between a portion of the exterior of the container and a portion of the housing side wall, thereby preventing leakage of the coolant medium from the annular space when the housing is tilted: and a seal containment means integral to a portion of the inside surface of the housing, such that the seal containment means holds the sealing means in place.

3. The holder of claim 2 wherein

the housing is tapered.

4. The holder of claim 2 wherein the seal containment means forms a lip along the top of the inside surface of the housing and the sealing means is attached to the bottom of the seal containment means.

5. The holder of claim 2 wherein the seal containment means forms a grooved lip along the top of the inside surface of the housing and the sealing means is inserted into the grooved lip of the seal containment means.

6. The holder of claim 2 wherein the container support means is a plurality of tabs.

7. The holder of claim 2 wherein the container support means is at least one pedestal.

8. The holder of claim 2 wherein the coolant medium is ice.

9. The holder of claim 2 wherein the coolant medium is a mixture of ice and water.

10. A holder for a beverage can comprising:

a truncated conical tumbler housing such that the beverage can will reside substantially inside the housing, the housing including

a truncated bottom portion having a diameter of approximately 2.7 inches,

a side wall having an inside surface and an exterior surface, the side wall creating an annular space between a portion of the exterior of the container and the inside surface of the side wall,

at least three support tabs integral to the bottom portion of the inside surface of the side wall, such that the tabs support the bottom of the beverage can above the bottom of the housing, thereby permitting ice and ice water to be placed in the housing, such that a substantial portion of ice and ice water is positioned below the beverage container,

a top opening having a diameter of approximately 3.6 inches;

a seal containment lip integral to the top of the inside surface of the housing; and a compliant seal integral to a portion of the inside surface of the housing side wall and integral to the bottom of the seal containment lip such that the compliant seal creates a waterproof boundary between a portion of the exterior of the container and a portion of the housing side wall, thereby preventing leakage of the ice and water from the annular space when the housing is tilted.

11. A holder for a beverage container comprising:

a housing such that the container will reside substantially inside the housing, the housing including

a bottom,

at least one container support means that supports the container above the bottom of the housing, thereby permitting a coolant medium to be placed in the housing, such that a substantial portion of the coolant medium is positioned below the beverage container,

at least one side wall having an inside surface and an exterior surface, the side wall creating an annular space between a portion of the exterior of the container and the inside surface of the side wall,

a top opening;

a sealing means integral to the top of the housing side wall such that the sealing means creates a seal between a portion of the exterior of the container and the top of the housing side wall, thereby preventing leakage of the coolant medium from the annular space when the housing is tilted; and

a lip seal containment means integral to the top external edge of the housing, such that the sealing means may be positioned on the lip seal containment means to hold the sealing means in place.

12. A holder for a beverage container comprising:

a housing such that the container will reside substantially inside the housing, the housing including

a bottom,

at least one container support means that supports the container above the bottom of the housing, thereby permitting a coolant medium to be placed in the housing, such that a substantial portion of the coolant medium is positioned below the beverage container,

at least one side wall having an inside surface and an exterior surface, the side wall creating an annular space between a portion of the exterior of the container and the inside surface of the side wall,

a threaded top opening;

a screw-on seal containment means which may be screwed onto the threaded top opening of the housing; and

a sealing means integral to the screw-on seal containment means such that the sealing means creates a seal between a portion of the exterior of the container and

the housing side wall, thereby preventing leakage of the coolant medium from the annular space when the housing is tilted.

13. A holder for a beverage container comprising:

a housing such that the container will reside substantially inside the housing, the housing including

a bottom,

at least one container support means that supports the container above the bottom of the housing, thereby permitting a coolant medium to be placed in the housing, such that a substantial portion of the coolant medium is positioned below the beverage container,

at least one side wall having an inside surface and an exterior surface, the side wall creating an annular space between a portion of the exterior of the container and the inside surface of the side wall,

a threaded top opening;

a screw-on seal containment means which may be screwed onto the threaded top opening of the housing; and

a sealing means positioned between the screw-on seal containment means and the housing such that the sealing means creates a seal between a portion of the exterior of the container and the housing side wall when the screw-on seal containment means is tightened, thereby preventing leakage of the coolant medium from the annular space when the housing is tilted.

14. A holder for a beverage container comprising:

a housing such that the container will reside substantially inside the housing, the housing including

a bottom,

at least one container support means that supports the container above the bottom of the housing, thereby permitting a coolant medium to be placed in the housing, such that a substantial portion of the coolant medium is positioned below the beverage container,

at least one side wall having an inside surface and an exterior surface, the side wall creating an annular space between a portion of the exterior of the container and the inside surface of the side wall,

a top opening;

a first detachable lid which may be attached to the top opening of the housing, the lid having an upper threaded portion;

a screw-on seal containment means integral to the lid which may be screwed onto the upper threaded portion of the lid; and

a sealing means integral to the screw-on seal containment means such that the sealing means creates a seal between a portion of the exterior of the container and the detachable lid, thereby preventing leakage of the coolant medium from the annular space when the housing is tilted.

15. A holder for a beverage container comprising:

a housing such that the container will reside substantially inside the housing, the housing including

a bottom,

at least one container support means that supports the container above the bottom of the housing, thereby permitting a coolant medium to be placed in the housing, such that a substantial portion of the coolant medium is positioned below the beverage container,

at least one side wall having an inside surface and an exterior surface, the side wall creating an annular space between a portion of the exterior of the container and the inside surface of the side wall,

a top opening;

a first detachable lid which may be attached to the top opening of the housing, the lid having a vertical extension, the extension having a lip;

a snap-on seal containment means which may be assembled over the extension of the lid; and

a sealing means positioned between the snap-on seal containment means and the lid such that the sealing means creates a seal between a portion of the exterior of the container and the housing side wall when the snap-on seal containment means is depressed, thereby preventing leakage of the coolant medium from the annular space when the housing is tilted.

16. A method of fabricating a beverage container holder comprising:

injection molding a tumbler housing including support means for the beverage container;

injection molding a seal containment means;

assembling a seal means to a seal containment means to form a sealing subassembly; and

attaching the sealing subassembly to the holder.

17. The method of claim 16 comprising

molding the seal means to the seal containment means.

18. A method of cooling a beverage container in a housing comprising

adding ice to the housing by placing the ice in the open top of the housing;

placing the beverage container partially within the housing;

supporting the beverage container above the bottom of a housing such that the ice is positioned substantially below the beverage container; and

sealing between the housing and the beverage container to prevent leakage when the beverage container is tilted.

19. The method of claim 18 additionally comprising

placing the housing in a vehicle cup holder when not in use.

20. The method of claim 18 additionally comprising

adding water and ice to the housing by placing the ice and water in the open top of the housing.

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