US 20090045206A1

(19) **United States**

(12) **Patent Application Publication**

Walker

(10) **Pub. No.: US 2009/0045206 A1**

(43) **Pub. Date: Feb. 19, 2009**

(54) **DISPOSABLE NON-SPILLABLE CHILDS DISPENSING CUP**

(76) Inventor: **Emily Price Walker**, Greenville, SC (US)

Correspondence Address:
NEXSEN PRUET, LLC
P.O. BOX 10648
GREENVILLE, SC 29603 (US)

(21) Appl. No.: **11/839,108**

(22) Filed: **Aug. 15, 2007**

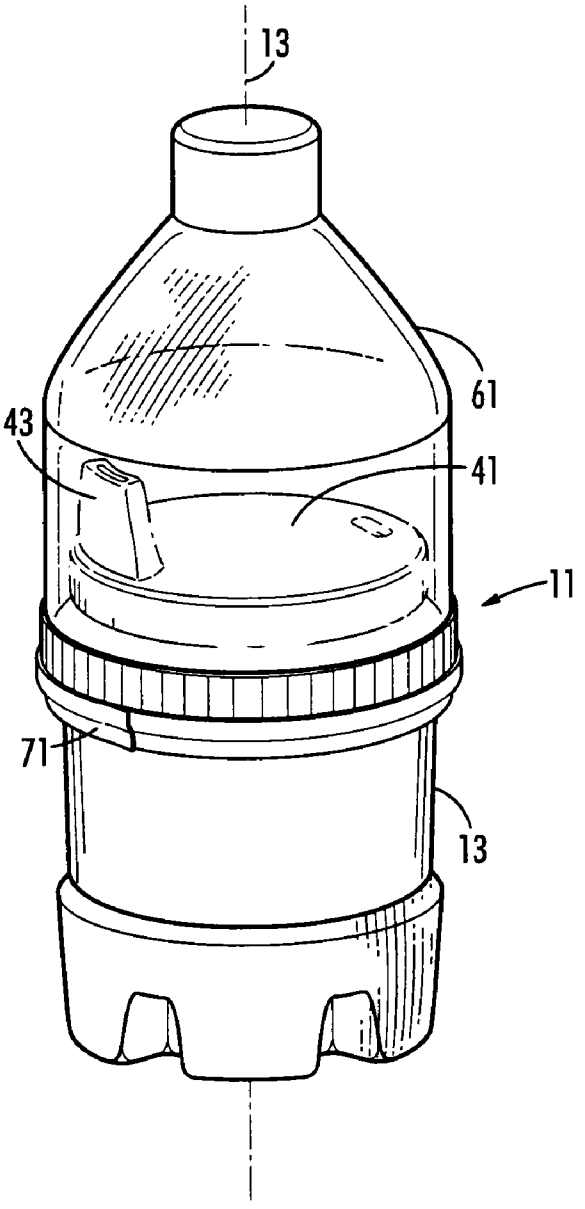
Publication Classification

(51) **Int. Cl.**
A47G 19/22 (2006.01)

(52) **U.S. Cl.** **220/713**; 220/711; 220/714

(57) **ABSTRACT**

A disposable sealed drink container suitable for use by a child to imbibe liquids and possessing a shape and size adapted for use in conventional drink dispensing machines including aluminum can vending machines and plastic bottle vending machines. The container includes a sealed impermeable vessel to suitable for containing a beverage, an extended spout designed to resist leakage when tipped and allow fluid to flow when suction is applied, and a protective cap.



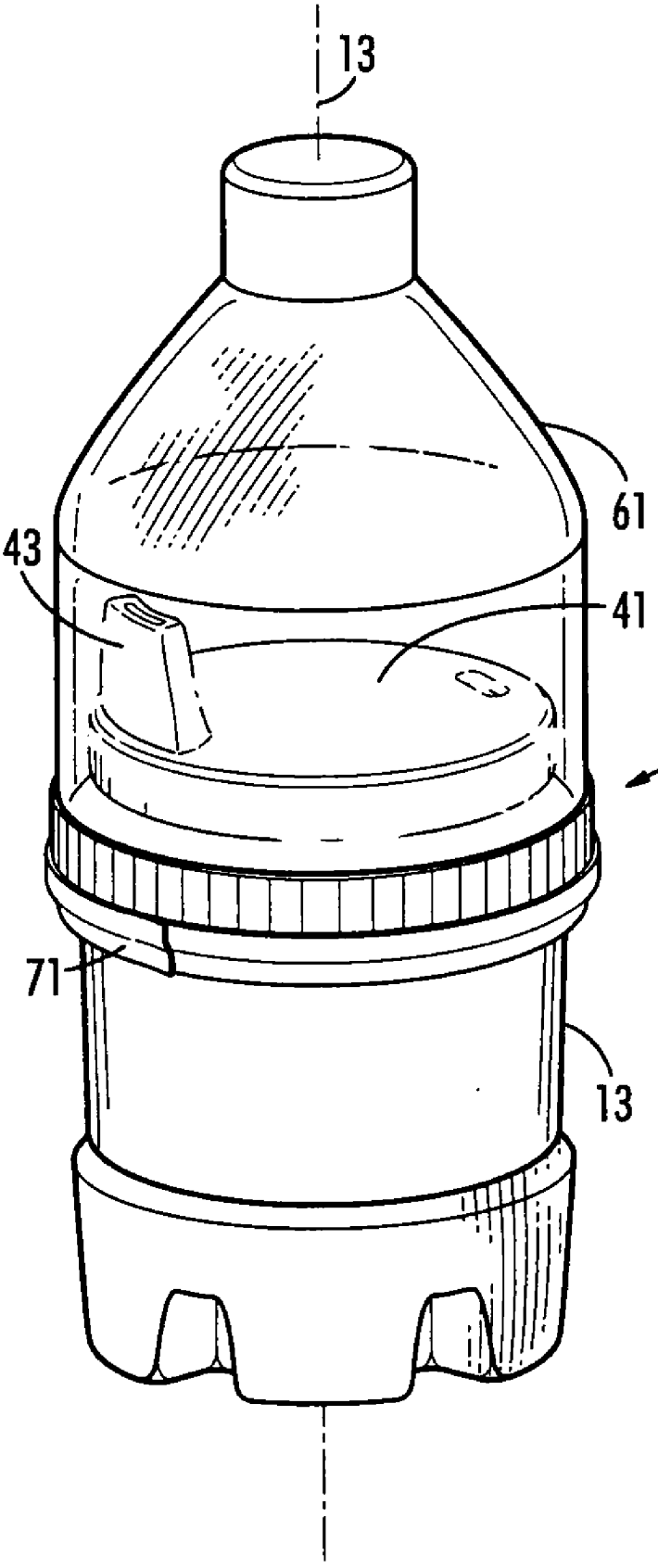


FIG. 1

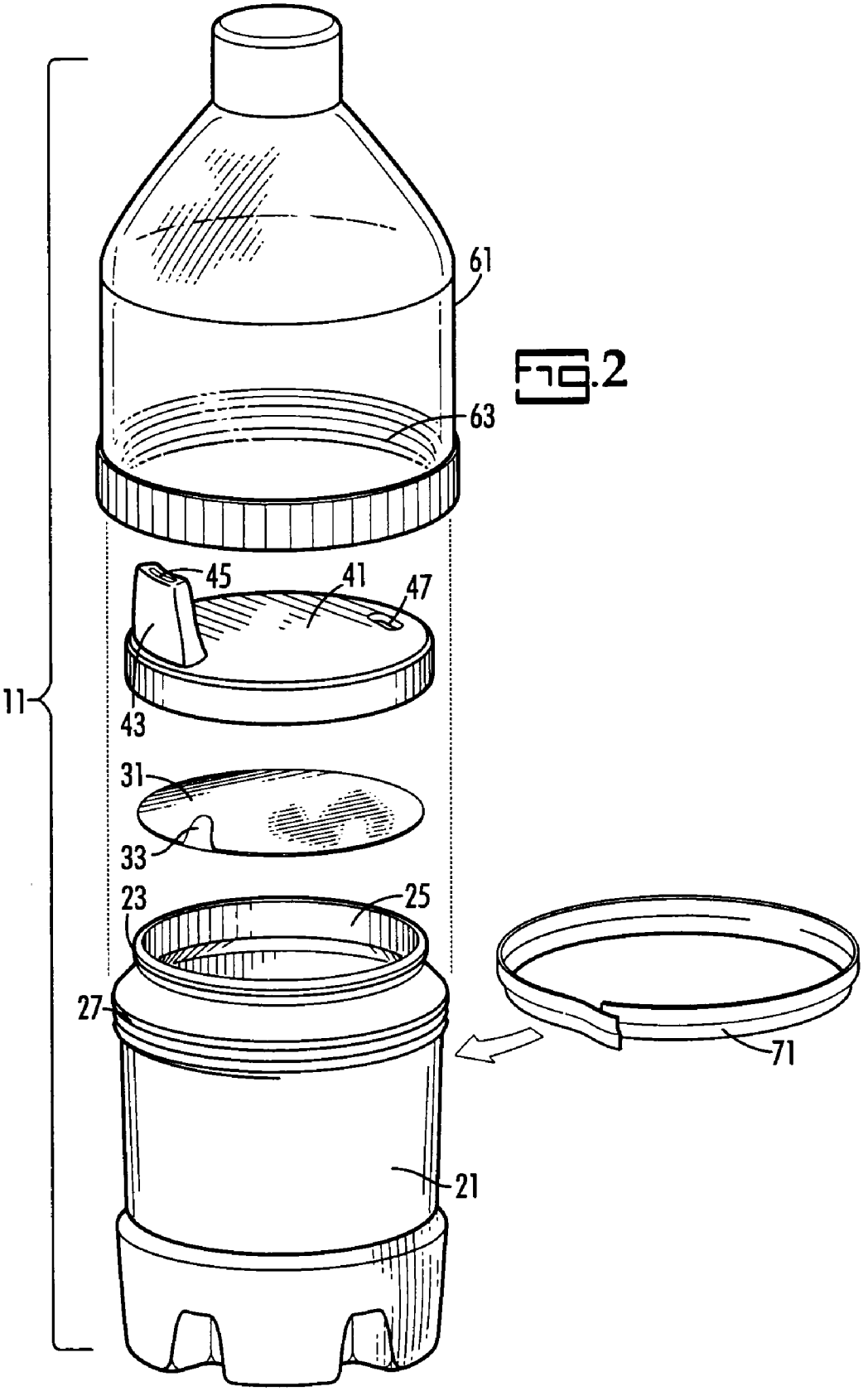


FIG. 2

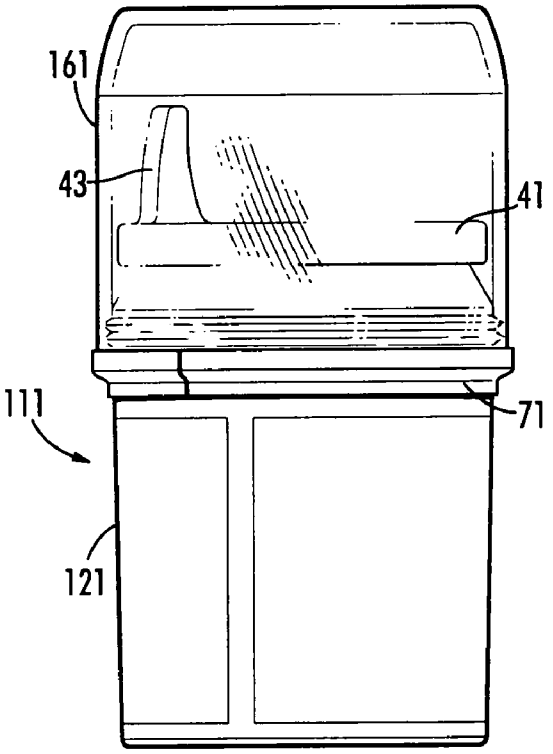


FIG.3

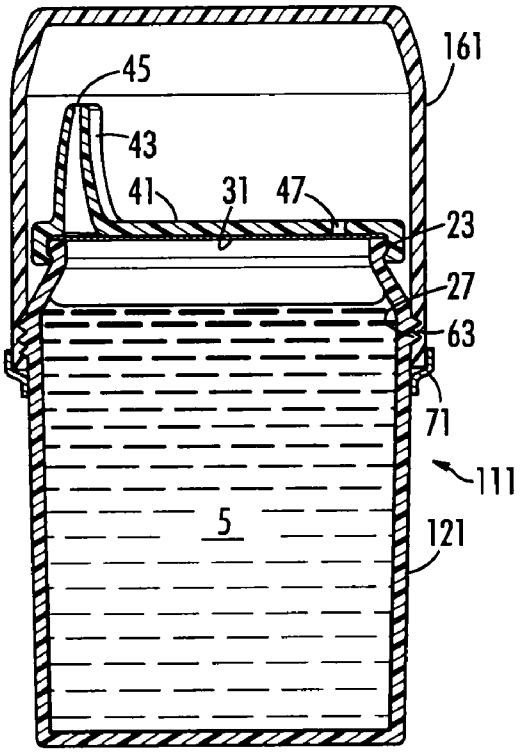


FIG.4

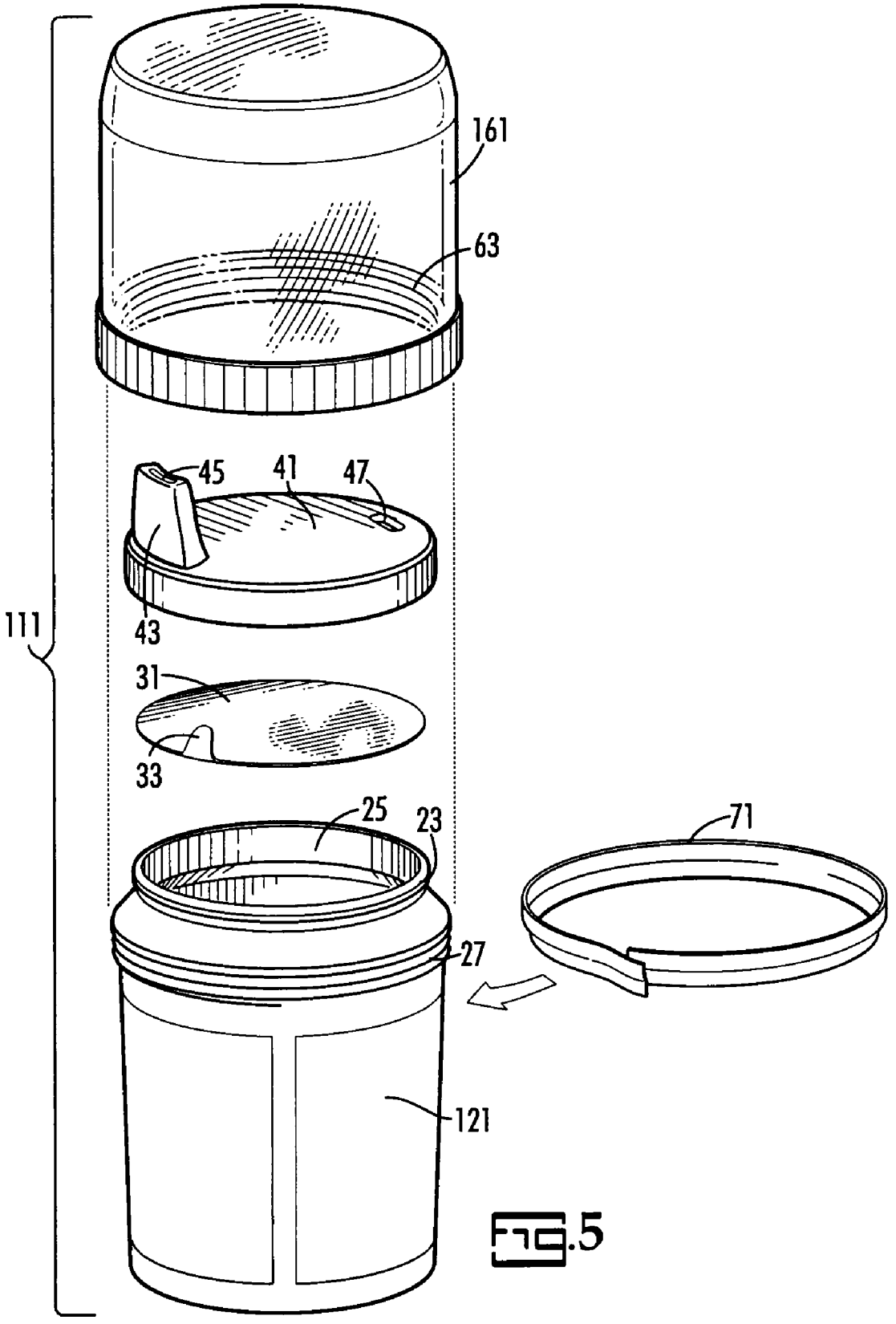


FIG.5

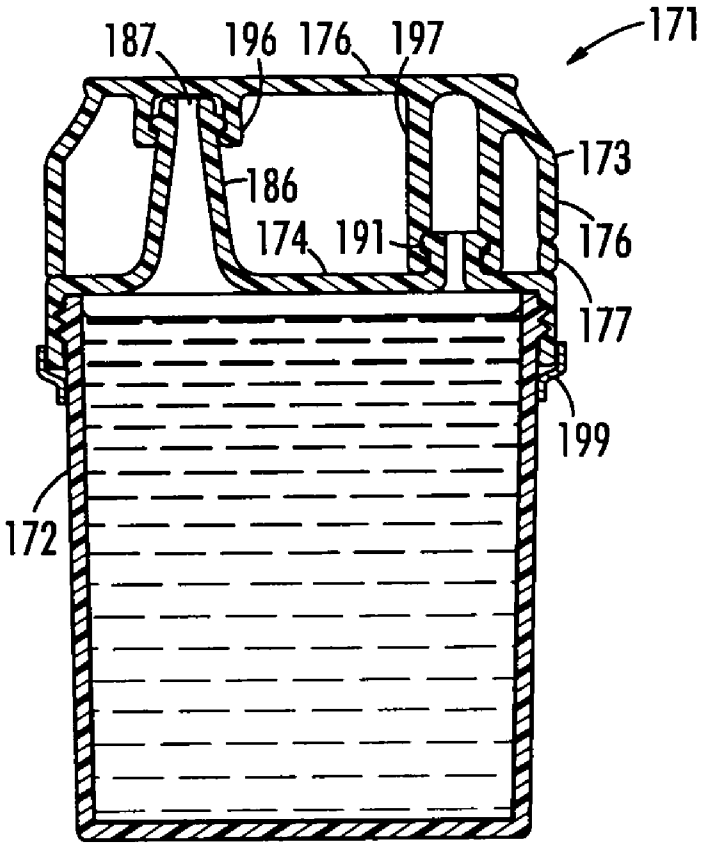

187
196
176
197
171
173
186
174
191
176
177
199
172

FIG.6

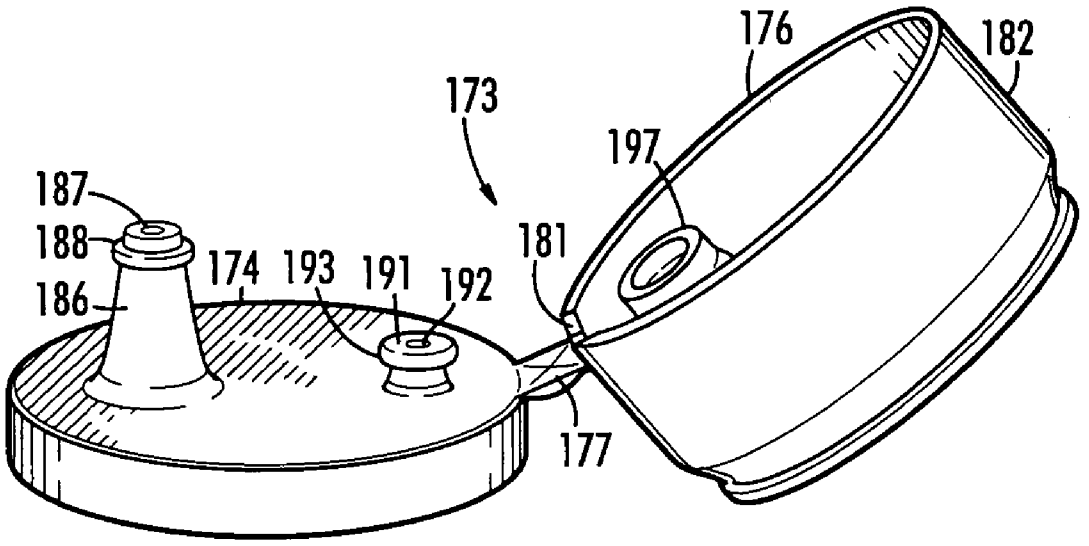

176
182
173
197
187
188
174
193
191
192
181
186
177

FIG.7

DISPOSABLE NON-SPILLABLE CHILDS DISPENSING CUP

BACKGROUND

[0001] This invention relates to containers that are specially adapted for use in can and bottle drink vending machines that enable dispensing of a child's disposable drinking cup containing beverage and possessing an extended mouthpiece that resists fluid flow when inverted, but allows adequate flow when suction is applied.

[0002] Children's cups possessing an extended spout for placing in the child's mouth and drinking from, commonly referred to as "sippy cups" and "sipper cups," have provided a convenient method of providing beverage to children while reducing spills associated with a young person's lack of motor skills. Sippy cups possess an extended spout that can be placed in a child's mouth. The spouts generally restrict fluid flow if the cup is inverted by means of valves and/or possessing small apertures through which the fluid must flow. When suction is applied the resistance to fluid flow is reduced allowing the child to drink.

[0003] Vending machines do not currently dispense drinks contained in drinking bottles or cans suitable for young children. When running errands, caretakers have to pack drinks and bottles for their children. If the young child needs a drink or bottle and the caretaker has not packed any, the caretaker has to sit and hold the cup for the young child, go into a store for a bottle, or even stop the errands altogether and go home.

[0004] Present drink vending machines carry beverages and juices, but the cans and bottles presently available in such vending machines do not sufficiently restrict the flow of liquid to prevent spills if the bottle is inverted. The openings of such bottles and cans are also awkward for a small child to drink from.

[0005] Present sipper cups, while better capable of reducing spills and more biometrically suited for small children than cans or current drink bottles, are not readily adaptable for use in conventional drink vending machines such that a drink machine service company could easily add such a product to a vending machine's inventory for caretaker's to conveniently purchase.

BRIEF SUMMARY OF THE INVENTION

[0006] Provided is a disposable drinking container suitable for use by a child and adapted to be dispensed from a drink vending machine. The container includes a vessel containing a liquid beverage, a releasable seal attached to the top of the vessel containing the liquid, the vessel having an upper portion having an extended spout, and a removable cap. The container is an appropriate shape and size for dispensing from a vending machine. The shape of the product allows for its use in conventional drink dispensing machines used in theme parks, shopping centers, restaurants and the like including aluminum can dispensing machines and plastic and glass bottle dispensing machines. Ideally the drinking container is lightweight and biodegradable. A releasably attached safety seal protects the contents of the container until the child is ready to consume its contents.

[0007] The extended spout contains an aperture or apertures to allow fluid to flow when suction is applied but resists fluid flow when the cup is inverted. Such function may be accomplished by any means known to those in the art including appropriate selection of the aperture dimensions and employment of valves. The extended spout is dimensioned to comfortably fit in a child's mouth. The content of the vessel is contained by a safety seal releasably attached to the top of the vessel. The extended spout and safety seal are protected by a removable cap releasably attached to the vessel. In the preferred embodiment of the container, the cap is threadably attached to the vessel and secured with a tamper evident seal extending around the circumference of the interface between the cap and the vessel.

[0008] Typically, a child's caretaker will purchase the container for the child from a convenient vending machine. The parent then will remove and discard the cap and safety seal. The caretaker then will attach the upper portion of the vessel to the lower portion of the vessel and hand the assembled vessel to the child. The child may then insert the extended spout in his or her mouth, invert the vessel, and suck the beverage from the vessel. The parent will then be able continue with their errands or drive with knowledge that the vessel will reduce or eliminate spills in the event the child was to tip or drop the drink.

[0009] A drink machine service company will be able to add vendible sippy cup products to the available selections on a standard drink machine without the need to invest in new equipment. Such an expansion of their product lines will expand their customer base by attracting caretakers of young children.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The preferred construction of the invention is illustrated by the accompanying drawings, in which:

[0011] FIG. **1** is a perspective of the container possessing the shape and size of a standard 20-ounce drink bottle;

[0012] FIG. **2** is an exploded view of the container shown in FIG. **1**;

[0013] FIG. **3** is a side view of the container possessing the shape and size of a standard 12-ounce drink can;

[0014] FIG. **4** is a vertical section of the container shown in FIG. **3**;

[0015] FIG. **5** is an exploded view of the container shown in FIGS. **3** and **4**;

[0016] FIG. **6** is a vertical section of a drink container with a snap on sippy closure having a hinged seal cap, and

[0017] FIG. **7** is a perspective of the closure shown in FIG. **6**.

DETAILED DESCRIPTION OF THE INVENTION

[0018] As illustrated in the accompanying drawings a disposable drinking container is shown for containing a liquid beverage, suitable for use by a child and adapted to be dispensed from a drink vending machine or equally convenient for a caretaker, may be purchased free standing at any number of locations such as convenience stores, theme parks or restaurants. The container is generally constructed from a resilient polymer based material suitable for use as a beverage container. In the preferred embodiment, the components will be of a biodegradable and/or recyclable material. Other materials may be used, including metal, paper, cardboard, and expanded polymers. FIG. **1** shows a perspective view of an embodiment of the invention with a shape of a standard 20-ounce drink bottle **11**. The outside surface the assembled container **11** approximately defines a surface of revolution about a vertical axis **13**.

[0019] FIG. **2** shows an exploded view of the container **11** which has a vessel includes an upper portion **41** snap fit onto a lower portion **21**. The container **11** also includes a safety seal **31**, a cap **61**, and a tamper evident seal **71**. The lower portion **21** possesses an opening **25** and an annular rim **23**. In the embodiment shown in FIGS. **1** and **2**, the lower portion **21** has external threads **27** possessing a minor diameter greater than the outside diameter of the upper portion **41**, thereby enabling cap **61**, possessing internal threads **63** dimensioned to mate with the external threads **27**, to fit over the rim **23**. Thus there is no interference between the internal threads **63** and the upper portion **41** when the cap **61** is removably secured to the lower portion **21** or removed therefrom. The tamper evident seal **71**, may or may not be present around the circumference of the container **11** covering the joint between the cap **61** and the vessel **21**, **41** where, if present, would be irreparably damaged upon removal of the cap **61**.

[0020] The upper portion **41** possesses an extended spout **43** adapted to be placed comfortably within a child's mouth. The extended spout **43** possesses at least one aperture **45** adapted to resist flow of liquid when the vessel **21**, **41** is tipped or dropped, but allow flow of liquid when suction is applied, such as when the extended spout **43** is placed within a child's mouth and the child is sucking. The vessel **21**, **41** may also have a vent aperture **47** adapted to allow air to flow into the vessel **21**, **41**, but resist the flow of fluid out of the vessel **21**, **41** when tipped or dropped. The apertures **45**, **47** may possess one or more valves adapted to resist fluid flow out of the vessel **21**, **41** when dropped or tipped, but allow fluid to flow when suction is applied to the extended spout **43**.

[0021] FIG. **3** shows another embodiment of the invention wherein the outside surface of the container **111** possesses the size and shape of a standard 12-ounce drink can. The container **111** includes a lower portion **121** connected to a cap **161**, and a removably secured tamper evident seal **71**. FIG. **4** shows a vertical section of the container **111** further illustrating the preferred embodiment of the invention filled with a liquid **5**, such as a fruit juice, juice cocktail, or milk, and ready for distribution in a standard drink can vending machine. Seal **31** may be constructed from but is not limited to a polymer, metallic foil, or a combination thereof, and is releasably attached to the rim **23** of the vessel **121**, **41** preferably in a manner that would prevent resealing of the safety seal **31** to the rim **23**. The tamper evident seal **71** is releasably attached to the container **111** such that removal of the cap **161** from the vessel **121**, **41** would destroy, permanently deform, or break the tamper evident seal **71**. FIG. **5** shows an exploded view of the embodiment of the invention shown in FIGS. **3** and **4**.

[0022] FIGS. **6** and **7** illustrate a plastic container **171** dispensable by present day vending machines which has a cylindrical drink containing lower portion or cup **172** and a one piece snap-on top portion **173**. The top portion **173** includes a lid **174** having a snap-on fit with the lower portion **172** and a cap **176** hinged to and interconnected with the lid **174** by a narrow flexible web **177**. The web **177** fits in a slot **181** in the side wall **182** of the cap **176** so that in the closed position of the cap **176** shown in FIG. **6**, the web **177** aligns with and does not extend radially outward beyond the cylindrical side wall **182** of the cap **176**. The lid **174** has an upstanding sippy or drinking spout **186** with an orfice **187** at its upper end. An annular ridge **188** extends radially outward from the spout **186** near its upper end and present a radially outward facing sealing surface. The lid also has an upstanding vent **191** with an orifice **192** and a radially outward annular ridge **193**. As shown in FIG. **6**, the cap **176** includes downwardly extending cylindrical connectors **196**, **197**, each of which have a radially inward facing sealing surface. The connectors **196**, **197** have a snap-on sealing fit with the sippy spout **186** and the vent **191**, respectively, when the cap **176** is in its illustrated closed position. A tamper evident seal **199** completes the sealing of the illustrated sippy drink container.

[0023] It is understood that the vessel **21**, **41** or **121**, **41** may be filled with the beverage **5** and sealed with the safety seal **31**. When dispensed the vessel is in an assembled condition as shown by FIG. **1** or **3**. Upon being dispensed from a standard drink bottle or can vending machine, the caretaker of a small child breaks and discards the tamper evident seal **71** and removes the cap **61** or **161**. The caretaker then unsnaps the upper portion **41** from the lower portion **21** or **121** and lifts pull tab **33** connected to safety seal **31** creating an opening. The caretaker then may discard the safety seal **31**. The caretaker then re-secures the upper portion **41** to the rim **23** of the lower portion **21** or **121** and gives the child the reassembled vessel **21**, **41** or **121**, **41** for drinking. Upon completion of consumption of the beverage, the components of the container **11** or **111** may be discarded, recycled, or cleaned and reused by the caretaker.

[0024] It should be understand that various modifications may be made without departing from the spirit and scope of the invention. Accordingly, other embodiments are within the scope of the following claims.

What is claimed is:

1. A container for fluids suitable for human consumption having an outermost exterior substantially defining a surface of revolution about a vertical axis and sized for use in a drink vending machine, said container comprising:

a vessel having an upper portion and a lower portion, said upper portion having an extended spout at its upper end sized to be placed in a human mouth, said spout having a tip with an aperture designed to resist leakage when tipped and allow fluid to flow when suction is applied, and said lower portion for containing said fluid;

a releasable seal attached to said vessel to prevent fluid egress from said vessel; and

a cap releasable attached to the top of said vessel forming an enclosure protecting said extended spout.

2. The container of claim **1** wherein the inside diameter of said cap is greater than the exterior diameter of said upper portion of said vessel.

3. The container of claim **1** in which said vessel and said cap have matingly engageable threads permitting releasable connection of said cap to said vessel.

4. The container of claim **1** in which said upper portion contains a vent aperture allowing air to enter said vessel when suction is applied to said extended spout but resists leakage when tipped.

5. The container of claim **1** in which said upper portion contains a valve allowing air to enter said vessel when suction is applied to said extended spout but results leakage when tipped.

6. The container of claim **1** in which said upper portion contains a valve allowing fluid to flow when suction is applied and resist leakage when tipped.

7. The container of claim **1** in which said upper portion and said lower portion are releasably secured to one another.

8. The container of claim **7** in which the top of said lower portion has an opening and an annular rim to which said releasable seal is attached.

9. The container of claim **8** in which said upper portion and said rim of said lower portion are adapted to releasably snap fit together.

10. The container of claim **1** in which said lower portion and said cap have matingly engageable threads.

11. The container of claim **1** having a width in the range of 52 mm to 76 mm and a height in the range of 92 mm to 306 mm.

12. The container of claim **1** having the shape, height and width permitting said container to be dispensed by a soda can vending machine.

13. The container of claim **1** having the shape, height and width permitting said container to be dispensed by a soda bottle vending machine drink bottle.

14. The container of claim **1** having a releasably attached tamper evident seal encircling the outer surfaces of said cap and said vessel at their junction.

15. A container for fluids for human consumption having an exterior substantially defining a surface of revolution, comprising:

a lower portion having an annular opening at its upper end, and

a unitary upper portion including a lid hinged to a cap, said lid including a upstanding sippy spout with a vertical opening and an upstanding vent having a central vertical opening, said spout and vent having radial sealing surfaces, said cap including downward protrusions for sealing engagement with said spout and vent.

16. A method of expanding a vending machine customer base by merchandising a vendible sippy cut containing beverage by placing the beverage in a container having an extended spout that resists leakage when tipped but allows fluid to flow when suction is applied, said container having a shape and size that can be vended as a sealed container from a refrigerated vending machine.

* * * * *