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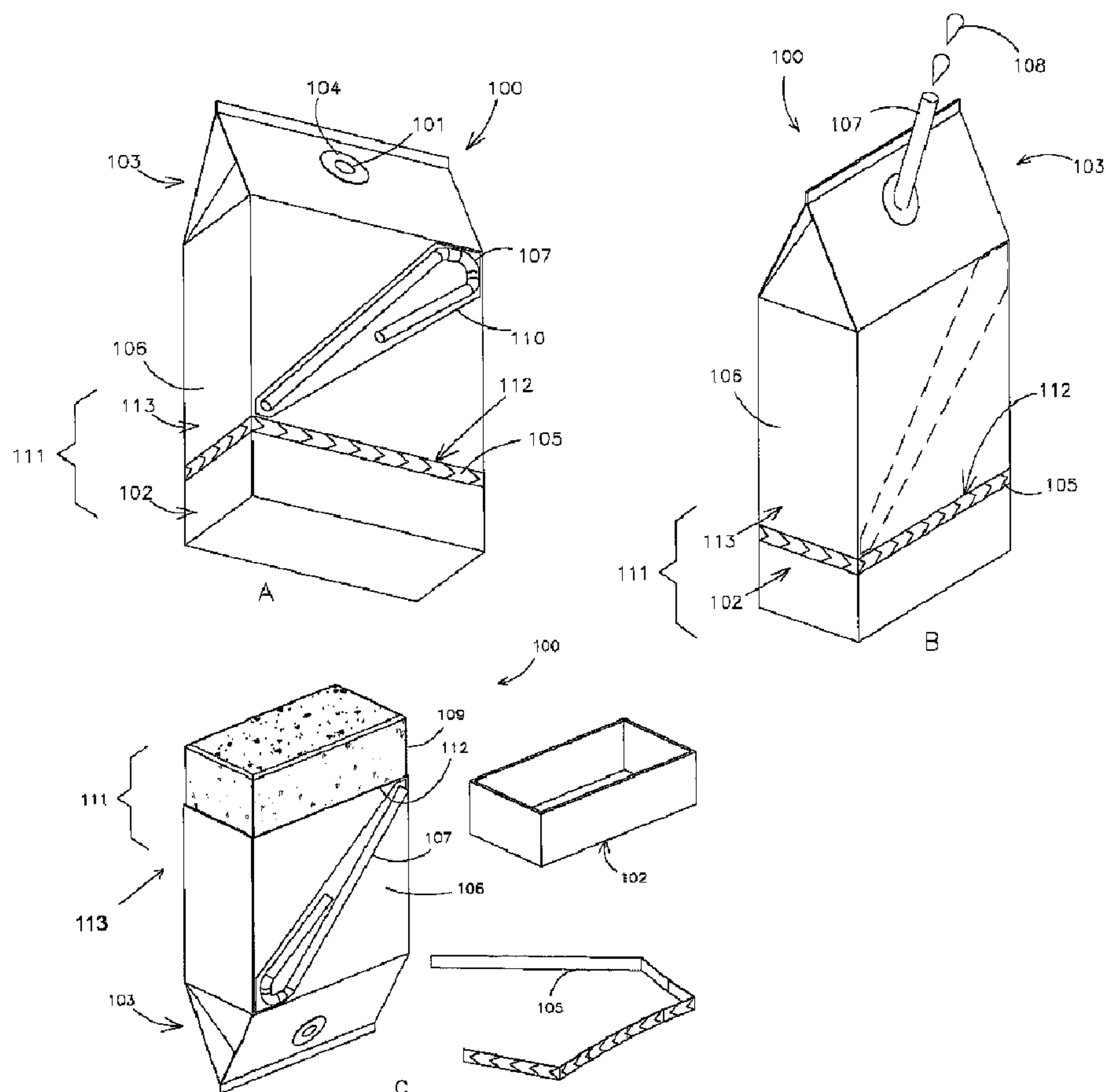
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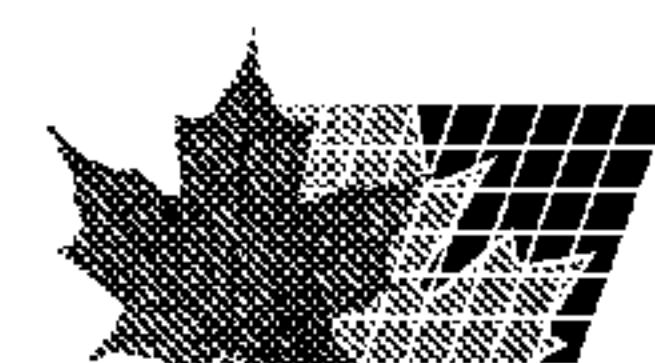
(54) Titre : CONTENANT ASEPTIQUE DOUBLE FONCTION

(54) Title: DUAL-PURPOSE ASEPTIC CONTAINER



(57) Abrégé/Abstract:

A consumable-product container includes an aseptically sealed body defining an interior volume, an amount of fluid disposed within the interior volume, the amount of fluid having a liquid state and a frozen state, a straw receiving area on the body, the straw



(57) **Abrégé(suite)/Abstract(continued):**

receiving area being of a material that is penetrable by a flexible plastic straw, and a removable member that, when removed from the body, creates an opening in the body sized to permit the fluid to escape the interior volume in the frozen state.

ABSTRACT

A consumable-product container includes an aseptically sealed body defining an interior volume, an amount of fluid disposed within the interior volume, the amount of fluid having a liquid state and a frozen state, a straw receiving area on the body, the straw receiving area being of a material that is penetrable by a flexible plastic straw, and a removable member that, when removed from the body, creates an opening in the body sized to permit the fluid to escape the interior volume in the frozen state.

DUAL-PURPOSE ASEPTIC CONTAINER

FIELD OF THE INVENTION

[0001] The present invention relates to the field of aseptic containers, and more particularly to a container that can extract a liquid from a first opening and frozen contents from a second opening.

BACKGROUND OF THE INVENTION

[0002] A “juice box” is a small container used to carry and consume drinks (most often juice). They are most popular with parents, who enjoy the ability to quickly give their children a single serving of juice. The shape of the product makes them easy for kids and adults to hold and use.

[0003] Juice boxes were originally designed in a specific fashion, a style that proved successful as it has remained, mostly, unchanged since the 1980s. Manufacturers chose a box shape because they foresaw this shape as being the most convenient and easily handled. Juice boxes typically come with a covered hole and an attached straw which makes it easier for children to drink and results in less of a mess. However, there are some juice boxes available for purchase equipped with sides that are penetrable by the straw anywhere or a pull tab.

[0004] They are frequently made of paperboard with an aluminum foil lining, but variations exist. Paperboard is used to shape the product and give the box an extra source of strength, an outer layer of Polyethylene forms a liquid-tight seal and is the layer used to print the information and graphics on the packaging, and an inner layer of aluminum is used to keep light and oxygen out (as well preventing the juice from becoming spoiled without having to use extra preservatives). One issue with current juice box packaging is it is designed for the juice to be consumed in its liquid form only. If the contents were frozen, one would have to wait for them to thaw or would have to use a tool to destroy the box to access the contents.

[0005] An “ice pop” or “popsicle” is a water-based frozen snack. It is made by freezing flavored liquid, such as fruit juice, or soda-pop around a stick. Once the liquid freezes solid, the stick can be a handle to hold the treat. In 1905 the first recorded “ice-pop” was created by Frank Epperson of San Francisco, who left a glass of “soda pop water and flavored powder” outside on his back porch with a wooden mixing stick extending therefrom. Today, the annual sales are of ice-pops exceed two billion dollars.

[0006] One issue with current ice-pop packaging is it is that it is designed for the ice-pop to be consumed in its solid frozen form only. Many consumers, however, would like to have the option to consume the ice-pop, which is usually made of juice, in a liquid state from the same packaging. Thawed ice-pops become very messy and it is usually impossible to set the ice-pop container down without the thawed contents spilling out.

[0007] The opposite is also true. Consumers would like the option of freezing juice to create an ice-pop and be able to consume it in a frozen form. Consumers are forced to choose between purchasing an ice-pop to consume frozen contents or a juice box to consume liquid contents. Alternatively, the consumer can buy both and waste storage space.

[0008] Therefore, a need exists to overcome the problems with the prior art as discussed above.

SUMMARY OF THE INVENTION

[0009] The invention provides a dual-purpose disposable aseptic container that overcomes the fore-mentioned disadvantages of the single-purpose ice-pop and single-purpose juice container packaging known in the art.

[0010] With the foregoing and other objects in view, there is provided, under the invention, a consumable-product container that includes a plastically deformable straw, an aseptically sealed flexible body defining an interior volume, and an amount of fluid disposed within the interior volume. The fluid, for example, fruit juice, has a liquid state and a frozen state. A first selectively openable aperture is at a first end of the body, the first selectively openable aperture being openable by penetrating a portion of the first end of the body with the plastically deformable straw. The first selectively openable aperture is sized to permit the fluid to escape the interior volume in a liquid state but is too small

to allow it to escape in a frozen state. A second selectively openable aperture is at a second end of the body and is large enough to permit the fluid to escape the interior volume in its frozen state.

[0011] In accordance with a feature of the present invention, the second end of the body is removable to open the second selectively openable aperture.

[0012] In accordance with another further feature of the present invention, the removable member is a tear-line located at the second end of the body and, when pulled, it causes a first portion of the second end of the body to separate from a second portion of the second end of the body, thereby exposing the second selectively openable aperture.

[0013] In accordance with one more feature of the present invention, the aseptically sealed flexible body is a traditional children's single-serve juice box.

[0014] In accordance with a further embodiment, the present invention provides a consumable-product container that includes an aseptically sealed body defining an interior volume and an amount of fluid disposed within the interior volume. The fluid has a liquid state and a frozen state. The body features a straw receiving area formed with a material soft enough to be penetrated by a flexible plastic straw and not requiring any other tools. When penetrated, the straw receiving area forms at least a partially watertight seal around the straw. A removable member is provided that, when removed from the body, creates an opening in the body sized to permit the fluid to escape the interior volume in the frozen state.

[0015] In accordance with a feature of the present invention, the removable member is a strip of material along the body and formed to separate from the body when pulled.

[0016] In accordance with another feature of the present invention, the removable member is integral with the body.

[0017] In accordance with one more feature of the present invention, the removable member is created by forming lines of weakness on either side thereof, so that when the removable member is pulled, the body tears along the lines of weakness, which allows the strip to separate from the body.

[0018] In accordance with yet another feature of the present invention, the removable member is a first section of the body that separates from a second section of the body to expose the opening.

[0019] The present invention also provides a consumable-product container that includes a straw and an aseptically sealed body defining an interior volume. The body includes a first end with a liquid removal opening, the liquid removal opening forming at least a partial watertight seal around the straw, a second end opposite the first end, the second end having a frozen content removal opening sized to permit contents of the body having a volume of at least 50% of the interior volume of the body to be removed from the body in a frozen state, and a selectively removable member operable to expose the frozen content removal opening when activated by a user.

[0020] Although the invention is illustrated and described as embodied in a dual-purpose disposable aseptic container, it is not intended to be limited to the details shown because various modifications and structural changes may be made without departing from the spirit of the invention and within the scope and range of equivalents of the claims. Known elements of exemplary embodiments of the invention will not be described or will be omitted so as not to obscure the details of the invention.

[0021] Unless otherwise defined, all terms of art, notations and other scientific terms or terminology used should have the meanings commonly understood by those of skill in the art to which this invention pertains. Sometimes, terms with commonly understood meanings are defined for clarity and/or for ready reference, and including such definitions should not be construed to represent a substantial difference over what is understood in the art. Many of the techniques and procedures described, or referenced, are well understood and commonly employed using conventional methodology by those skilled in the art.

[0022] The indefinite articles “a” and “an,” as used herein in the specification and in the claims, unless clearly indicated to the contrary, should be understood to mean “at least one,” or as one or more than one. The term “plurality,” as used herein, is defined as two or more than two.

[0023] The phrase “and/or,” as used herein in the specification and in the claims, should be understood to mean “either or both” of the elements so conjoined, i.e., elements that are conjunctively present sometimes and disjunctively present in other cases. Other

elements may optionally be present other than the elements identified by the “and/or” clause, whether related or unrelated to those elements identified unless indicated to the contrary. As a non-limiting example, a reference to “A and/or B,” when used in conjunction with open-ended language such as “comprising” can refer, in one embodiment, to A without B (optionally including elements other than B); in another embodiment, to B without A (optionally including elements other than A); in yet another embodiment, to both A and B (optionally including other elements); etc.

[0024] As used in the specification and in the claims, “or” should be understood to have the same meaning as “and/or” as defined above. When separating items in a list, “or” or “and/or” shall be interpreted as being inclusive, i.e., including at least one, but also including over one, of a number or list of elements, and, optionally, additional unlisted items. Only terms indicated to the contrary, such as “only one of” or “exactly one of,” or, when used in the claims, “consisting of,” will refer to the inclusion of exactly one element of a number or list of elements. The term “or” as used shall only be interpreted as indicating exclusive alternatives (i.e. “one or the other but not both”) when preceded by terms of exclusivity, such as “either,” “one of,” “only one of,” or “exactly one of.” “Consisting essentially of,” when used in the claims, shall have its ordinary meaning as used in the field of patent law.

[0025] The term “another,” as used herein, is defined as at least a second or more. The terms “including” and/or “having,” as used herein, are defined as comprising (i.e., open language). The term “coupled,” as used herein, is defined as connected, although not necessarily directly, and not necessarily mechanically. As used, the terms “about” or

“approximately” apply to all numeric values, whether or not explicitly indicated. These terms refer to a range of numbers that one of skill in the art would consider equivalent to the recited values (i.e., having the same function or result). Often these terms may include numbers rounded to the nearest significant figure.

[0026] As used in the specification and in the claims, the term “ice-pop” comprises, solidified water like substances with artificial or natural flavor. Non-limiting examples are: freezer pops, popsicles, or ice creams.

[0027] As used in the specification and in the claims, the term “aseptic” refers to sealing that prevents germs from penetrating the sealed barrier.

[0028] As used in the specification and in the claims, the term “selectively openable” refers to two items that rarely separate during their normal intended use, but can be separated from each other by a user through designed, built-in feature. Examples of such a feature include line of weakness built into the material that tears when pressure is applied, an area of glue with less adhesion than other areas of the container, lids, caps, covers, closures, top, membranes, foil, paper, plastic, strips, string, tear-lines, any combination, and more.

BRIEF DESCRIPTION OF THE DRAWINGS

[0029] The accompanying figures, where like reference numerals refer to identical or functionally similar elements throughout the separate views and which, with the detailed

description below, are incorporated in and form part of the specification, further illustrate various embodiments and explain various principles and advantages all under the present invention. Other features that are considered as characteristic for the invention are set forth in the appended claims. As required, detailed embodiments of the present invention are disclosed; however, the disclosed embodiments are merely exemplary of the invention, which can be embodied in various forms. Therefore, specific structural and functional details disclosed are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one of ordinary skill in the art to variously employ the present invention in virtually any appropriately detailed structure. Further, the terms and phrases used are not intended to be limiting; but rather, to provide an understandable description of the invention.

[0030] While the specification concludes with claims defining the features of the invention regarded as novel, it is believed that the invention will be better understood from a consideration of the following description with the drawing figures, in which like reference numerals are carried forward. The figures of the drawings are not drawn to scale.

[0031] FIG. 1A is an upward-looking perspective view of an embodiment of a dual-purpose popsicle mold/liquid drink container depicting a straw and an aseptically sealed flexible body defining an interior volume.

[0032] FIG. 1B is a downward-looking perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 1A with the straw inserted in a first selectively openable aperture within the body.

[0033] FIG. 1C is a perspective view of the dual-purpose popsicle mold/liquid drink container of FIGS. 1A and 1B turned upside down, a removable member, and a first portion of the bottom of the body removed and exposes a second selectively openable aperture sized to permit fluid to escape the interior volume in a frozen state.

[0034] FIG. 2A is a perspective view of a conical dual-purpose popsicle mold/liquid drink container with a liquid selectively openable removal aperture where at least a partial watertight seal around is created when a straw is inserted into the aperture.

[0035] FIG. 2A1 is a close-up detailed view of FIG. 2A, depicting the area of material creating a water-tight seal on the first selectively openable aperture, and ready to be pulled away and discarded or penetrated by a straw.

[0036] FIG. 2B is a downward perspective view of the conical shaped dual-purpose popsicle mold/liquid drink container of FIG. 2A turned upside down, a removable member, and a first portion of the bottom of the body removed and exposes a second selectively openable aperture that allows the fluid to escape the interior volume in a frozen state.

[0037] FIG. 2C is a perspective view of the conical shaped dual-purpose popsicle mold/liquid drink container of FIGS. 2A and 2B turned upside down, without the

removable member and first portion of the bottom of the body in FIG. 2B and exposing the second selectively openable aperture wherein fluid escapes the interior volume in a frozen state.

[0038] FIG. 3A is a downward perspective view of the dual-purpose popsicle mold/liquid drink container depicting a lid and an aseptically sealed flexible body defining an interior volume.

[0039] FIG. 3B is a downward perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 3A with the lid removed to expose a first selectively openable aperture within the body.

[0040] FIG. 3C is a downward perspective view of the dual-purpose popsicle mold/liquid drink container of FIGS. 3A and 3B turned upside down, a removable member, and a first portion of the bottom of the body removed and exposes a second selectively openable aperture that allows fluid to escape the interior volume in a frozen state.

[0041] FIG. 4A is a perspective view of the dual-purpose popsicle mold/liquid drink container depicting a straw inserted in a first selectively openable aperture within an aseptically sealed flexible body defining an interior volume.

[0042] FIG. 4B is a perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 4A turned upside down, and a first portion of the bottom of the body removed and exposes a second selectively openable aperture that allows fluid to escape the interior volume in a frozen state.

[0043] FIG. 4C is a perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 4A turned upside down, without the first portion of the bottom of the body in FIG. 4B and exposing the second selectively openable aperture that allows fluid to escape the interior volume in a frozen state.

[0044] FIG. 4D is a flow diagram illustrating a method of consuming a frozen treat with the container of the present invention.

[0045] FIG. 5A is a perspective view of a dual-purpose popsicle mold/liquid drink container that includes a tubular shaped aseptic container with a straw puncturing one end of the container to create a liquid removal aperture forming at least a partial watertight seal around the straw.

[0046] FIG. 5B is a perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 5A, wherein a handle made out of wood is used to puncture one end of the container to create a handle before freezing the liquid inside.

[0047] FIG. 5C is a perspective view of the dual-purpose popsicle mold/liquid drink container of FIGS. 5A and 5B, turned upside down, wherein a removable member allows for the separation of the container body from the removable top.

[0048] FIG. 6A is a perspective view of the dual-purpose popsicle mold/liquid drink container, that includes a spiral tubular shaped body, and a straw used to puncture one side of the container allowing for liquid to be extracted and forming at least a partial watertight seal around the straw.

[0049] FIG. 6B is a perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 6A turned upside down, a removable member, the bottom of the body in FIG. 6A is removed exposing the second selectively openable aperture that allows fluid to escape the interior volume in a frozen state.

[0050] FIG. 6C is a perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 6A, turned upside down, wherein the spiral tubular shaped aseptic container is contracted to remove the solid content through the second removable aperture, by pushing on the bottom of the container body.

[0051] FIG. 7A is a perspective view of the dual-purpose popsicle mold/liquid drink container, a straw, a removable end cover, wherein the straw is inserted through the removable cover forming at least a partial watertight seal around the straw that allows for the removal of liquid.

[0052] FIG. 7B is a perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 7A, with the removable end cover removed and exposing the second selectively openable aperture wherein fluid escapes the interior volume in a frozen state by squeezing of the container body.

[0053] FIG. 8A is a perspective view of a tubular shaped dual-purpose popsicle mold/liquid drink container, depicting a straw-handle combination and a lid that covers the liquid removal opening.

[0054] FIG. 8B is a perspective view of a tubular shaped dual-purpose popsicle mold/liquid drink container of FIG. 8A, and a cap on the liquid removal opening removed to allow fluid to escape in the liquid state but not in the solid state.

[0055] FIG. 8C is a perspective view of a tubular shaped dual-purpose popsicle mold/liquid drink container of FIGS. 8A and 8B turned upside down, wherein the straw-handle with the lid on is a handle and a selectively removable member that separates the straw-handle from the container to expose the frozen content.

[0056] FIG. 8D is a perspective view of a tubular shaped dual-purpose popsicle mold/liquid drink container of FIGS. 8A, and 8B turned upside down, wherein the frozen content is exposed and held by the straw-handle.

[0057] FIG. 9A is a downward-looking perspective view of an embodiment of a dual-purpose popsicle mold/liquid drink container depicting an aseptically sealed flexible body defining an interior volume and a window to see inside the interior volume.

[0058] FIG. 9B is a downward-looking perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 9A showing as the solid volume is removed through a second selectively openable aperture within the body by discarding a removable member.

[0059] FIG. 9C is an upward-looking perspective tilted view of the dual-purpose popsicle mold/liquid drink container of FIGS. 9A and 9B, wherein a “v” shaped structure at the

bottom end of the body is shown and the window that allows for the solid content to be viewed inside the container.

[0060] FIG. 9D is a side view of the dual-purpose popsicle mold/liquid drink container of FIGS. 9A 9B and 9C, showing how a user uses the “v” shaped structure at the bottom end to remove the solid content of the container.

[0061] FIG. 10A is a downward-looking perspective view of an embodiment of a dual-purpose popsicle mold/liquid drink container depicting a removable member on top of a foldable triangle top end that allows for stacking of the containers.

[0062] FIG. 10B is a downward-looking perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 10A showing as the solid volume is removed through a second selectively openable aperture within the body by discarding a removable member.

[0063] FIG. 10C is a downward-looking perspective view of the dual-purpose popsicle mold/liquid drink container of FIG. 10A showing an arrow to indicate that when folded, the cross-fold-lines in concert with vertical-fold-line collapse within itself to allow for stacking of the container one on top of the other.

[0064] FIG. 10D is a downward-looking perspective view of the dual-purpose popsicle mold/liquid drink container and continuation sequence of FIG. 10C showing the top surface as it folds and covers the openable aperture.

[0065] FIG. 10E is a downward-looking perspective view of the dual-purpose popsicle mold/liquid drink containers and continuation sequence of FIG. 10D showing how the dual-purpose popsicle mold/liquid drink container are stacked one on top of another.

DETAILED DESCRIPTION

[0066] While the specification concludes with claims defining the features of the invention regarded as novel, it is believed that the invention will be better understood from a consideration of the following description in conjunction with the drawing figures, in which like reference numerals are carried forward. It is to be understood that the disclosed embodiments are merely exemplary of the invention, which can be embodied in various forms.

[0067] The present invention provides a novel dual-purpose popsicle mold/liquid drink container. Embodiments of the invention provide for a liquid container that allows for extraction of the contents in liquid and solid form. Embodiments of the invention provide for a method to use this drink container so a person can enjoy the contents within this container both in liquid and solid form.

[0068] Referring now to FIG. 1A, one embodiment of the present invention is illustrated in an upward-looking perspective view. The illustrated embodiment shows several advantageous features of the novel container **100**, but, the invention can be provided in several shapes, sizes, combinations of features and components, and varying numbers and

functions of the components. The first example of the novel dual-purpose popsicle mold/liquid drink container **100** includes a plastically deformable straw **107**, an aseptically sealed flexible body **106** defining an interior volume, a first selectively openable aperture **101** at a first end **103** of the body **106**, a second selectively openable aperture, generally represented by reference number **112** in FIG. 1A, but not visible in this view, at a second end **111** of the body **106**. It also features a straw pouch **110** wherein the straw **107** is placed during manufacturing and is readily available to a user. In this embodiment, the drink container **100** is openable by penetrating a portion of the first end **103**, i.e., the first selectively openable aperture **101**, of first end **103** of the body **106** with the straw **107**. The first aperture **101** is an area of foil **104** penetrable by a tip of the straw **107**. The invention is in no way limited to foil and can use other materials that serve to seal the container and are penetrable by a flexible plastic straw. In some embodiments, the entire side of the container is a foil or other material that is penetrable by the end of a straw. In some embodiments, the aperture **101** is preformed and is not created by the straw's penetration, although the straw can pass through it in a penetrating manner. In one such embodiment, the aperture can be resealed by pressing the foil **104** against the body **106** once the straw is removed. The area of foil **104** may also be pulled away and discarded. At the opposite end of **103**, a removable member **105**, such as a tear-line is shown. If removed, the tear-line would separate the first portion **113** of the second end **111** of the body **106** from a second portion **102** of the second end **111** of the body **106**.

[0069] FIG. 1B provides a downward-looking perspective view of the dual-purpose popsicle mold/liquid drink container **100** of FIG. 1A. The drink container **100** contains an amount of fluid **108** disposed within the interior volume, the fluid having a liquid state and a frozen state. The fluid disposed within the container **100** could be fruit juices or any other consumable beverage. The volume of fluid can be equivalent to that within a traditional children's single-serve juice box. As a non-limiting range, the liquid disposed within the interior volume of the aseptic purpose popsicle mold/liquid drink container **100** can be between about 4 oz. and 10oz., or between about 100 ml. and 300 ml. but the invention is not so limited.

[0070] FIG. 1B also depicts how the drink container **100** is openable by penetrating, or otherwise inserting, the straw **107** into a aperture **101** of the first end **103** of the body **106**, e.g., through the foil **104**. The selectively openable aperture **101** is sized to permit the fluid **108** to escape the interior volume in a liquid state but not in a frozen state. The aperture **101** is too small to allow the frozen contents to escape. Here, the straw pouch **110** of FIG. 1A is peeled away and discarded.

[0071] FIG. 1B also shows a removable member **105** operable to separate a first portion **113** of the second end **111** of the body **106** from a second portion **102** of the second end **111** of the body **106** to open the second selectively openable aperture **112** (shown best in FIG. 1C).

[0072] FIG. 1C depicts a downward looking perspective view of the juice box container **100** of FIGS. 1A and 1B turned upside down. Here, the second portion **102** of the second

end **111** of the body **106** is removable to open the second selectively openable aperture **112**. The exposed second selectively openable aperture **112** is sized to permit the fluid to escape the interior volume of the juice box container **100** in a frozen state **109**. The aperture is big enough to allow the entire contents to slide out. More specifically, the first portion **113** of the second end **111** is separable from the second portion **102** of the second end **111** of the body **106** to expose the second selectively openable aperture **112**. The first end **103** and second end **111** are separated by tear-line member **105**. This is shown in FIG. 1C removable member **105**, a strip of material that can be removed from the body **106** by pulling on it. Strips such as tear-line member **105** are well known in the art. One of the main advantages of the present invention is that the ice-pop **109** can be easily enjoyed using the same drink container body **106**, without the need to transfer to another container before freezing.

[0073] The straw **107** is a tube used to suck a beverage or fluid out of a container such as **106**. Straws **107** are usually made from polypropylene plastic. Polypropylene is a resin made by polymerizing, or stringing together, molecules of a propylene gas. The polypropylene resin must first be mixed with the plasticizers, colorants, antioxidants, stabilizers, and fillers. These materials, in powder form, are dumped into the hopper of an extrusion compounder that mixes, melts, and forms beads of the blended plastic. The resin exits the die in a long string in the shape of a straw **107**.

[0074] Referring to FIG. 2A, another embodiment of the present invention, namely, a cone shaped popsicle mold/liquid drink box container **200** is depicted. FIG. 2A1 is a close-up detailed view of the upper portion of FIG. 2A, depicting the area of foil **204**

creating a water-tight seal on the first selectively openable aperture **201**, and ready to be pulled away and discarded by a user. FIG. 2A shows, that once the area of foil **204** is removed, it allows for the straw **207** to be introduced into body **206** for the liquid **208** to be extracted. FIG. 2A also shows an embodiment that includes a straw **207**, and an aseptically sealed flexible body **206** defining an interior volume and having a first end **203** with a liquid removal opening **201** created by the straw **207** as it punctures the body **206**. The liquid removal opening forms at least a partial watertight seal around the straw **207**. The body **206** here conforms a sloping transition between the first end **203** to the second end **211** terminating in removable member **205**.

[0075] FIGS. 2B and 2C depict the juice box **200** of FIG. 2A upside-down. The second end **211** has a frozen content removal aperture **212** sized to permit frozen state contents **209** of the body **206** to be removed in a solid state. There is a difference between the sizes of the first opening **201** (shown in FIG. 2A) at the first end **203** and the second aperture **212** at the second end **211**. Because of the size difference, if the contents **209** of the juice box **200** were frozen, the contents **209** could not be removed through the smaller first opening **201**. If the contents **209** were partially frozen or if there was a small amount of contents **209** within the body **206**, it is possible that some contents **209** could fit through the smaller first opening **201** (shown in FIG. 2A). However, it is contemplated that if the body was filled at least 50% with the contents **209**, and the contents **209** were frozen to a solid state, the contents **209** could not be removed from the first end **203** but could easily be removed from the second end **211**. FIG. 2B also depicts how the selectively removable member **205** will expose the frozen content **209** through

the second selectively openable aperture **212** when removed by a user. Here, the selectively removable member **205** is glued to the second portion **202** of the second end **211**. The glue/adhesive allows for easy removal of the removable member **205**. The drink box container **200** shows the straw **207** folded on the outside of the body **206**.

[0076] FIG. 2C depicts a downward looking perspective view of the juice box **200** of FIGS. 2A turned upside down. Here, the exposed second selectively openable aperture **212** is sized to permit the fluid to escape the interior volume of the juice box **200** in a frozen state **209**. The aperture is big enough to allow the entire contents to slide out. The strip of material of removable member **205** of FIG. 2B was removed completely from the body **206** and is not shown in this view. Again, one of the main advantages of juice box **200** is that the ice-pop content **209** can be easily enjoyed using the same drink container body **206**, without the need to transfer to another container before freezing.

[0077] As shown in FIGS. 1A and 2A, the shape of the containers **100** and **200** may vary. These embodiments encompass a liquid removal opening and a solid removal opening, in relative opposite ends. The following body shapes could be used for the same function, in the same way, to achieve the same result: sphere, cube, cuboid, cylinder, hexagonal prism, cone, square pyramid, triangular-based pyramid, triangular prism, and others.

[0078] FIGS. 3A and 3B depict yet another embodiment of the invention in a downward looking perspective view. A dual-purpose popsicle mold/liquid drink container **300**, similar to the embodiment of FIGS. 2A-C, is in the shape of a cone, the body **306** defining a sloping transition from the first end **303** to the second end **311** ending in

removable member **305**. The container **300** includes a lid **301** screwable onto a lid-thread **302** disposed at the first selectively openable aperture **321** at a first end **303** of body **306**. The lid **301** could attach in other ways in other envisioned embodiments. The first end **303** of the body **306** is openable by removing the screw-able lid **301** to permit the fluid **308** to escape. The aperture **321** is the smallest diameter of the cone-shaped body **306**. The aperture **321** allows the contents of the body **306** to easily escape in a liquid form **308**. However, if the contents of the body **306** are frozen **309** (as shown in FIG.3C), or even partially frozen, the aperture **321** is too small for the entire contents to escape.

[0079] The aseptically sealed flexible body **306** defines an interior volume typically between about 4 oz. and 10 oz., or between about 100 ml. and 300 ml. The fluid within the interior volume is inserted into the container body **306** in a liquid state **308** and later converted into a frozen state **309** after being placed in a freezer.

[0080] FIG. 3C is a perspective view of the conical shaped dual-purpose popsicle mold/liquid drink container **300** of FIGS. 3A and 3B turned upside down. The lid **301** is put and closed at the now bottom end **303** of the body **306**. The second aperture **312**, on the top end **311**, is selectively openable by removing a removable member **305** (tear-line) and exposing the ice content **309**. Here, the aperture **312** allows the contents to escape the interior volume of the body **306** in the frozen state, i.e., as a solid ice-pop or ice cream. As a user holds the container **300** and melts the frozen contents where they contact the body **306**, the smooth slope of the wall of body **306** allows for easy removal of the frozen content. The removable member **305** is operable to separate the second portion **302** of the second end **311** of the body **306** to open the second selectively

openable aperture **312**. Instead of being a removable tear strip, as illustrated in FIG. 3C, the removable member **305** can be integral with the removable lid **302** and be removably coupled to the second end **311** of the body **306** with adhesive or other mechanical measures.

[0081] Referring now to FIGS. 4A-4C, another embodiment of the dual-purpose popsicle mold/liquid drink container **400** is shown. FIGS. 4A-4C will be described in conjunction with the steps shown in the process flow chart of FIG. 4D, which illustrates a novel method for using a drink container. Referring now to FIG. 4A and FIG. 4D, the method starts at step **421** by filling the body with a fluid and moves directly to step **423** where an aseptically sealed flexible body **406** with fluid inside is introduced to a freezing temperature for a time sufficient to place the fluid into a frozen state. In step **425**, the flexible body **406** is turned upside down from its normal drinking orientation in FIG. 4A. In step **427**, a selectively removable member **405** is removed to expose the contents of the body **406** in their frozen state as shown in FIG. 4B. In step **429**, as shown in FIG. 4C, the user squeezes the flexible body **406** to remove the contents in the frozen state **409**.

[0082] With more specific reference to FIG. 4A, a first selectively openable aperture **421** at a first end **403** of the body **406** is openable by penetrating end portion **420** with the straw **407**. As in the previously described embodiments, the aperture **421** is sized to permit the fluid to escape the interior volume in a liquid state but not in a frozen state. On the opposite second end **411** of body **406**, a second selectively openable aperture **412** allows the fluid to escape the interior volume in the frozen state **409** (shown in FIG. 4B and FIG. 4C).

[0083] FIG. 4B is FIG. 4A turned upside down, and shows removable member **405** resembling a lid as it is removed from body **406**. The lid **405** is secured at the end **411** of body **406** in a sealed arrangement. In the embodiment shown, the removable member **405** further includes a tongue-tab **401** for easy removal by the user. By completely removing member **405**, the fluid is exposed in the frozen state **409**, and, as shown in FIG. 4C, the flexible body **406** then allows the contents to be extracted through second selectively openable **412** by squeezing the sides of the body **406**.

[0084] The dual-purpose popsicle mold/liquid drink package **400** should be sturdy enough to sustain freezing. Freezing or solidification is a phase transition in which a liquid turns into a solid when its temperature is lowered to or below its freezing point. Most of fluid drinks to be used with the dual-purpose popsicle mold/liquid drink container **400** are composed mostly of water. For most fluid drinks, the melting and freezing points are the same temperature; however, certain substances possess differing solid-liquid transition temperatures. As an example, the freezing point or melting point of water is the temperature at which water changes phase from a liquid to a solid or vice versa. The freezing point describes the liquid to solid transition while the melting point is the temperature at which water goes from a solid (ice) to liquid (water). Ordinarily the freezing point of water is 0° C or 32° F.

[0085] In another embodiment of the invention, shown in FIGS. 5A and 5B, the dual-purpose popsicle mold/liquid drink container **500** is in the shape of a traditional cup. One main feature of the container **500** is that the liquid removal and solid removal occurs at the same end **503** of body **506**, and end portion **521** acts a barrier for both liquid and

solid. Here, the popsicle mold/liquid drink container **500** includes a handle **501**, and a straw **517**. Both are usually disposed on the outside the container body **506** inside its own pouch, such as pouch **510**. The handle **501** could be made out of wood or plastic, preferably disposable. The handle **501** and the straw **517** are to be removed from pouch **510** and inserted into the same end **503** through end portion **521** of body **506** by a user. When the straw **517** is inserted using straw tip **507**, a liquid removal aperture **531** is created. Since the straw tip **507** is sharp or angled, it allows for an easy insertion. Because of the penetration of end portion **521**, the liquid removal aperture **531** forms a partial watertight seal around the straw **517**. Liquid is then allowed to escape the container **500** by suction placed on the straw **517** or by squeezing the sides of body **506**. Selectively removable a member **505** is also disposed on the same end **503** along second removal aperture **512**.

[0086] In FIG. 5B, before freezing, a user can form a handle by locating the tip **513** of handle **501**, inserting it into end portion **521** of same end **503** of the body **506**, and allowing the liquid content to transform into a solid. The frozen liquid solidifies around handle **501** making it an excellent tool for extraction of the solid content. After the selectively removable member **505** is removed to expose removal aperture **512**, body **506** is then removed downward, allowing the interior volume to be removed in a frozen state **509** (not shown). Since solidification occurred around handle **501**, handle **501** allows holding the ice treat upside down, as shown in FIG. 5C.

[0087] FIG. 5C is an upside-down view of FIGS. 5A and 5B. Here, the selectively removable member **505** has been removed to expose the frozen content **509**. The

advantage of this embodiment is significant. Its novel approach allows this dual-purpose container **500** to minimize production costs. In the same package, a user can use the tip of the straw **507** to penetrate end portion **521** of the body **506** and allow for its content in liquid form to exit. Keeping the same orientation, if punctured by the tip **513** (shown in FIG. 5A) of handle **501**, a frozen-treat **509** could be held if frozen. Another advantage of being openable in an upright orientation is that if handle **513** or straw **517** is not available or lost, by removing the end portion **521**, the ice-treat **509** could be eaten using a spoon, and the juice could be consumed as if drinking from a regular cup.

[0088] FIG. 6A shows another embodiment of the dual-purpose popsicle mold/liquid drink container **600**. Here, the body **606** is formed as a tubular-spiral. The container **600** includes: a straw **607**, a first selectively openable aperture **631**, at a first end **603** and a second selectively openable aperture **612** (hidden from this view) at the opposite second end **611** of a tubular-spiral body **606**. The sealed flexible tubular-spiral body **606** includes a helix accordion edge **601** running from the first end **603** to the second end **611**, for the entire length of the body **606**. In this view, the second end **611** is the bottom end. The bottom end **611** includes a removable member **605** to open the second selectively openable aperture **612** (hidden from this view). In Fig. 6A, as in previous figures, by inserting the straw **607** into the first end portion **621**, a first selectively openable aperture **631** is created allowing a user to sip the liquid contents inside.

[0089] FIGS. 6B and 6C show FIG. 6A upside-down. After placing the aseptically sealed flexible body **606** filled with fluid or juice into a freezer, the frozen treat is ready for extraction from the second end **611**. By turning the body **601** upside down, the

second end **611** becomes the top end. Now, the removable member **605**, depicted here as a strip of cardboard or plastic, is removed to open the second selectively openable aperture **612** previously hidden. The second end portion **623** can then be removed and discarded. Then, the contents of the body may be removed from the body in a frozen state **609** by pushing from the bottom of the accordion shaped body **606** as shown in FIG. 6C. The accordion-like shape body **606** folds within itself in a spiral formation along edge lines **601**.

[0090] FIGS. 7A and 7B depict dual-purpose popsicle mold/liquid drink container **700** depicting a square pyramid body **706**. FIG. 7A includes a square removable end portion **703** that is a lid to cover and protect the inside contents of the body **706**. The lid **703** is sufficiently frail to allow a straw **707** to puncture to create a first liquid removal aperture **721**, but strong enough to protect the liquid content. The lid **703** is also removable, disposable, and comprises tongue-tab **731** for easy grabbing by a user. As the lid **703** is removed, the solid removal opening **712** is exposed. The pyramid aseptic package container **700** internally contains a cuboid **702** volume of liquid of between about 4 oz., and 10oz., or between about 100 ml. and 300 ml. By exposing the aseptically sealed flexible body **706** to a freezing temperature for a time sufficient to place the fluid into the frozen state, a cuboid **702** ice-pop **709** is created inside as shown in FIG. 7B. This design incorporates flexible holding-wings **701** at the bottom end of body **706**. The holding-wings **701** are used to push up the frozen treat **709** through the solid removal opening **712**. The large surface area of the holding-wings **701** is helpful to children because it

allows them for a better grip. It also prevents the rapid melting of the ice-treat since there is no direct contact with the cuboid **702** volume of frozen liquid.

[0091] The dual-purpose popsicle mold/liquid drink container **800** of FIGS. 8A and 8B is a cylinder shaped body **806** that uses a straw-handle **801** for extraction of liquid. The straw-handle **801** should be made of a stiff enough material to enable a user to hold an ice-treat after freezing. Since, the straw-handle **801** is also a straw; a user can likewise sip the juice content. A removable cover **821** or screwable lid is disposed to seal the first selectively openable aperture **811**. The straw-handle **801** combo is further disposed on a selectively openable aperture **812** (not shown). Before using the drink container to have a drink, the lid **821** is removed to allow the contents inside the body **806** to escape in liquid form. By putting it back on, it will allow the container to be used multiple times until all the contents of the body are extracted. After exposing the aseptically sealed flexible body **806** to a freezing temperature an ice-pop (hidden) will be created inside the body **806**. The straw-handle **801** is then used to hold the ice-pop by a user's hand. One of the advantages of this embodiment is that a user might drink half the liquid and freeze half of the liquid content for later consumption in solid form.

[0092] In FIGS. 8C and 8D, a depiction of FIG. 8A upside down shows the drink container **800** with its contents in solid form after freezing. The cylindrical drink container **800** contains an amount of fluid equivalent to a traditional children's single-serve square juice box. FIG. 8C shows selectively removable member **805**, which is a tear-line made out of cardboard. The tear-line **805**, as it is removed, exposes the selectively openable aperture **812** that allows the body **806** to be separated from straw-

handle **801**. When member **805** is removed in its entirety, the body **806** is then separated away from straw-handle **801**. As shown in FIG. 8D, as long as the first removable cover **821** is in place, no liquid content should exit, unless so wanted by the user. At least one advantage of this embodiment is that a separate straw or a handle-stick is not needed, saving in packaging and assembly costs. The straw-handle **801** should be made of hard enough materials for it not to bend when holding the ice-pop. A durometer hardness of between: 10 to 85 could be used. Examples of such as a hard plastic usable for this embodiment include: acetals, acrylics, amino resins, cellulosics, phenolics, polyamides, polyesters, polyolefins, polyurethanes, styrenes, vinyls and any combination and more. Although FIGS. 8A-D show the treat **809** being removed from the body **806** in the direction of the handle **801**, the handle can also be used to push the treat **809** upward.

[0093] Referring now to FIG. 9A, another embodiment of the novel dual-purpose popsicle mold/liquid drink container **900** is illustrated in a downward-looking perspective view. The illustrated container **900** shows several advantageous features of the present invention. The novel drink container **900** is made of an aseptically sealed flexible material defining an interior liquid **908** volume. A first selectively openable aperture **921** at a first end **903** of the body **906** is created for the penetration of a straw (not shown). A second selectively openable aperture **912**, (not visible in this view) is disposed on the same end **903** of body **906** and is created after the removal of a tear-line **905**. Tear-line **905**, a strip of material, is created for the entire length of the circumference of body **906**. In this embodiment, the drink container **900** is openable both by penetrating a portion of the first end **903**, with a straw or removing tear-line **905** at the same first end **903**. The

first selectively openable aperture **921**, of first end **903** of the body **906** is covered by an area **924** of foil or thin plastic either removable or penetrable by a tip of a straw. Because of the size difference, if the contents of the juice box **900** were frozen, the contents could not be removed through the smaller first aperture **921**.

[0094] FIG. 9A features an optional window **913**. This window **913** allows for a user to see how much liquid or solid content is inside container **900**. Window **913** could be made of clear plastic material and be part of the aseptic packaging. Aseptic paper packages are usually made of several layers of laminated paper and plastic. In one of the paper laminates, a sliver of paper can be cut off before the plastic lamination is placed. Hence, the clear plastic laminate would cover the paper cut-out creating a window **913** into the liquid **908** inside the package. After placing the container of FIG. 9A into a freezer, and giving it enough time for the liquid to solidify, a frozen treat is created as shown in FIG. 9B. FIG. 9B shows how the exposed second selectively openable aperture **912** allows the previously fluid content to escape in a frozen state **909**. In this figure, the first end **903**, the removable tear-line member **905**, was removed completely. After removal, the tear-line separates removable portion **902** from the main body **906** of the container. One feature of container **900** is that the liquid removal and solid removal occurs at the same end **903** of body **906**. One of the advantages of container **900** that the body **906** is kept in an upright position allowing for removal of liquid without a straw at all.

[0095] At the opposite end **911**, in FIG. 9B, at first end **903** of body **906**, a wedge-like edge **901** is created as part of the container **900**. This “v” shaped folded structure at the

bottom end **911** of body **906** creates a wedge-like edge **901** for pushing the ice treat after solidification. Using this structure, a user can use two fingers to remove the ice-treat through openable aperture **912**. Here, the window **913** allows for the bottom edge **919** of the ice-treat **909** to show how much is left inside the body **906**.

[0096] Referring now to FIG. 9C, an upward tilted view allows for a closer look into the “v” shaped folded structure **901** at the bottom end **911** of body **906**. The “v” shaped folded structure creates a grabbing surface **917**, for two or more finger to be inserted into the bottom of the container **900**. Flexible straw **907** is still attached to the outside surface of body **906** as it was not used since ice-treat solid **909** is coming out of aperture **912**. As depicted in FIG. 9D, a user **921** uses the thumb and index finger to squeeze the “v” shape grabbing surface **917**. The heat released from the thumb and index finger melts some solid **909** allowing the easy removal of the frozen content through aperture **912**. Window **913** and solid bottom edge **919** shown on the side of the container **900**, is used to view the inside content now in solid form.

[0097] FIG. 10A shows a further embodiment **1000** of the present invention, which features a square shaped body with a triangular top. As in previous embodiments, FIG. 10A depicts the area of foil or other material **1004** creating a water-tight seal on the first selectively openable aperture **1001**. This area of material, e.g., plastic, **1004** is ready to be pulled away and discarded by a user or penetrated by straw **1027** shown here on the side of container body **1006**. Once the area of material **1004** is removed, it allows for the liquid to be extracted. Body **1006** includes an optional window **1033** similar to the one found in FIG. 9A that allows viewing of the inside contents of the container. Also similar

to previously presented FIG.9A and FIG. 9B, the liquid removal and solid extraction occurs at the same end **1003** of body **1006**.

[0098] On top of the triangular top of end **1003**, in FIG. 10A, a selectively removable member **1005** (also described previously as a tear-line) is removable and dischargeable by a user. In this view horizontal-fold-line **1007** is depicted, a pre-formed folding-line made by pressing the aseptic material laminate with sharp edge. As removable member **1005** is detached, the content in liquid or solid form can be extracted through the same aperture **1012**. This feature is very useful since, in many occasions, the straw **1027** is lost or removed from the body **1006** by accident; hence a user can drink the content in liquid form with no straw **1027**. Another advantage is that if aperture **1012** is defective or leaking, by keeping the container body **1006** upright, none of the contents will be spilled. On the opposite second end **1011**, a vertical-fold-line **1019** is shown with folding wings **1013**. Folding wings **1013** have similar purpose as folding wings previously described in FIGS. 7A and 7B.

[0099] FIG. 10B depicts the juice box container 1000 of FIG. 10A after the fluid inside was exposed to a freezing temperature for a time sufficient to convert the fluid into its frozen state. On the same first end **1003**, the frozen content removal aperture **1012** allows content **1029** to be removed from body **1006** in a frozen state **1029**. This view shows cross-fold lines **1009** that form the triangular top first end **1003** as previously shown in FIG. 10A. When folded in concert with cross-fold-lines **1009**, it creates a flat surface that allows for stacking of the containers one on top of the other (not shown). These types of fold-lines **1009**, as shown, are used to create the triangular top at first end

1003 of FIG. 10A. The selectively removable member **1005**, after removal, will expose the frozen **1029** or liquid content (reference number **1008** in FIG. 10A). After letting the container **1000** of FIG. 10A sit inside a freezer for a time sufficient to solidify its content, an ice-cream or ice-pop **1029**, is created. The container **1000** (similarly to previously depicted FIG. 9A and 9B) uses optional window **1033** to see how much liquid or solid content is left inside the container body **1006**. Window **1013** could be made of clear plastic material and be part of the aseptic packaging **1000**. At the second end **1011** of the body **1006**, the vertical folding lines **1013**, with the folding wings **1013** create a way for the contents to be squeezed out by a user.

[00100] FIGS. 10C, 10D, and 10E are downward looking perspective views of the juice box container **1000** that show the ability to stack one container **1000** on top of the other. Here, the main advantage of cross-fold-lines **1009** and the vertical-fold-line **1007** is shown. FIGS. 10C shows cross-fold lines **1009** forming the triangular top first end **1003** in its upright position. As the arrow **1021** indicates, when folded, the cross-fold-lines **1009** in concert with vertical-fold-line **1007** collapse within themselves and create a flat surface as shown in FIG. 10D. This fold is beneficial in two ways: first, top-surface **1017** is the stronger surface because it does not have an aperture. Every time a material is pierced, stress-concentrations are created in the material. Such stresses could make a material vulnerable to failures and cracks. In this case, for instance, the first selectively openable aperture **1001** covered with foil **1004** can be easily damaged or removed by accident. By folding along the vertical-fold-line **1007**, the openable aperture **1001** will be concealed and protected against any sudden rips and tears. Second, top-surface **1017** is

flat, and this allows for other containers to be placed on top as shown in FIG. 10E. The ability to stack is beneficial during packaging, and when displayed at a store front. At the same time, window **1033** allows for a user to see how much liquid **1008** or solid volume is in the container **1000** even when stacked together as a pack. It is envisioned that the bottom portion **1011** of the container **1000** depicted in FIGS. 10A-E can be provided with the same bottom portion **911** of the container **900** of FIGS. 9A-D.

[00101] In summary, as shown in FIGS. 5A, 7A, 8A, 9A, and 10A, the shape of the dual-purpose popsicle mold/liquid drink container may vary, to include a liquid removal aperture and a solid removal aperture, on the same end. As an alternative, and as seen in FIGS., 1A, 2A, 3A, 4A, and 6A, the liquid removal aperture and a solid removal aperture, are shown at opposite ends. Correspondingly, the following container shapes could be used for the same function, in the same way, to achieve the same result: spheres, cubes, cuboids, cylinders, hexagonal prisms, cones, square pyramids, triangular-based pyramids and triangular prisms.

[00102] The material used in the aseptic dual-purpose popsicle mold/liquid drink box containers **100**, **200**, **300**, **400**, **500**, **600**, **700**, **800**, **900** and **1000** can vary depending on packaging and the type of liquid deposited inside. The packaging can accommodate severe temperature changes and thermal stresses. From extreme heat for sterilization, to extreme cold, sufficient to freeze its content without tearing or cracking. In addition, the materials will, preferably, be robust enough to sustain the stresses of the children that bring the drink container into harsh environments such as lunch boxes, playtime, and camping trips.

[00103] Packaging materials of the aseptic dual-purpose popsicle mold/liquid drink box containers **100, 200, 300, 400, 500, 600, 700, 800, 900** and **1000**, that could be used for the same function, in the same way, to achieve the same result include: 1) Laminates and metallized films which involve the binding of aluminum foil to paper or plastic film to improve barrier properties; 2) Tinplates produced from low-carbon steel (Tinplate results from coating both sides of blackplate with thin layers of tin. Although tin provides steel with some corrosion resistance, tinplate containers are often lacquered with epoxy phenolic and oleoresinous groups and vinyl resins, to provide an inert barrier between the metal and the food product); 3) Plastics (made by condensation polymerization (polycondensation) or addition polymerization (polyaddition) of monomer units); 4) Polyolefins (a collective term for polyethylene and polypropylene, the two most widely used plastics in food packaging, and other less popular olefin polymers. Polyethylene and polypropylene both possess a desirable combination of properties, including flexibility, strength, lightness, stability, moisture and chemical resistance, and easy processability); and 5) Paper laminates (coated or uncoated papers based on pulp. They can be laminated with plastic or aluminum to improve various properties. Paper can be laminated with polyethylene to make it heat sealable and to improve gas and moisture barrier properties. Paper is almost always treated, coated, laminated, or impregnated with materials such as waxes, resins, or lacquers to improve functional and protective properties).

[00104] While the foregoing written description of the invention enables one of ordinary skill to make and use what is the best mode, those of ordinary skill will understand and appreciate the existence of variations, combinations, and equivalents of the specific

embodiment, method, and examples. The invention should therefore not be limited by the above described embodiment, method, and examples, but by all embodiments and methods within the scope and spirit of the invention.

[00105] The foregoing description of the specific embodiments will so fully reveal the general nature of the invention that others can, by applying knowledge within the skill of the art, readily modify and/or adapt for various applications such specific embodiments, without undue experimentation, without departing from the general concept of the present invention. Therefore, such adaptations and modifications are within the meaning and range of equivalents of the disclosed embodiments, based on the teaching and guidance presented. The phraseology or terminology is for description and not of limitation, such that the terminology or phraseology of the present specification is interpreted by the skilled artisan in light of the teachings and guidance. The breadth and scope of the present invention should not be limited by the above-described exemplary embodiments, but should be defined only under the following claims and their equivalents.

CLAIMS

1. A consumable-product container comprising:
 - a straw;
 - an aseptically sealed flexible body defining an interior volume;
 - an amount of fluid disposed within the interior volume, the amount of fluid having a liquid state and a frozen state;
 - a first selectively openable aperture at a first end of the body, the first selectively openable aperture:
 - openable by penetrating a portion of the first end of the body with the straw; and
 - sized to permit the fluid to escape the interior volume in the liquid state but not in the frozen state; and
 - a second selectively openable aperture at a second end of the body, the second selectively openable aperture being openable by a removable member that, when pulled away from the body, creates an opening in the body sized to permit the fluid to escape the interior volume in the frozen state.
2. The consumable-product container according to claim 1, wherein the second end of the body is removable to open the second selectively openable aperture.
3. The consumable-product container according to claim 1 or 2, wherein:

a first portion of the second end is separable from a second portion of the second end of the body to expose the second selectively openable aperture.

4. The consumable-product container according to claim 3, wherein said first portion of the second end is a lid.
5. The consumable-product container according to any one of claims 1 to 4, wherein the removable member is integral with the body.
6. The consumable-product container according to any one of claims 1 to 4, wherein the removable member is a tear-line.
7. The consumable-product container according to any one of claims 1 to 6, wherein the straw is plastically deformable.
8. The consumable-product container according to any one of claims 1 to 7, wherein the aseptically sealed flexible body comprises a traditional children's single-serve juice box.
9. A consumable-product container comprising:

an aseptically sealed body defining an interior volume;

an amount of fluid disposed within the interior volume, the amount of fluid having a liquid state and a frozen state;

a straw receiving area on the body, the straw receiving area being of a material that is penetrable by a flexible plastic straw; and

a removable member that, when pulled away from the body, creates an opening in the body sized to permit the fluid to escape the interior volume in the frozen state.

10. The consumable-product container according to claim 9, wherein the removable member is a strip of material along the body and formed to separate from the body when pulled.
11. The consumable-product container according to claim 9 or 10, wherein the straw receiving area is of a material that forms a partial watertight seal around the straw when penetrated by the straw.
12. The consumable-product container according to claim 9 or 11, wherein the removable member is integral with the body.
13. The consumable-product container according to any one of claims 9 to 13, wherein the removable member is a first section of the body that separates from a second section of the body to expose the opening.
14. A consumable-product container comprising:

a straw;

an aseptically sealed body defining an interior volume and further comprising:

a first end with a liquid removal opening, the liquid removal opening forming at least a partial watertight seal around the straw;

a second end opposite the first end, the second end having a frozen content removal opening sized to permit contents of the body having a volume of at least 50% of the interior volume of the body to be removed from the body in a frozen state; and

a selectively removable member operable to expose the frozen content removal opening when activated by a user.

15. The consumable-product container according to claim 14, further comprising a lid selectively couplable to the body.
16. The consumable-product container according to claim 14 or 15, wherein the selectively removable member is operable to separate a first portion of the second end of the body from a second portion of the second end of the body to expose the frozen content removal opening.
17. The consumable-product container according to claim 16, wherein the selectively removable member is a tear-line.

18. The consumable-product container according to any one of claims 14 to 17, wherein the aseptically sealed flexible body comprises a traditional children's single-serve juice box.
19. The consumable-product container according to claim 14, wherein the selectively removable member is integral with the body.
20. The consumable-product container according to any one of claims 14 to 20, wherein the selectively removable member is a first section of the body that separates from a second section of the body to expose the frozen content removal opening.

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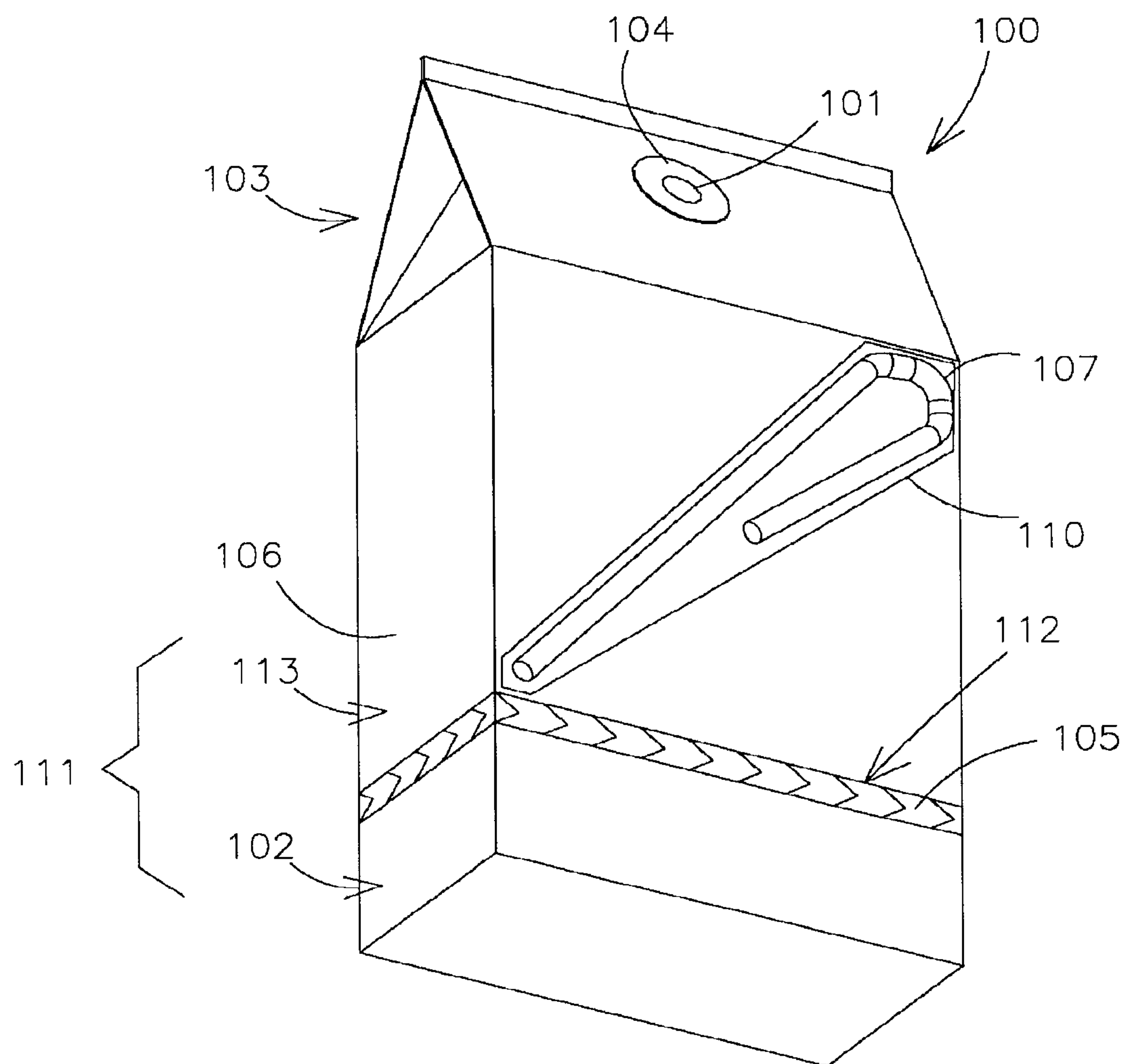


FIG. 1A

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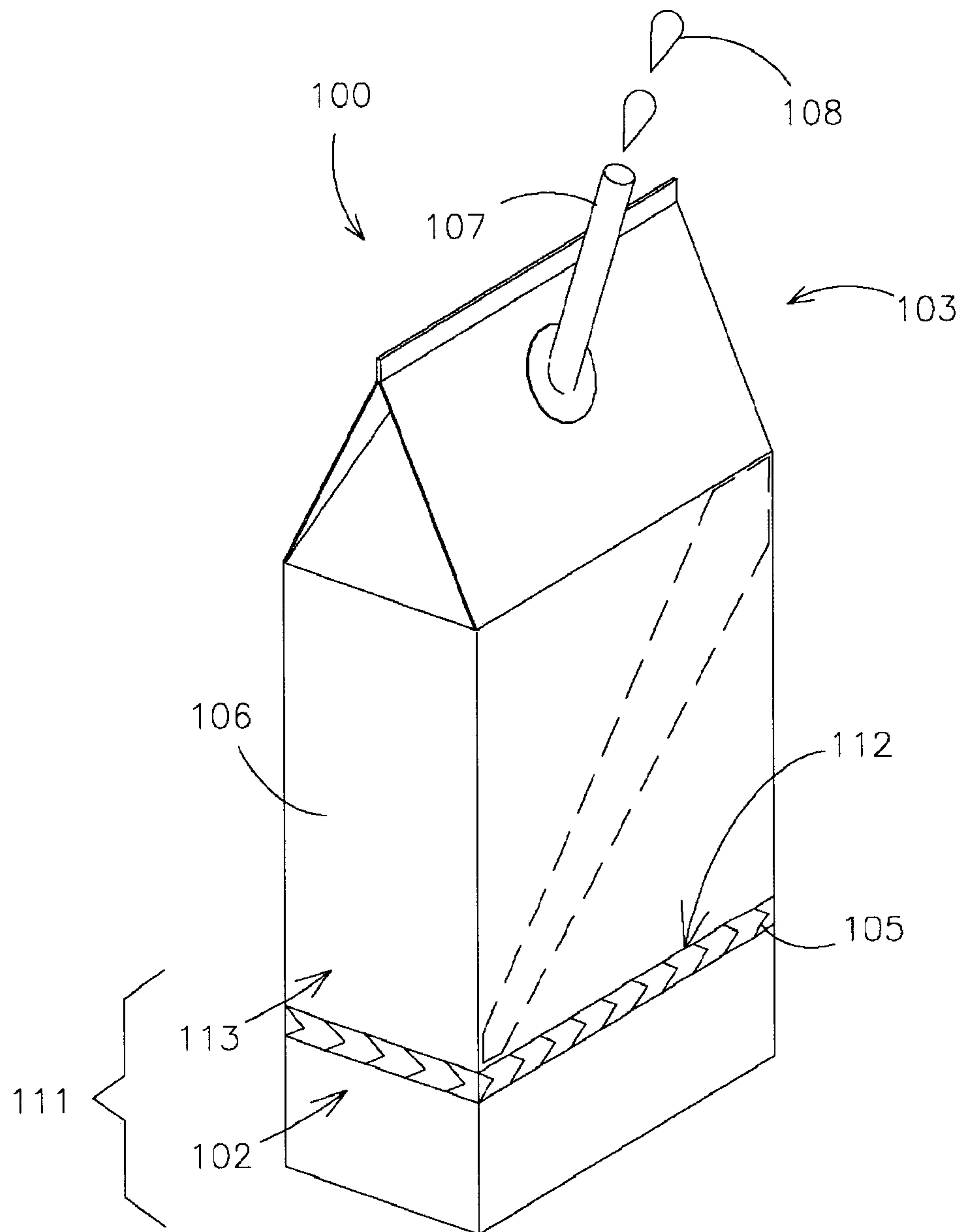


FIG. 1B

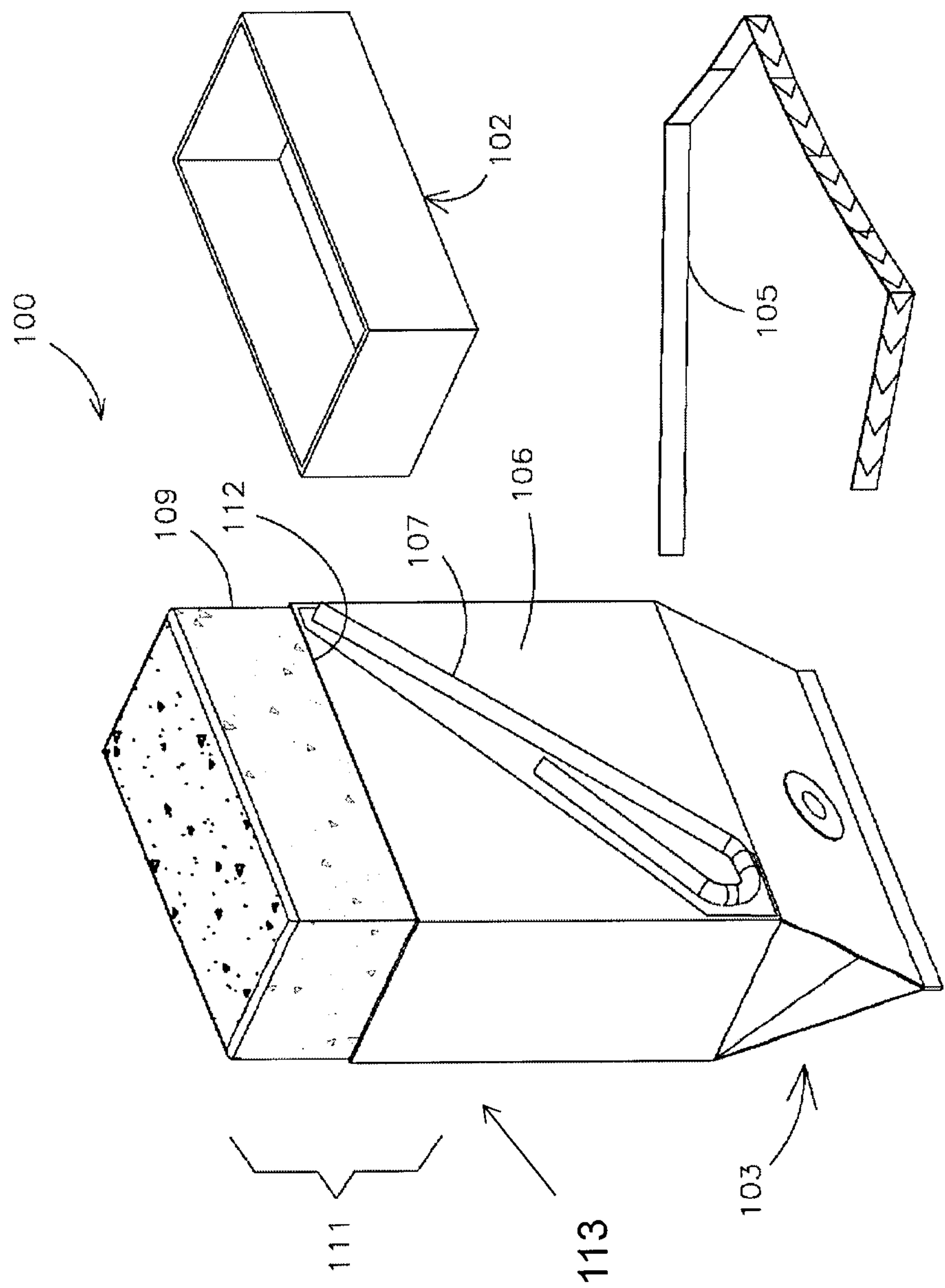


FIG. 1C

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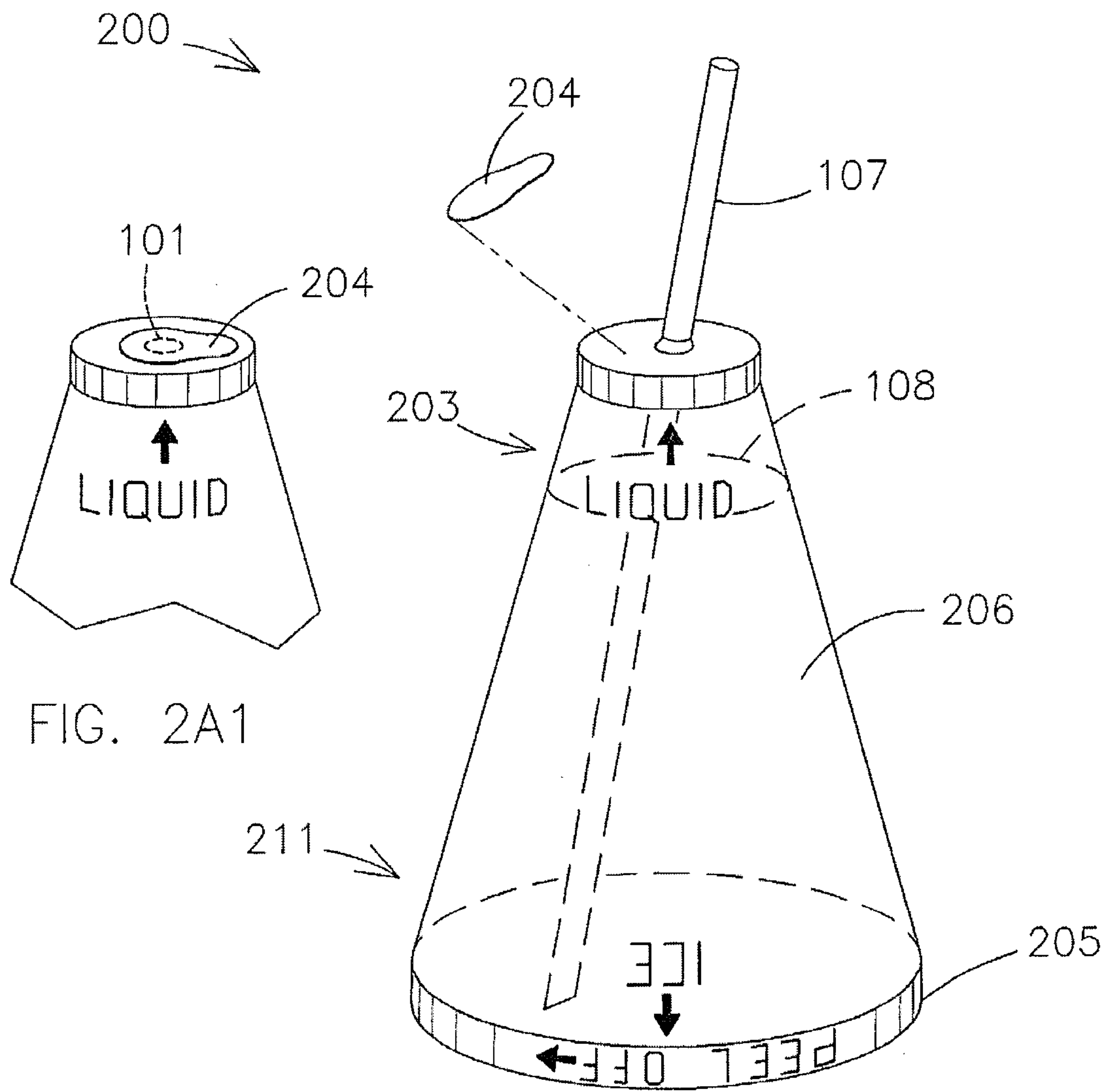


FIG. 2A

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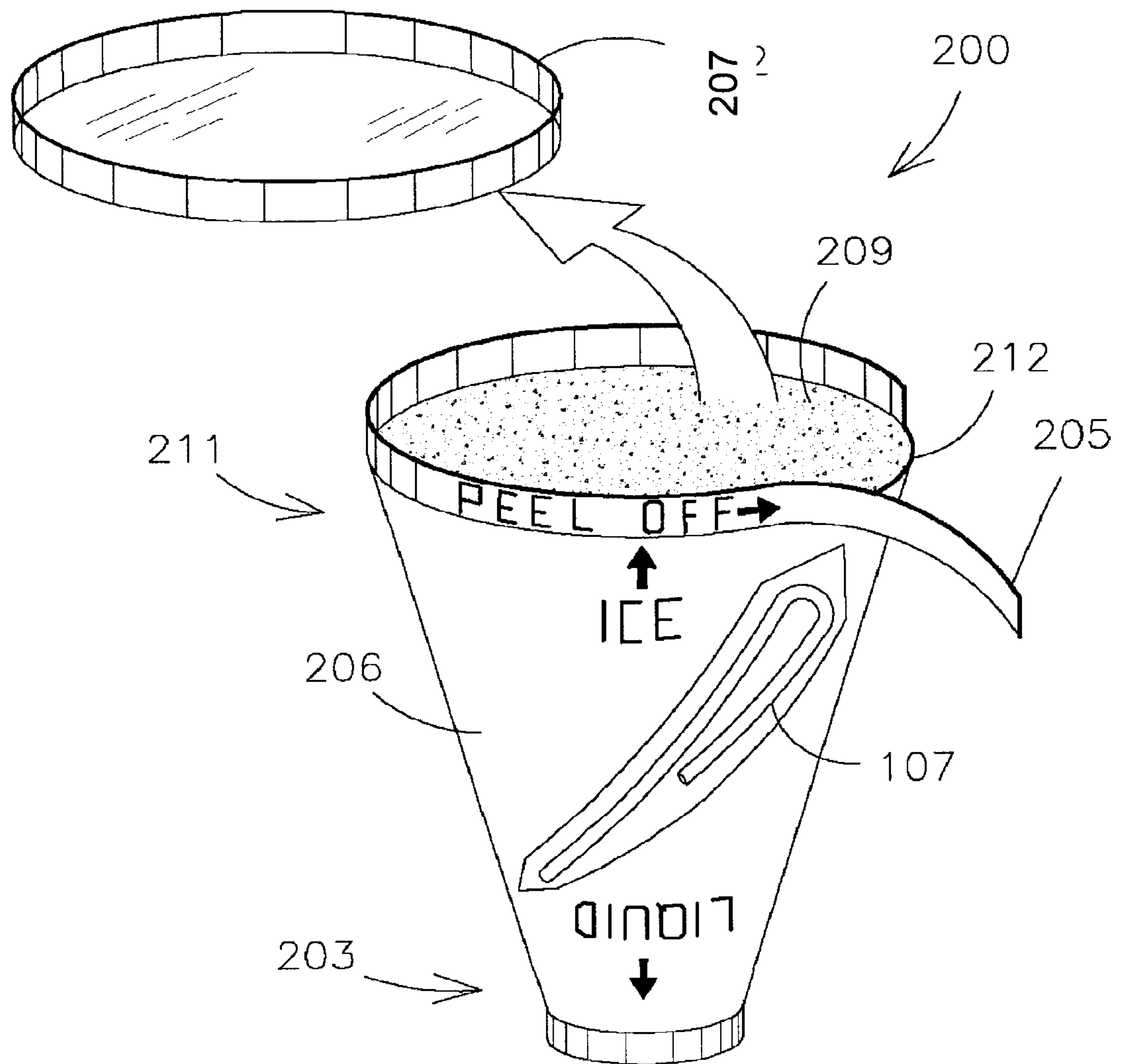


FIG. 2B

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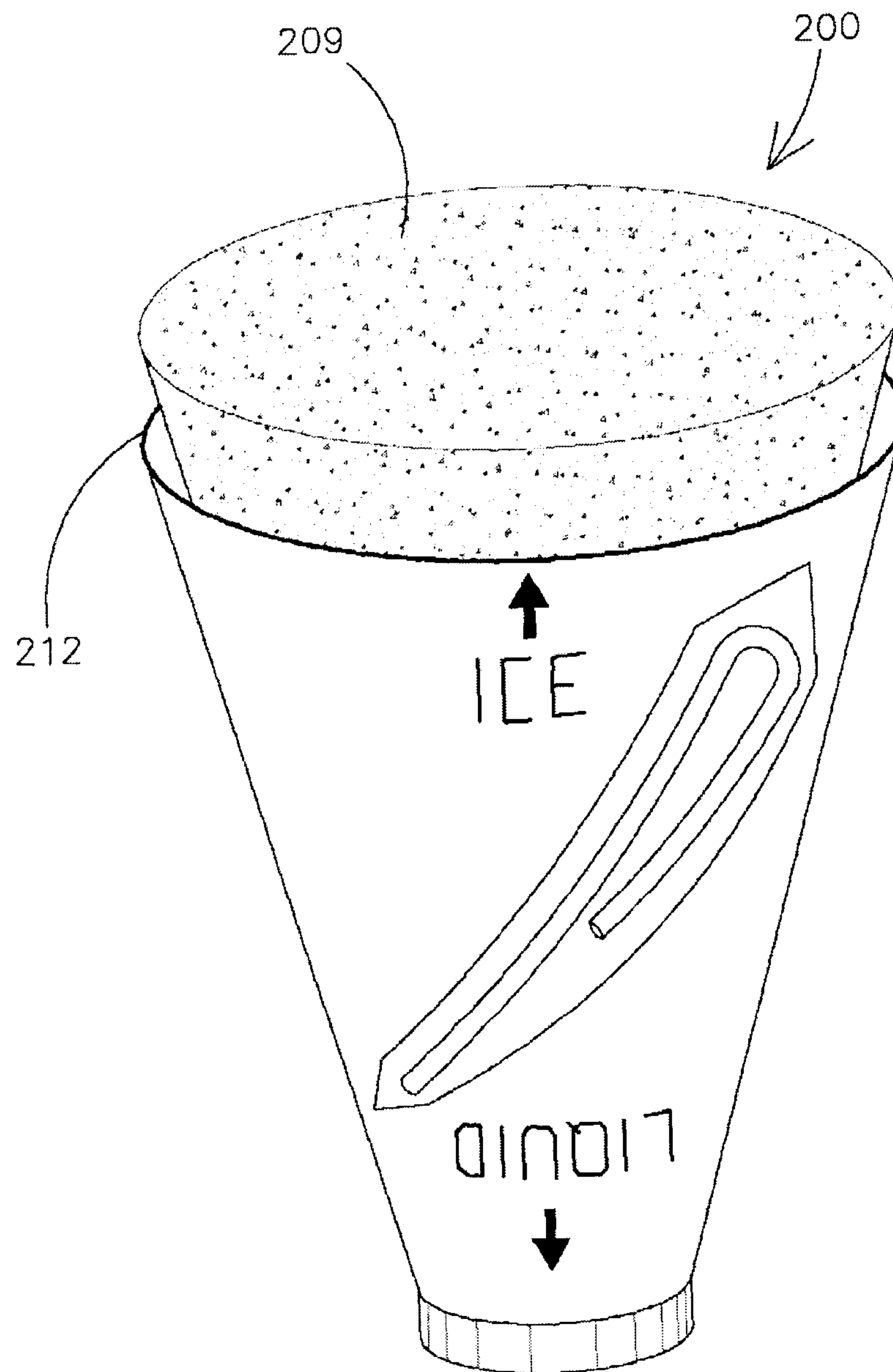
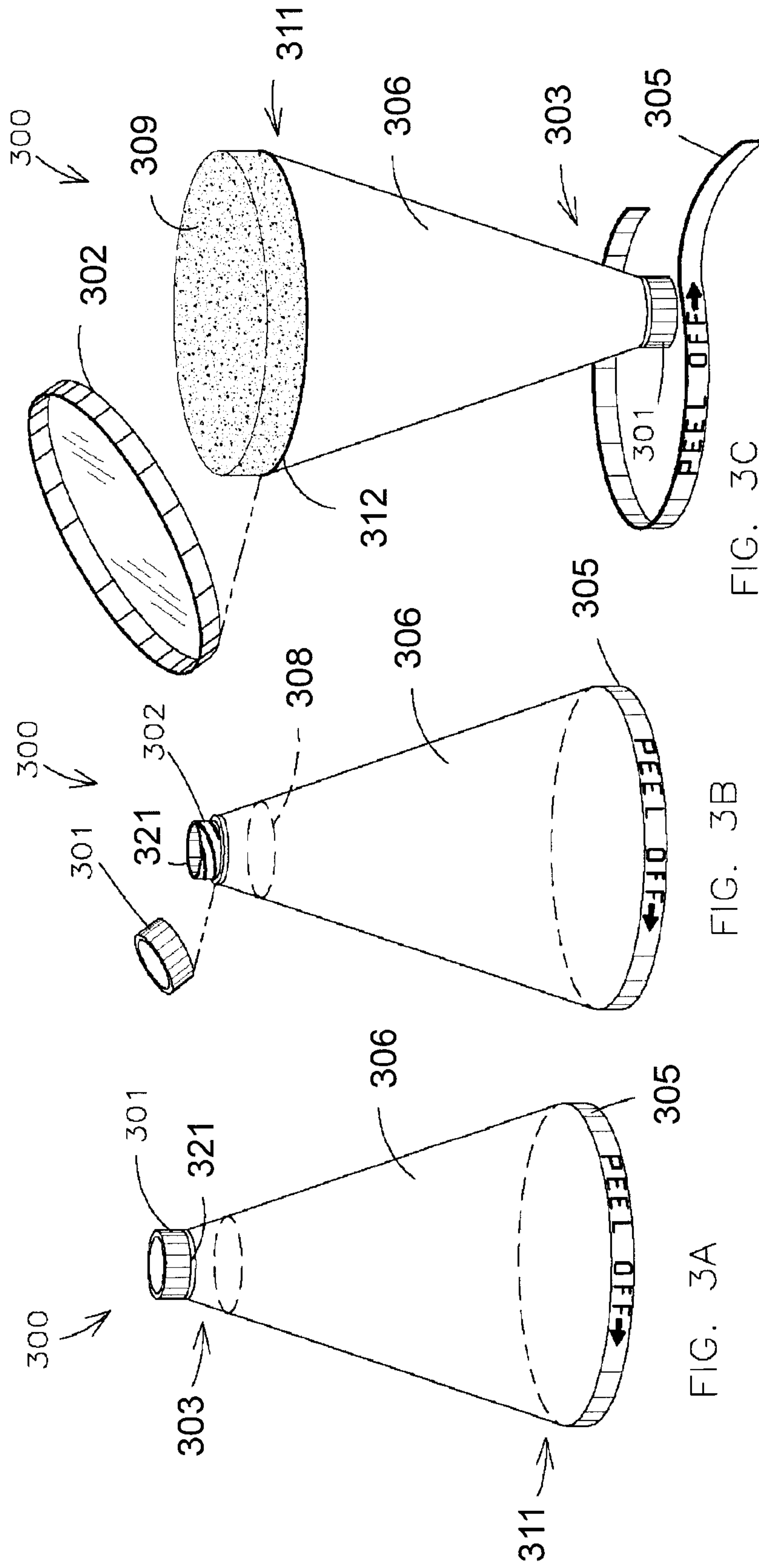
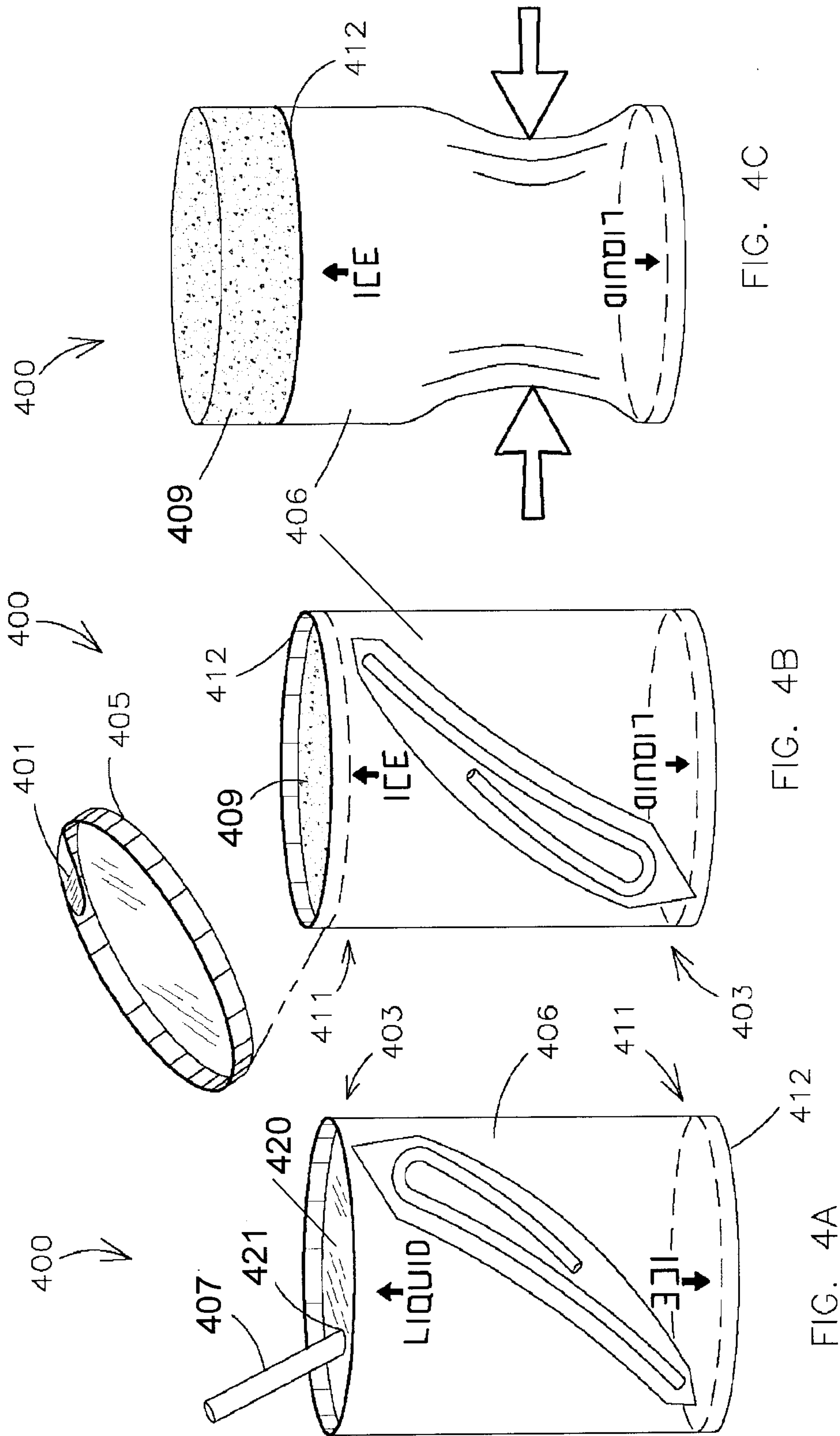


FIG. 2C

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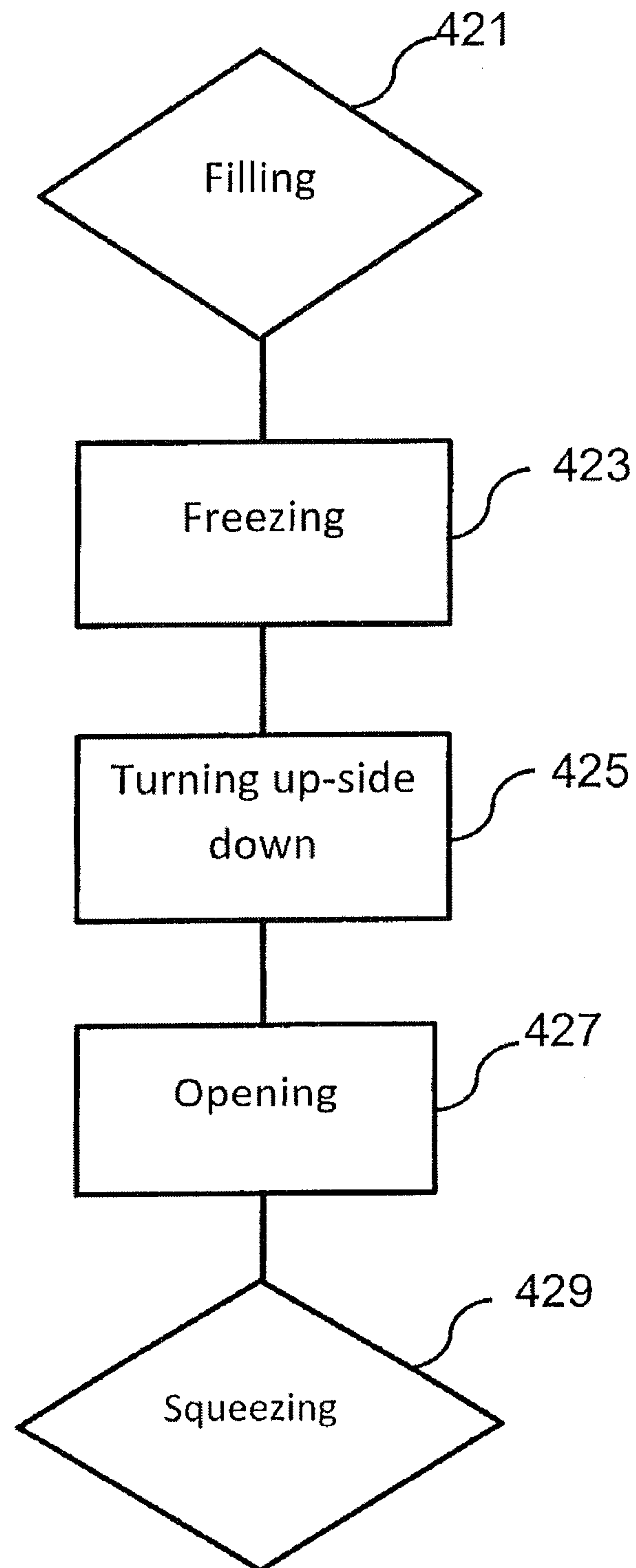
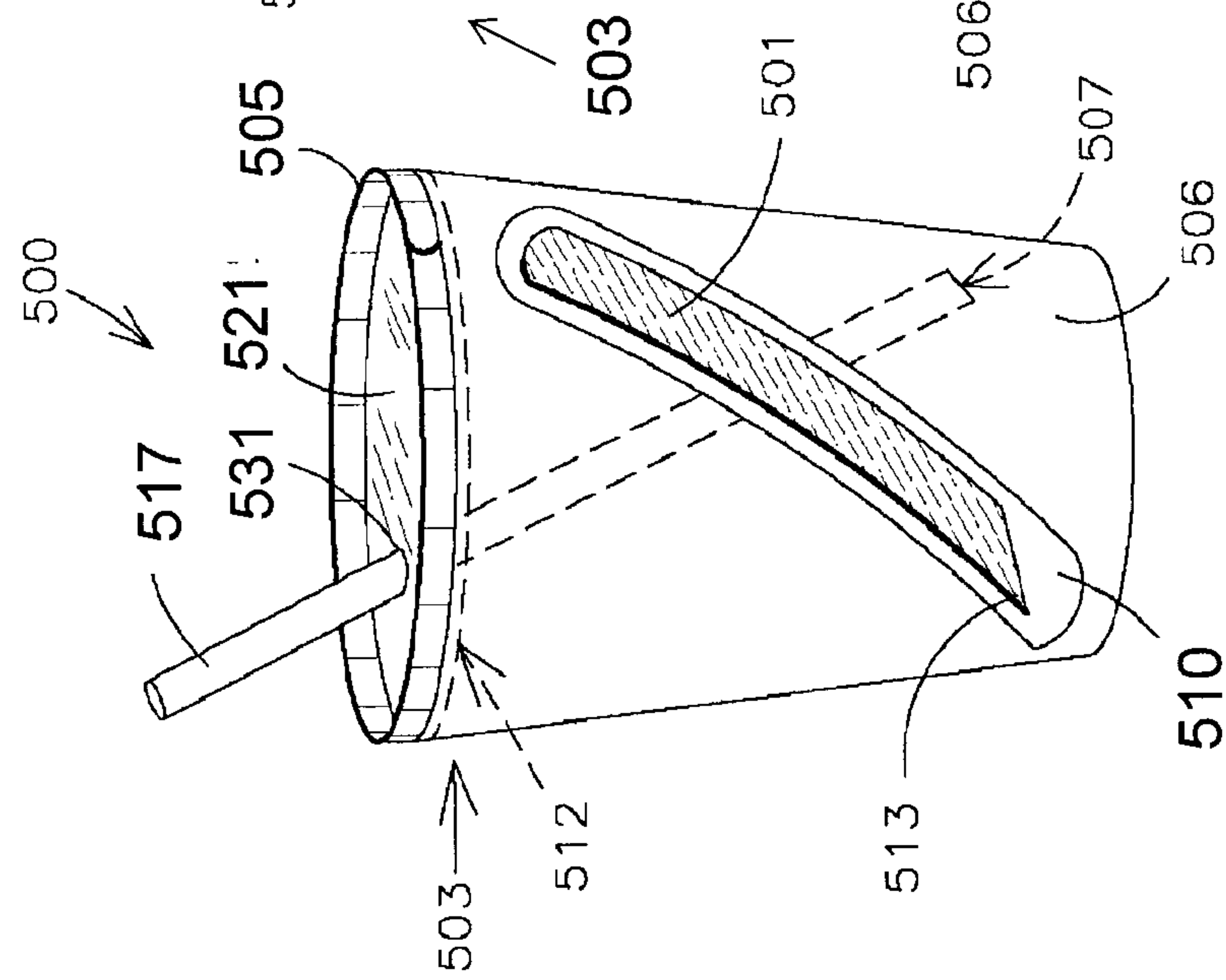
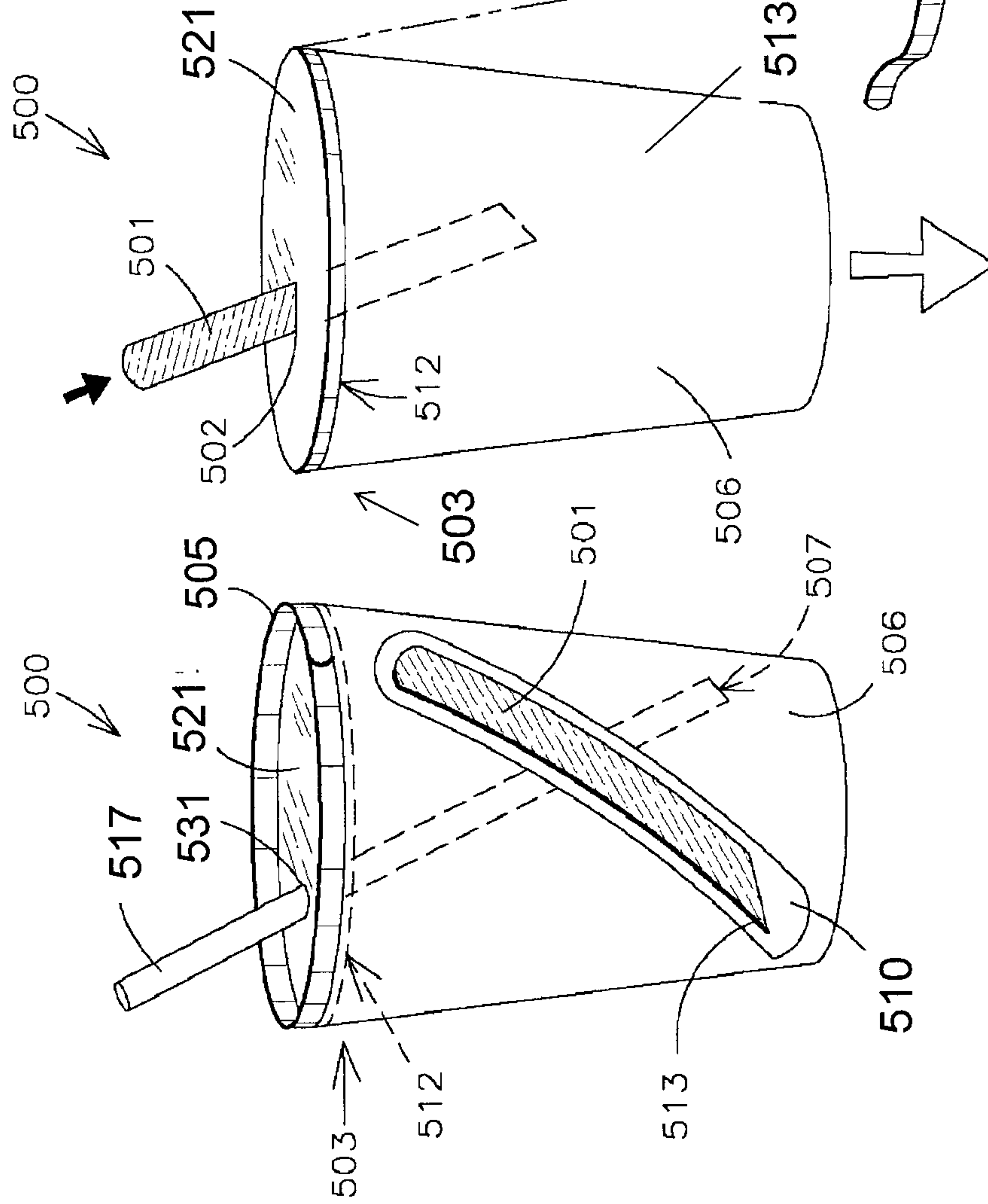
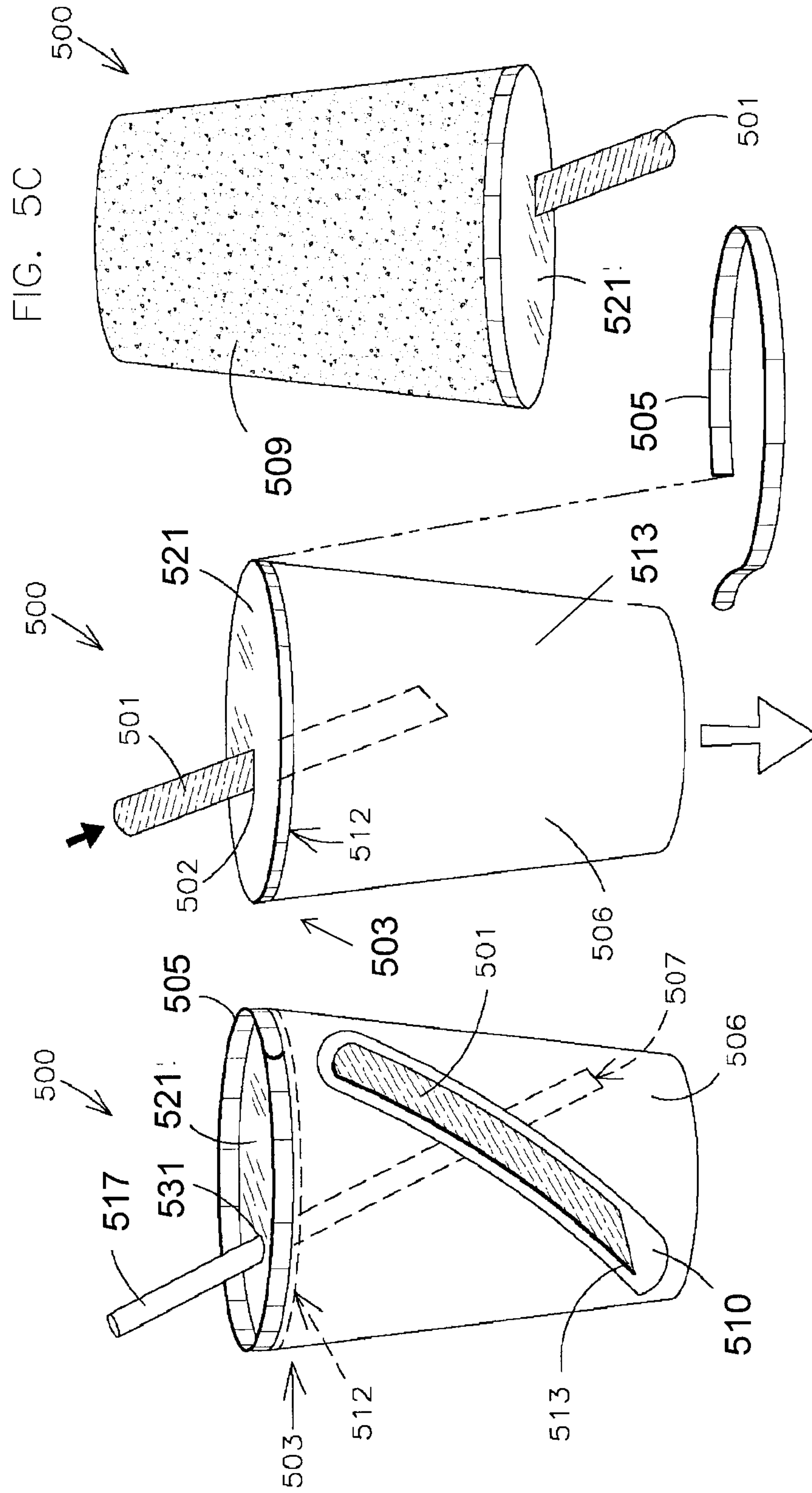
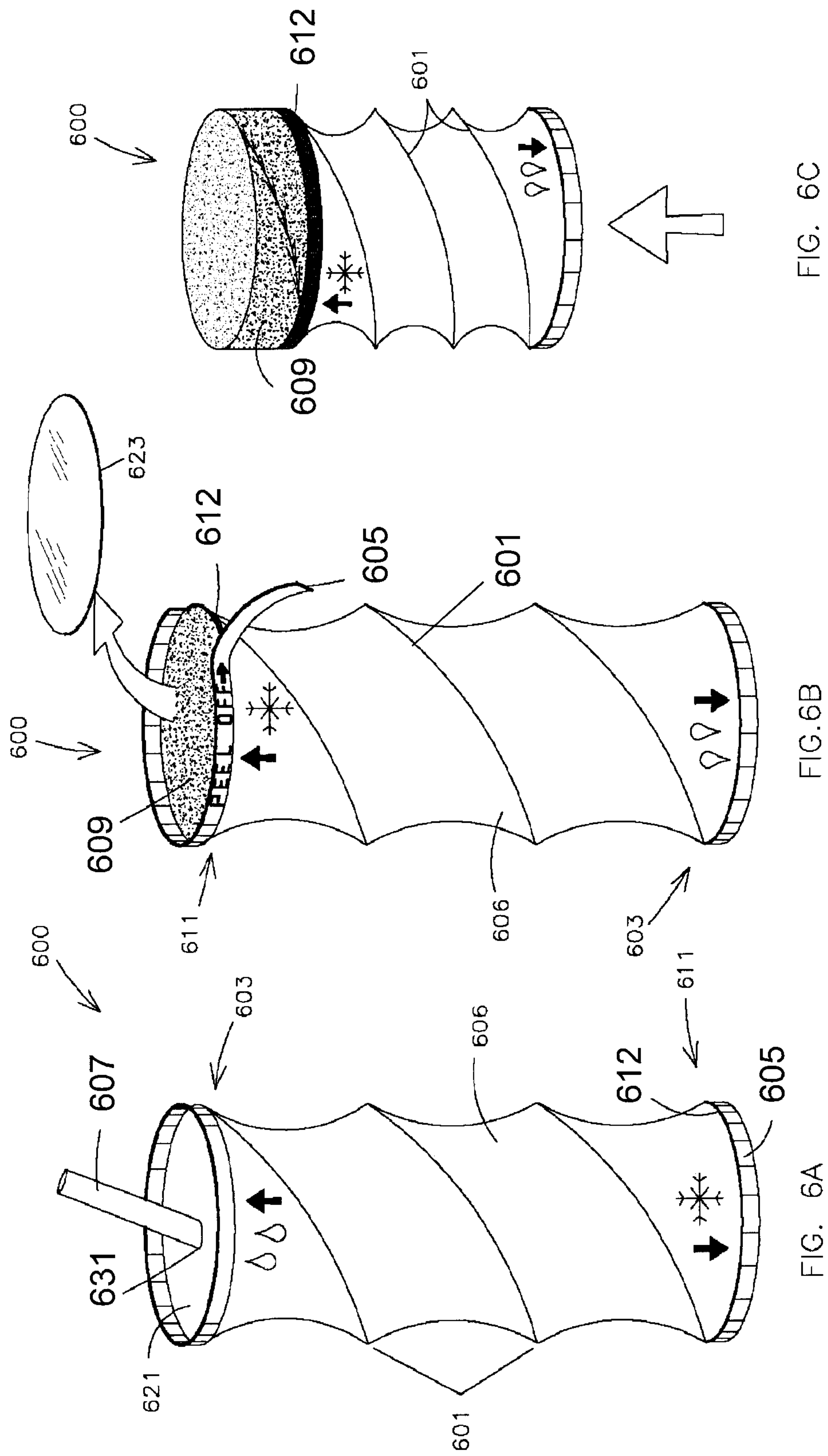


FIG. 4D





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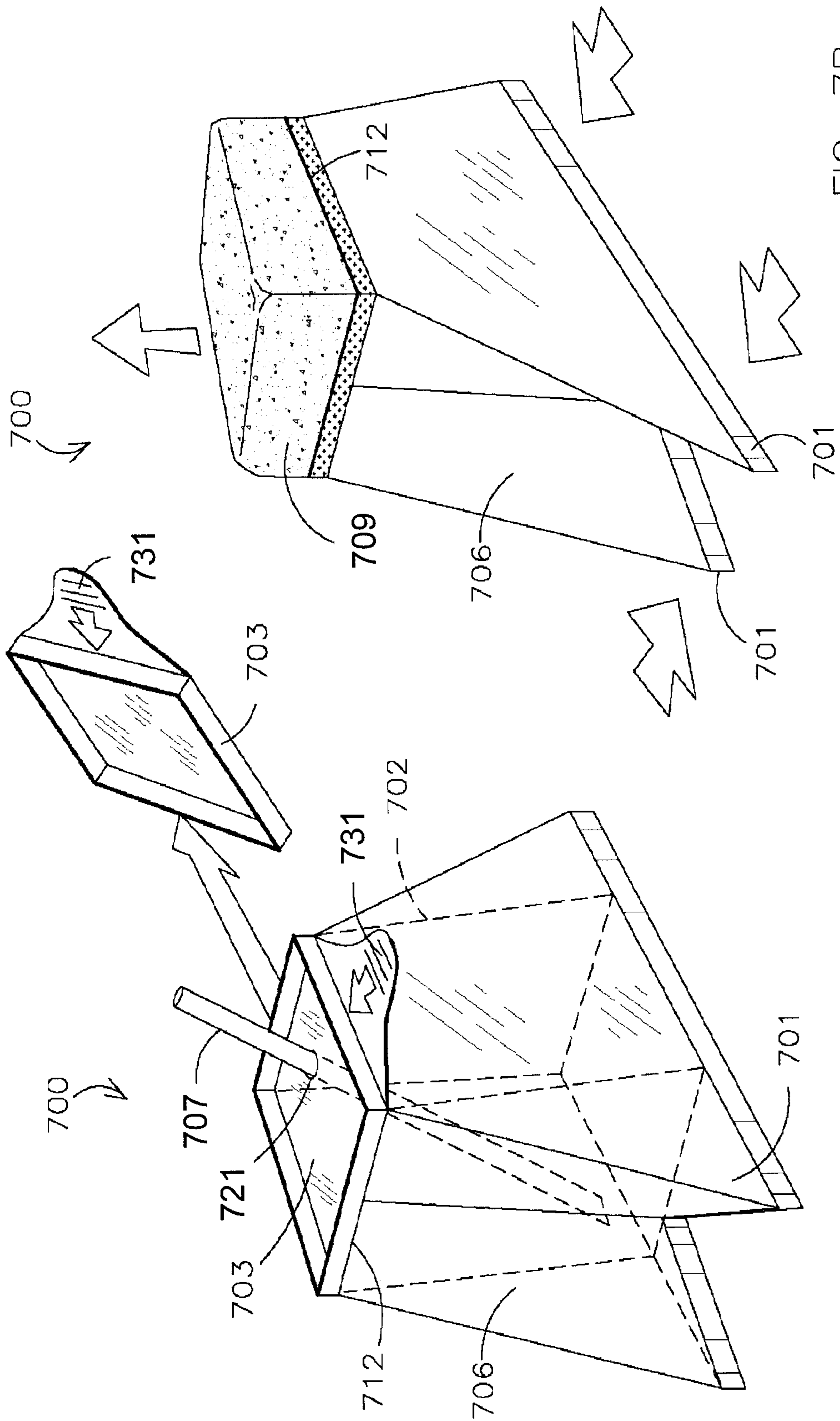
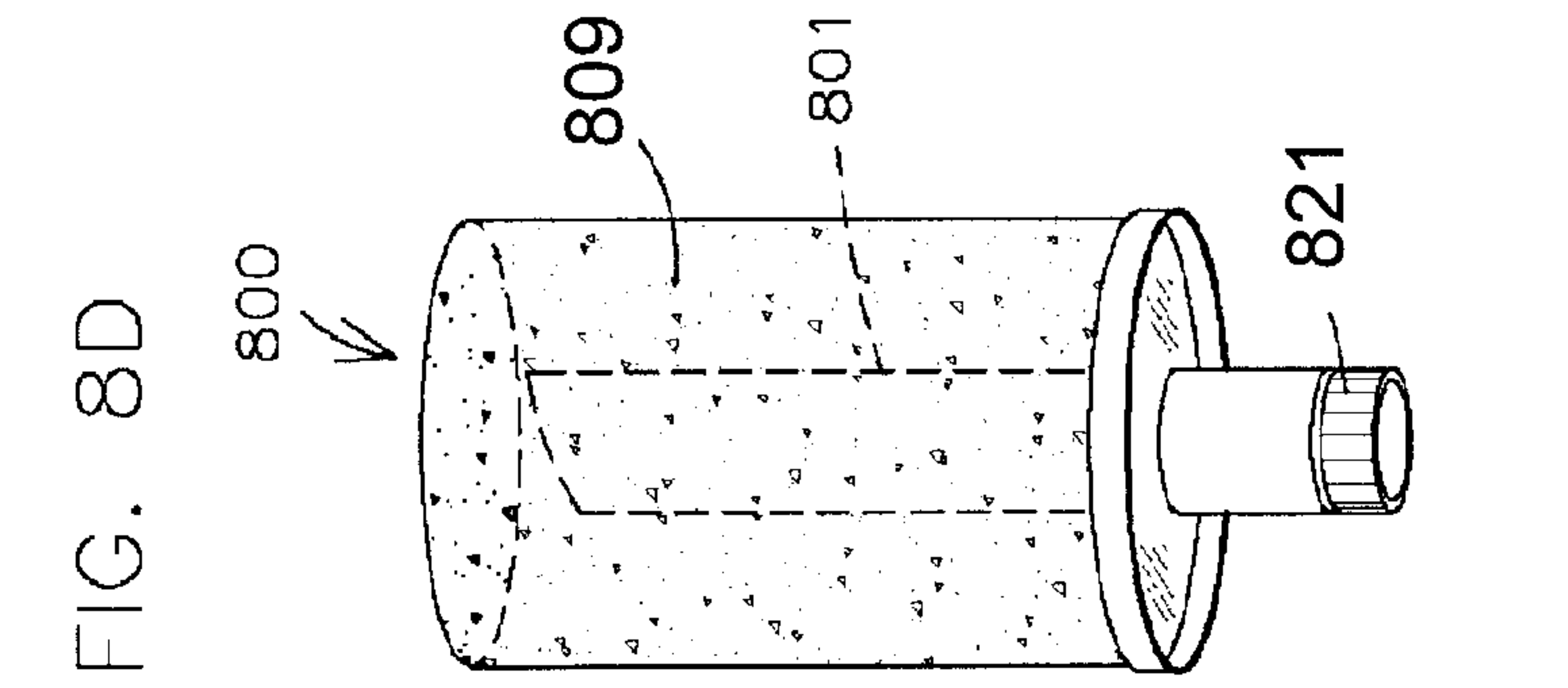
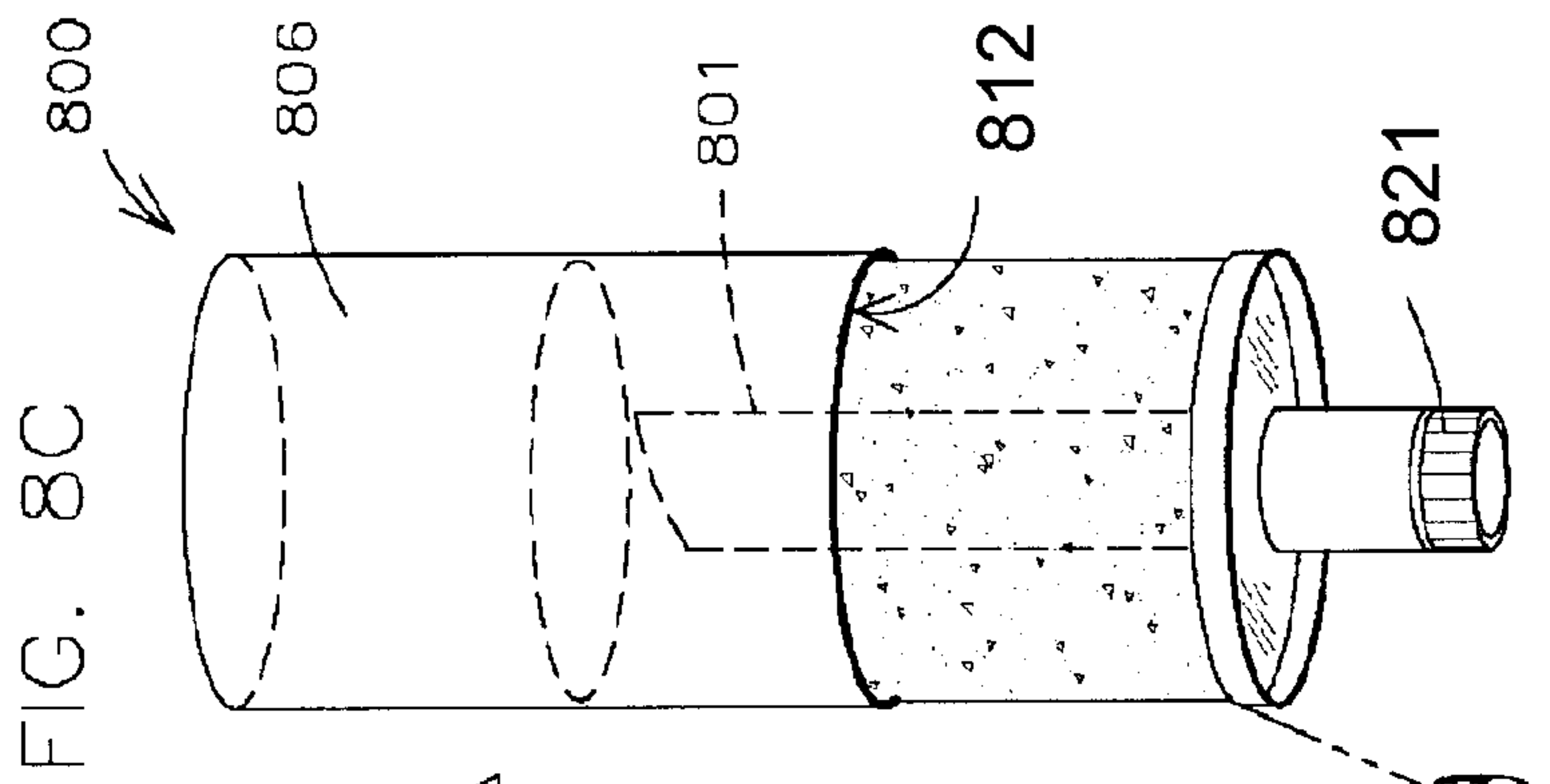
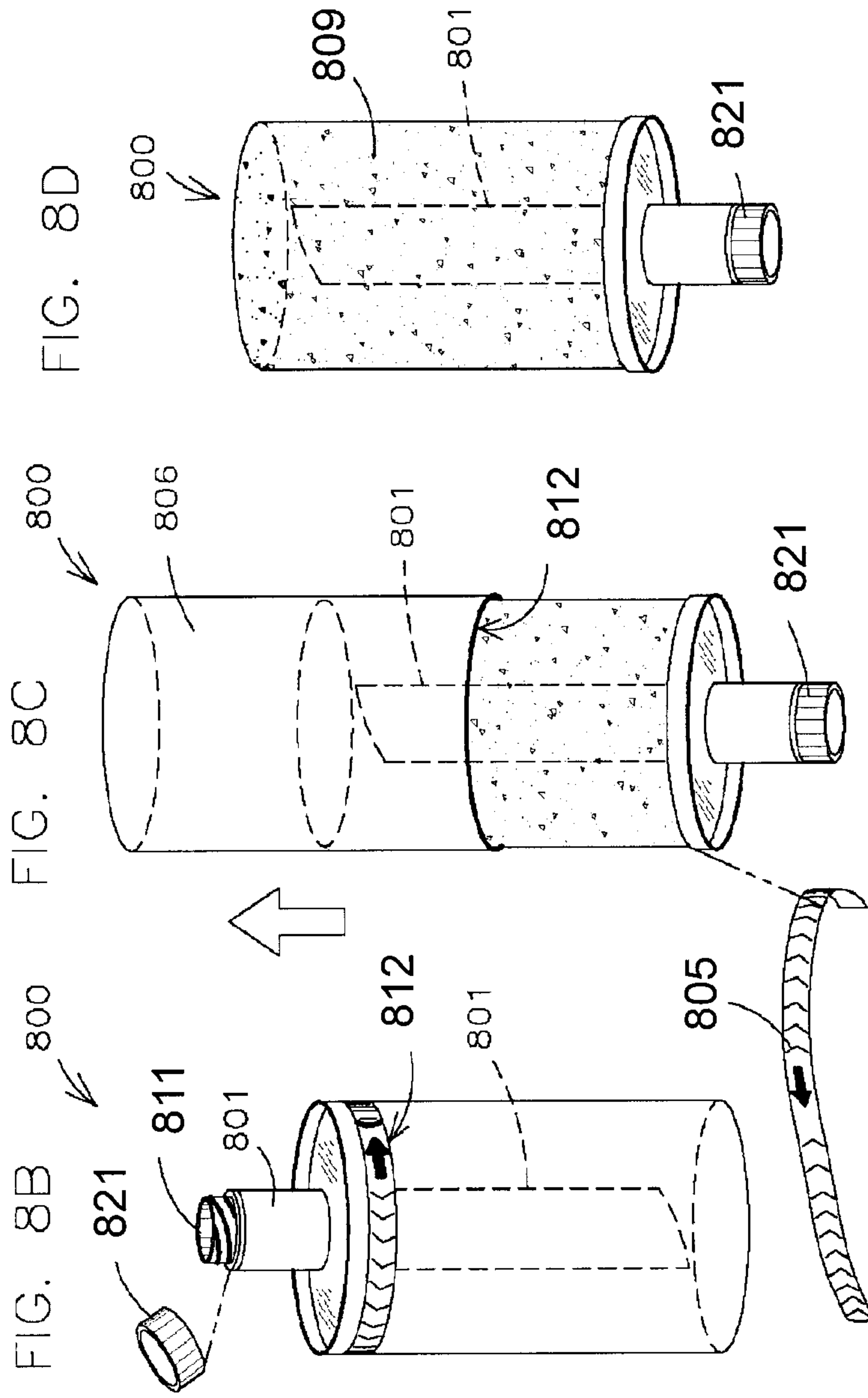
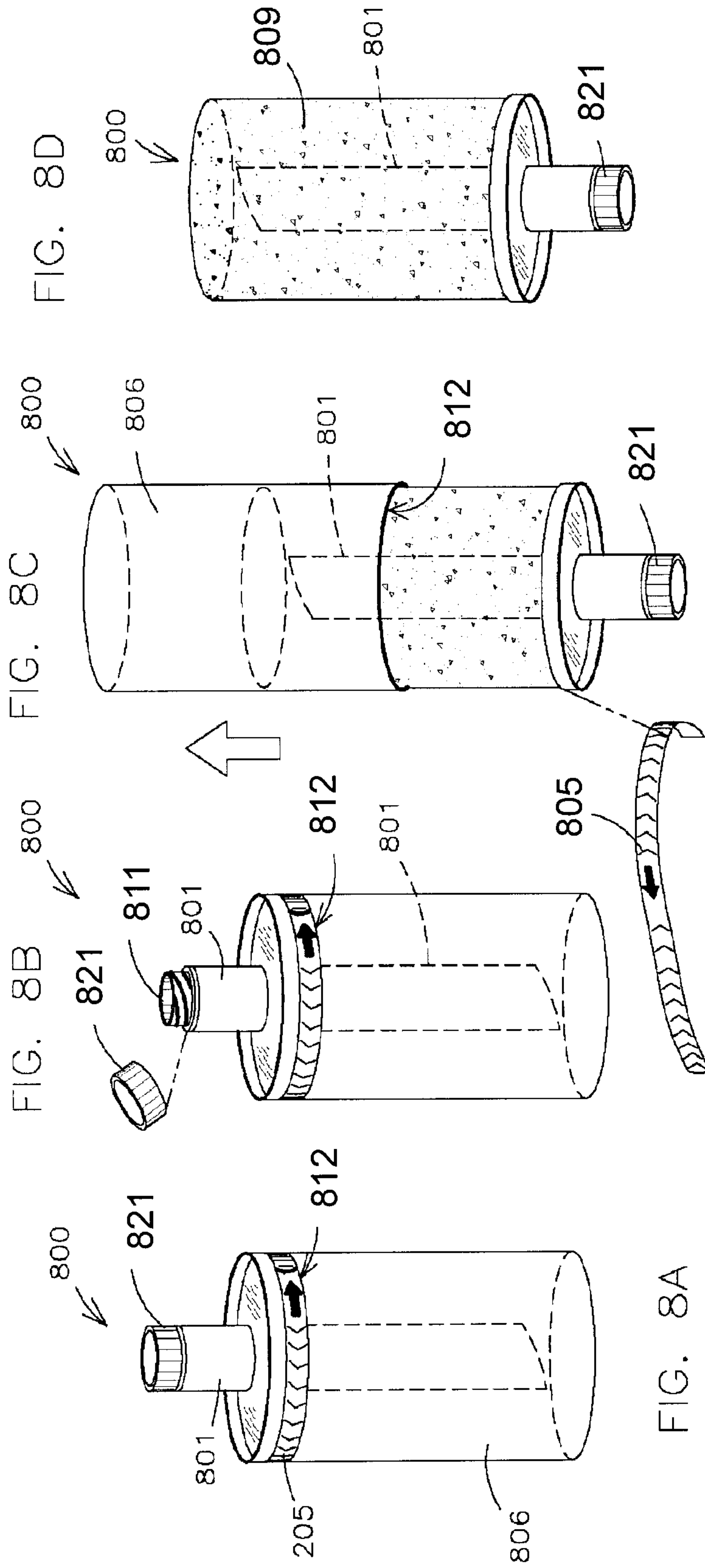


FIG. 7B

FIG. 7A



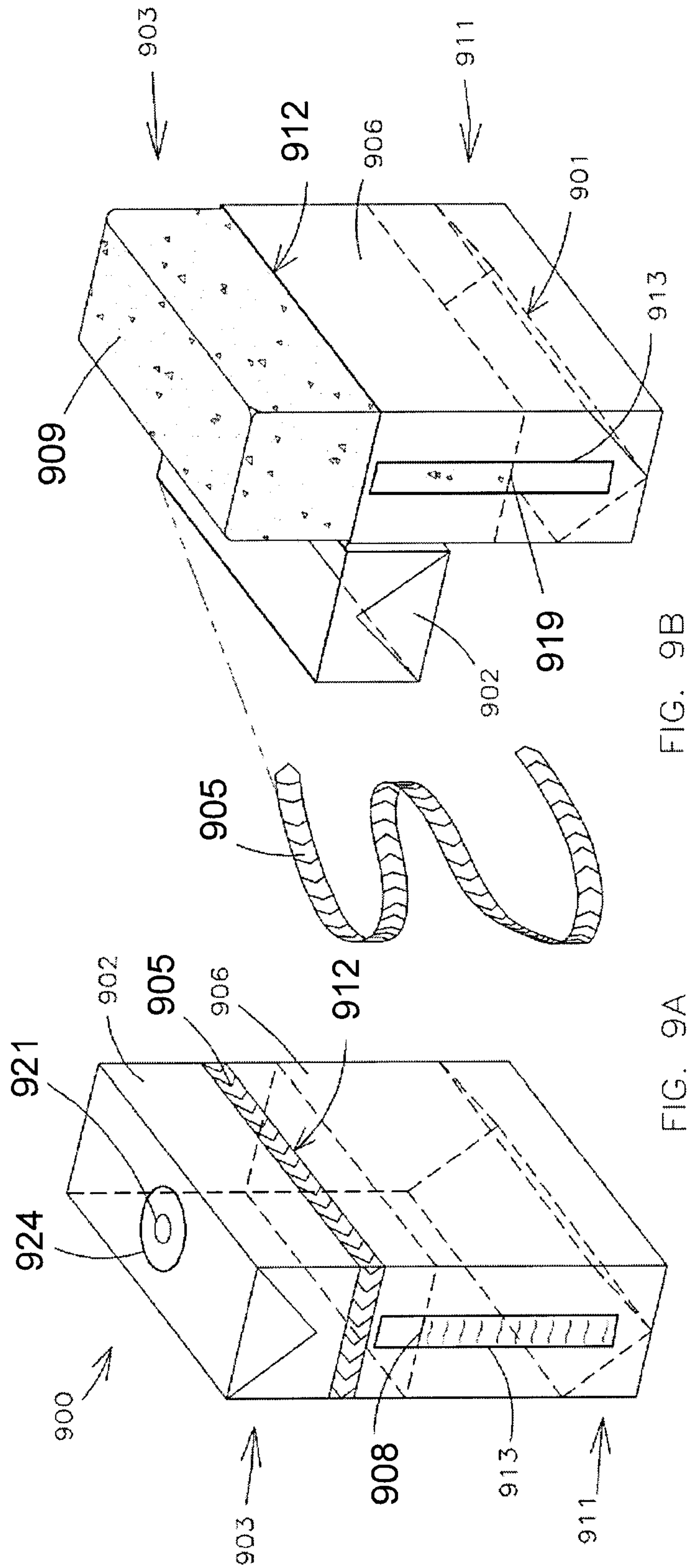


FIG. 9B

FIG. 9A

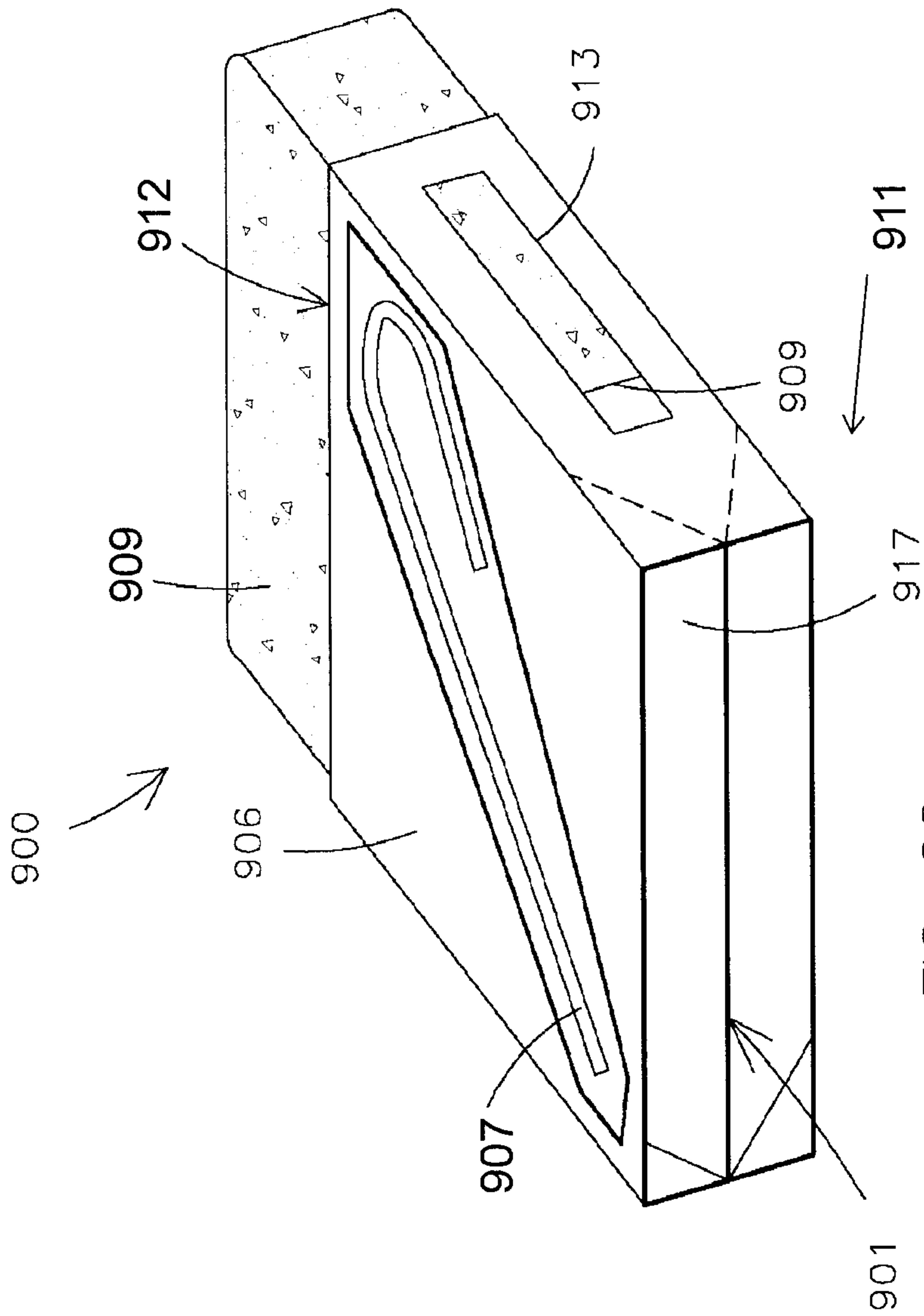


FIG. 9C

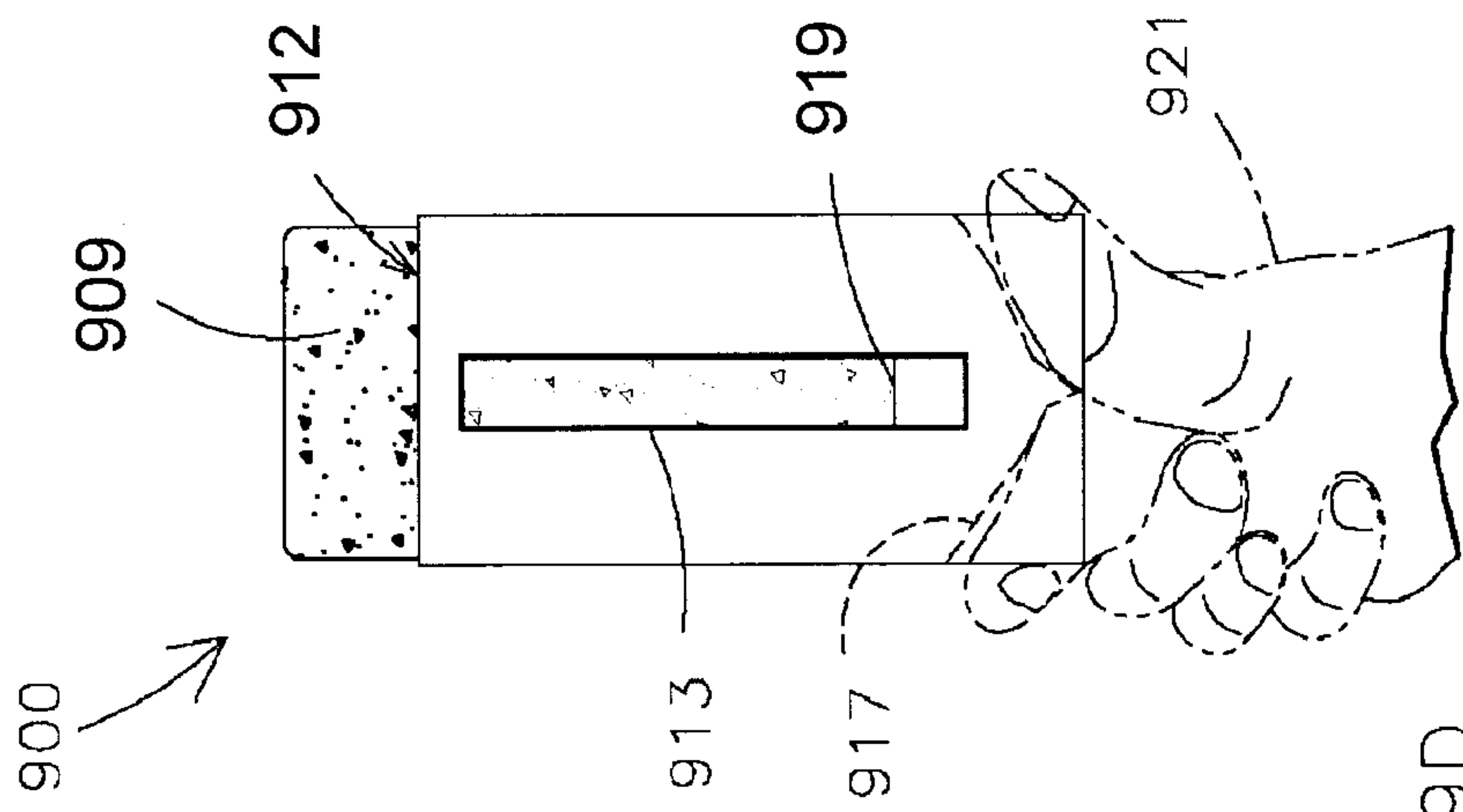


FIG. 9D

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