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(54) **POUCH CARTON AND CONTAINER FITMENTS FOR USE WITH ANY INGREDIENTS**

Publication Classification

- (51) **Int. Cl.**
B65D 51/28 (2006.01)
B65D 25/08 (2006.01)
- (52) **U.S. Cl.** 215/227; 206/219; 206/222; 215/250
- (57) **ABSTRACT**

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A container having a storage and dosing cap having a body storage chamber that can be used to mix several substances at the time of use. The container is typically a can, pouch, bottle, IV bags, cartons, drums or any type of container that can hold ingredients that are liquid, powder and or gel. A powder, liquid, and or gel stored in the cap body can be activated by pushing or twisting an actuator top area or outer cap area of the storage and dosing cap to be mixed into the container. The actuator which can have none or more than one angle on the bottom area of the actuator can break open the bottom of the storage cap area whether being a line of weakening or a seal with absorbent material or both to release product into a container when manually depressed or twisted.

(21) Appl. No.: **12/484,637**

(22) Filed: **Jun. 15, 2009**

Related U.S. Application Data

(60) Provisional application No. 61/061,133, filed on Jun. 13, 2008.

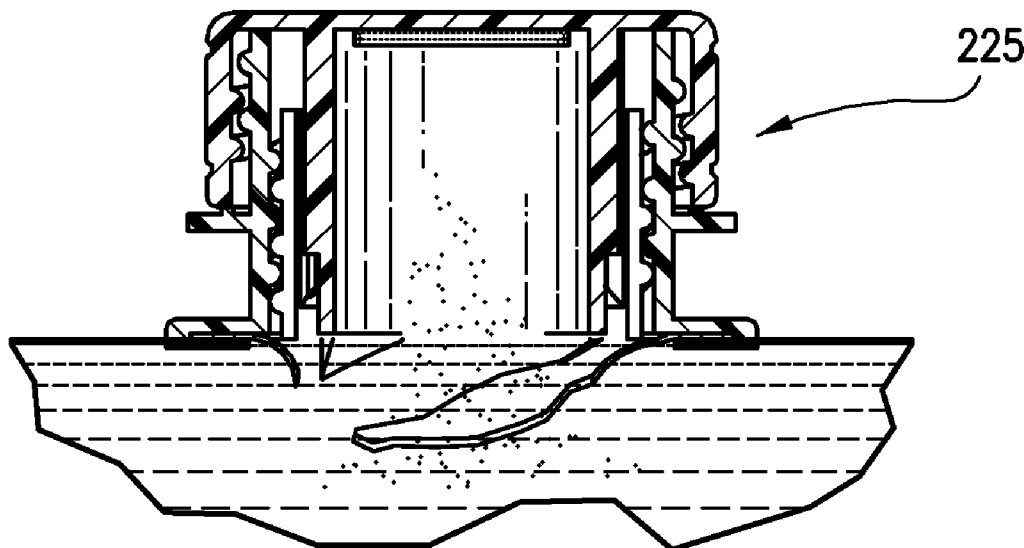
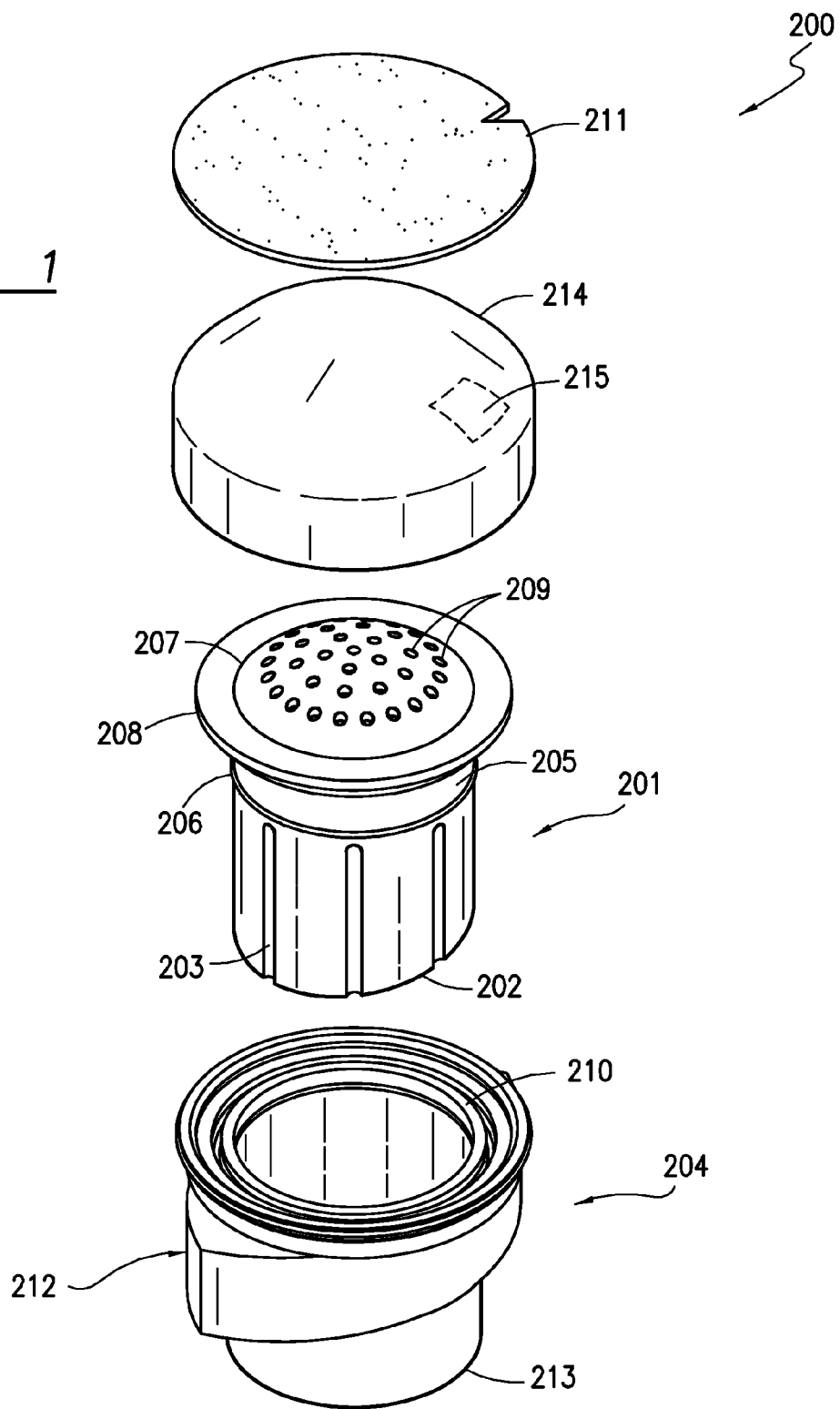


FIG. 1



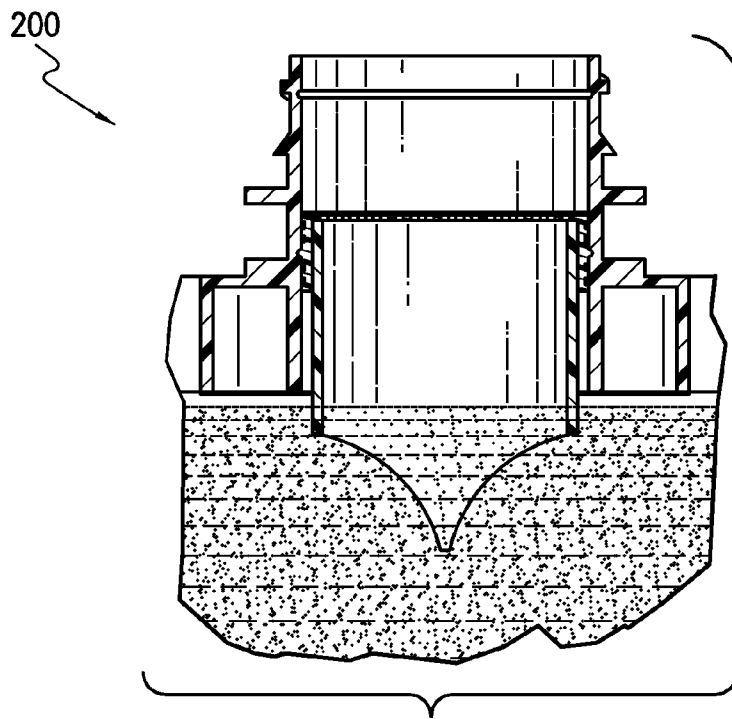


FIG. 2

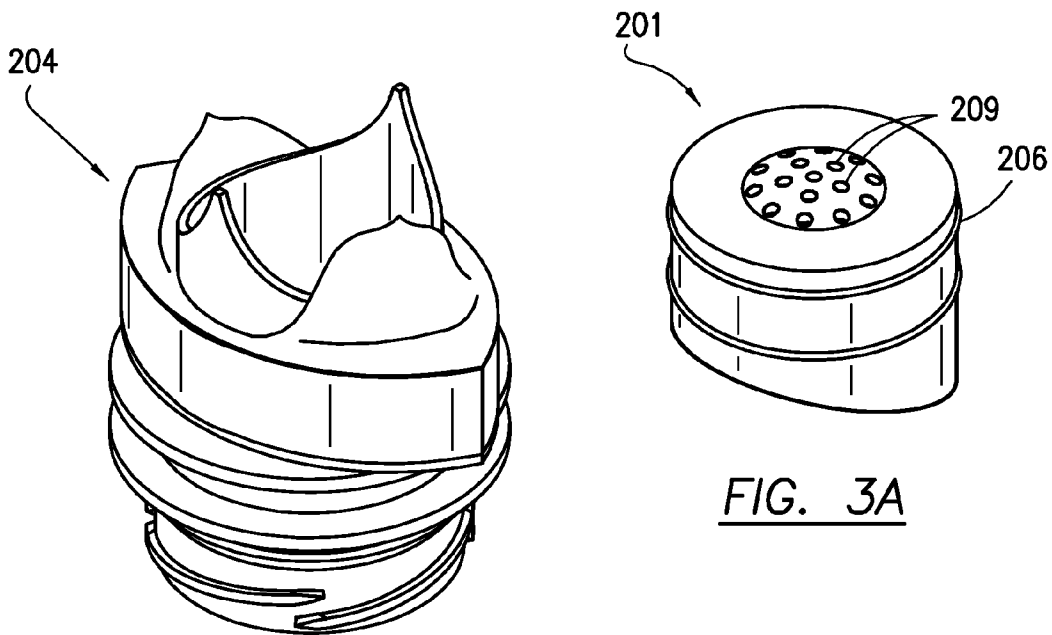


FIG. 3

FIG. 3A

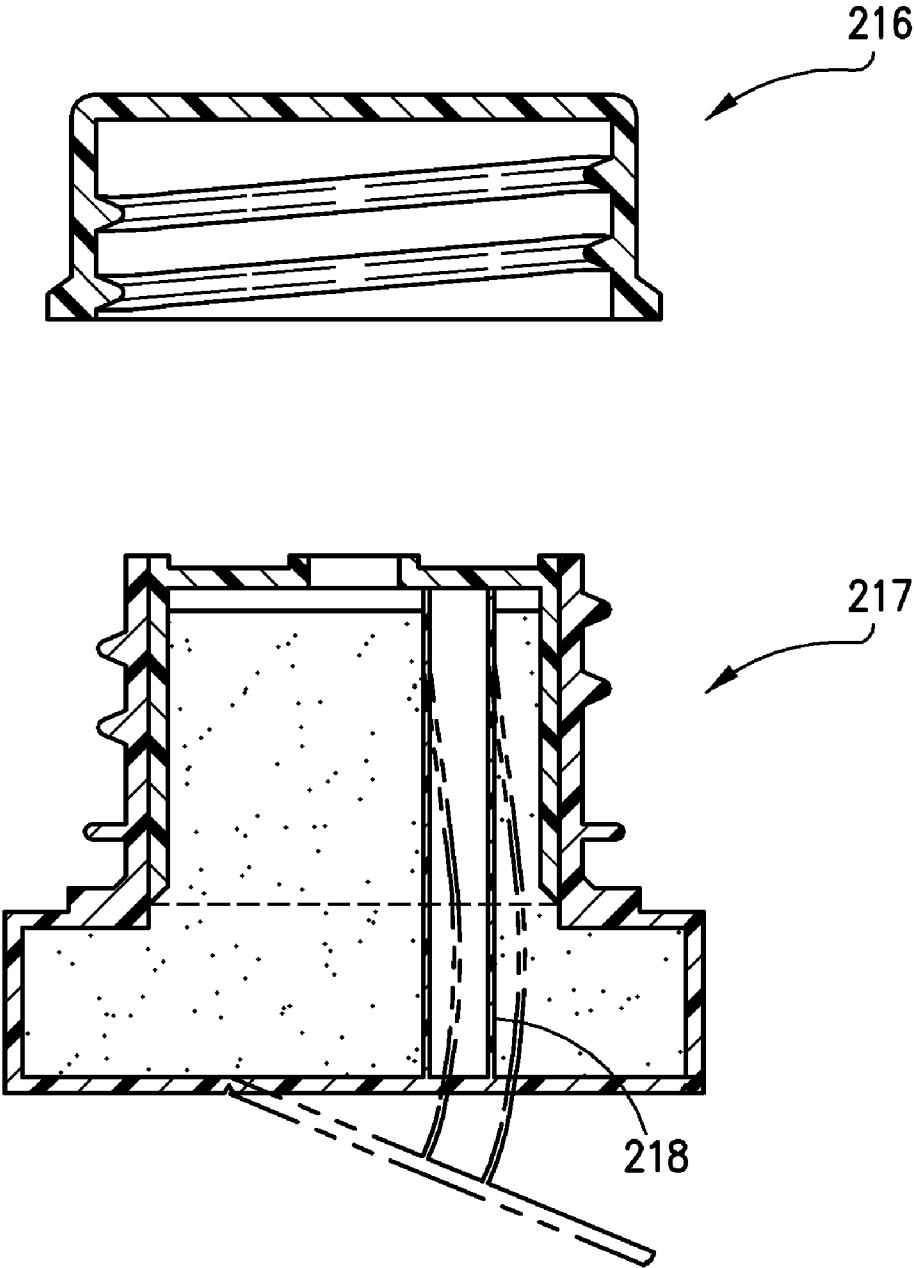


FIG. 4

FIG. 5

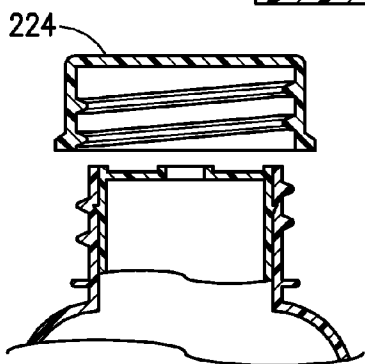
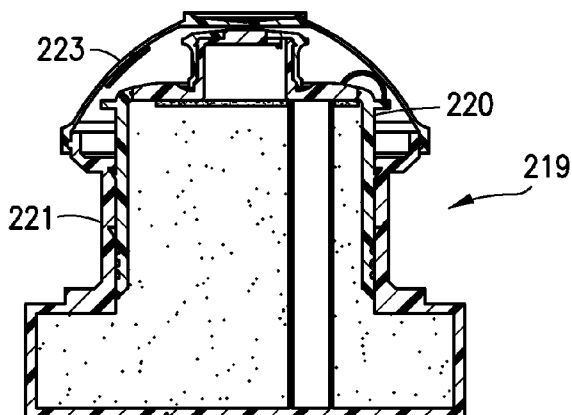


FIG. 6A

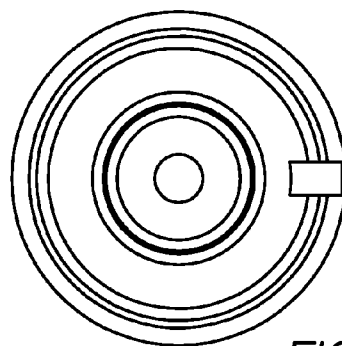


FIG. 5A

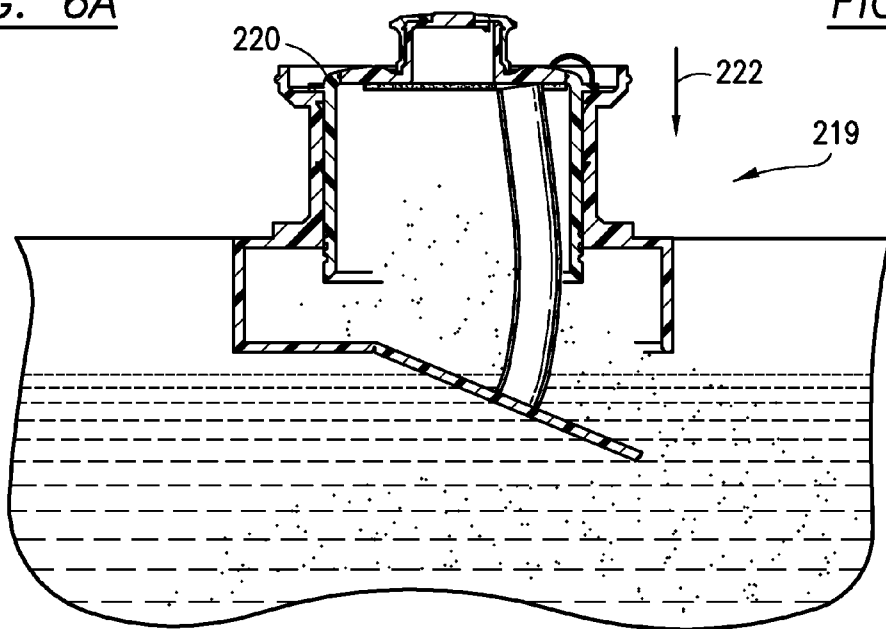


FIG. 6

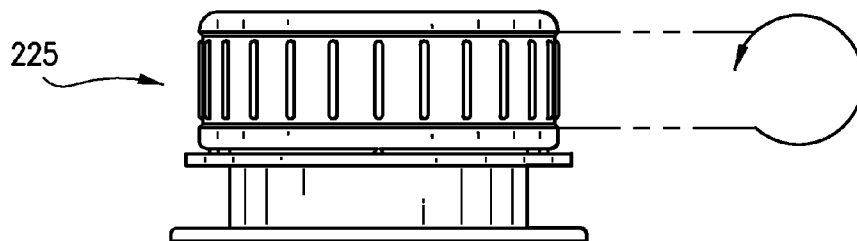


FIG. 7

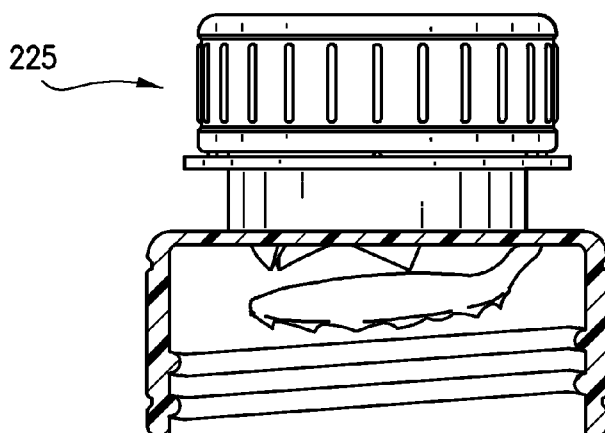


FIG. 8

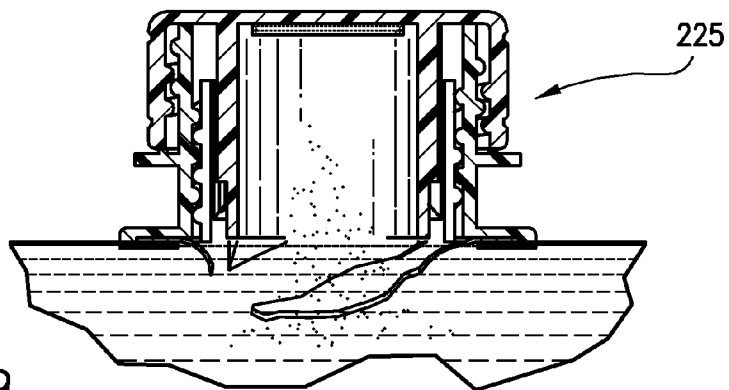


FIG. 9

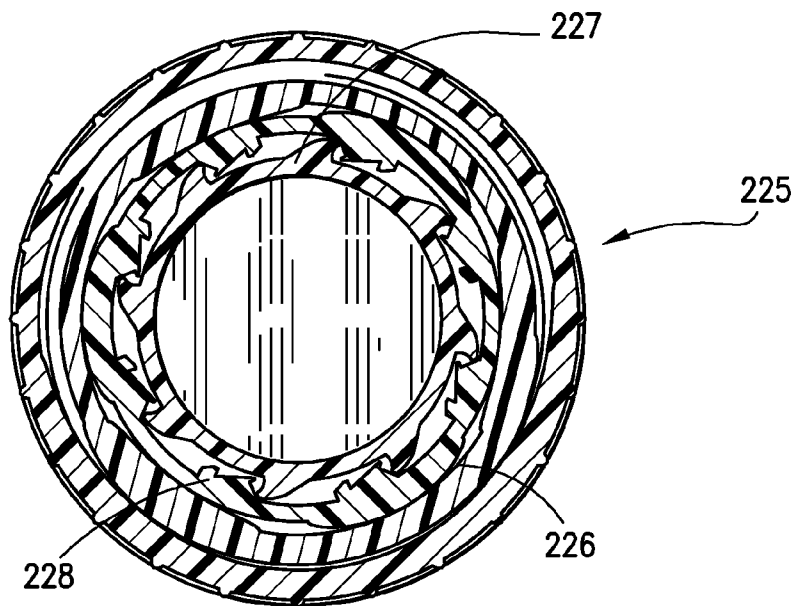


FIG. 9A

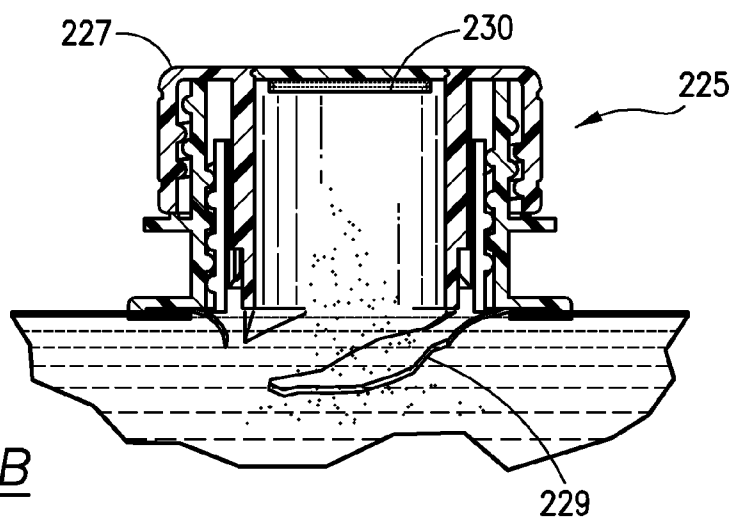


FIG. 9B

FIG. 10

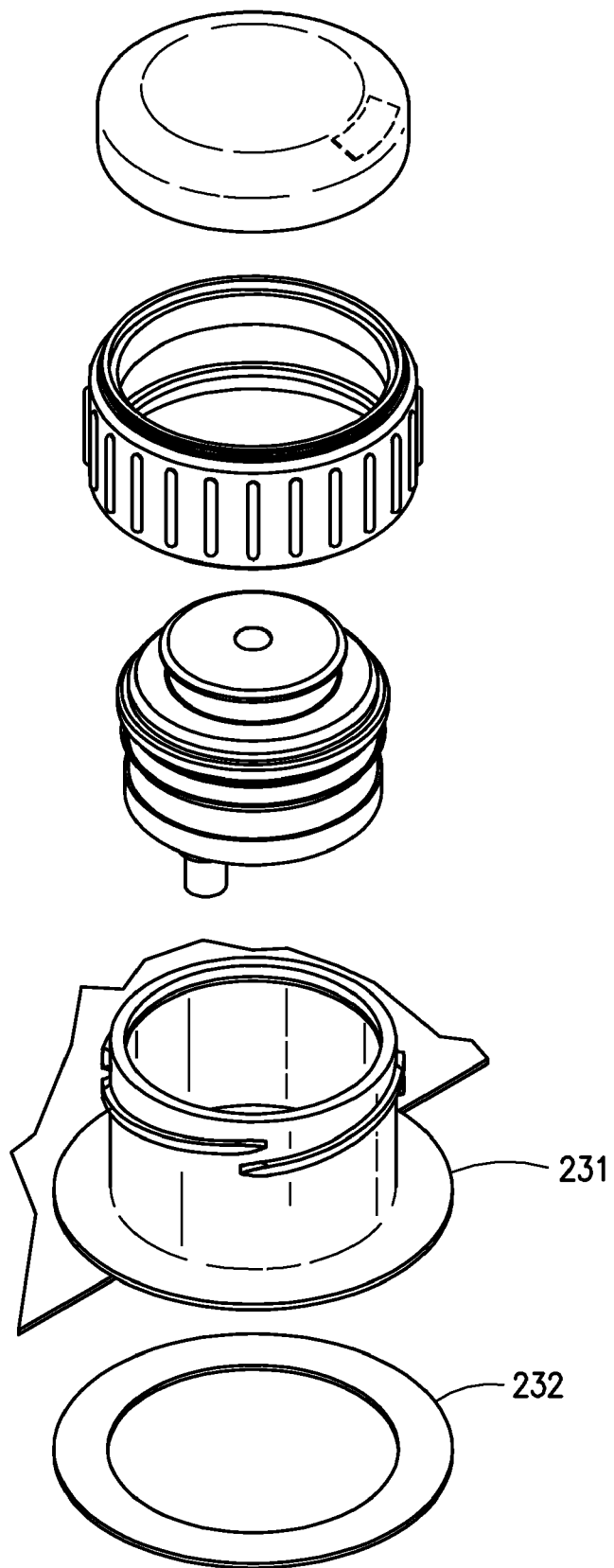


FIG. 11

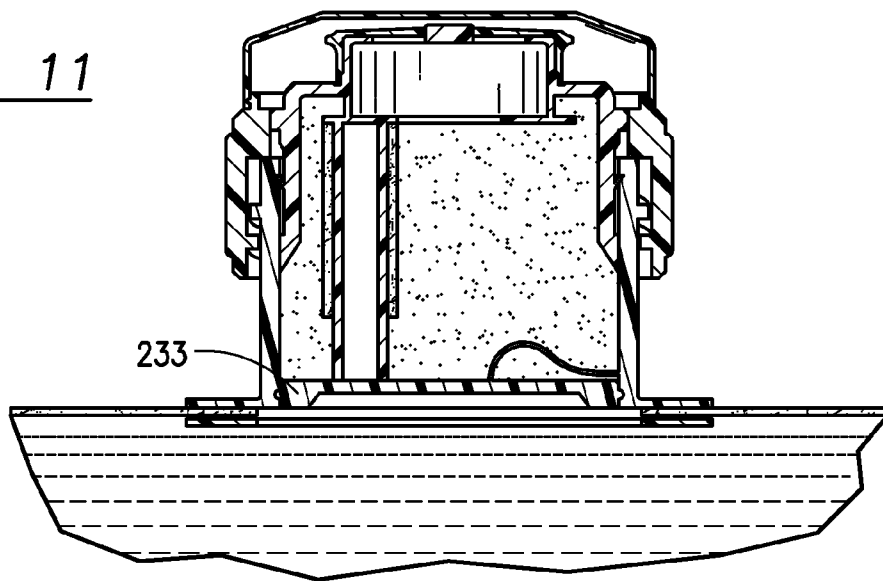
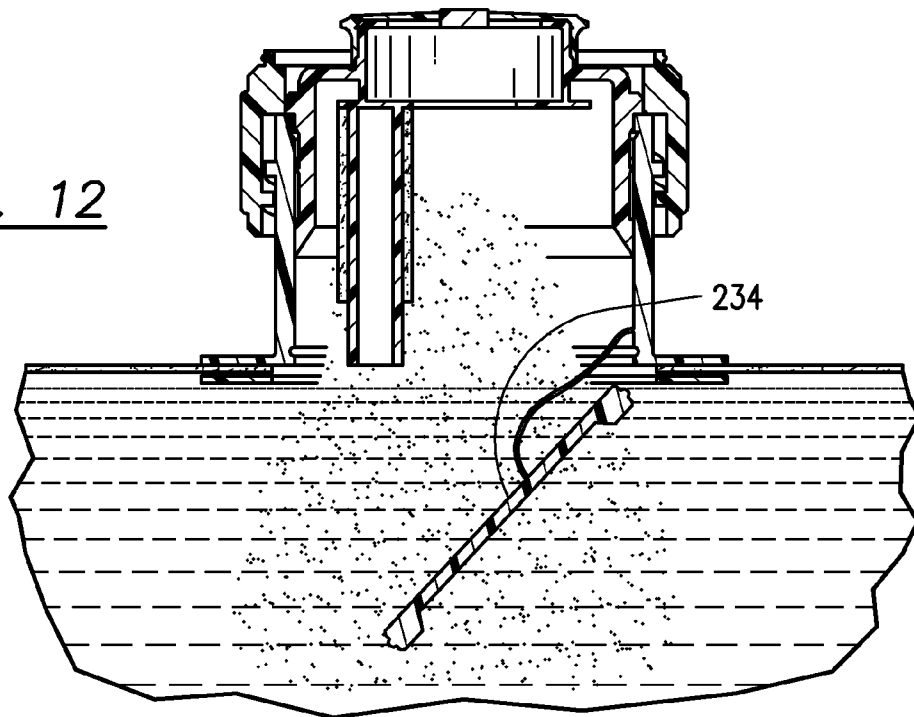


FIG. 12



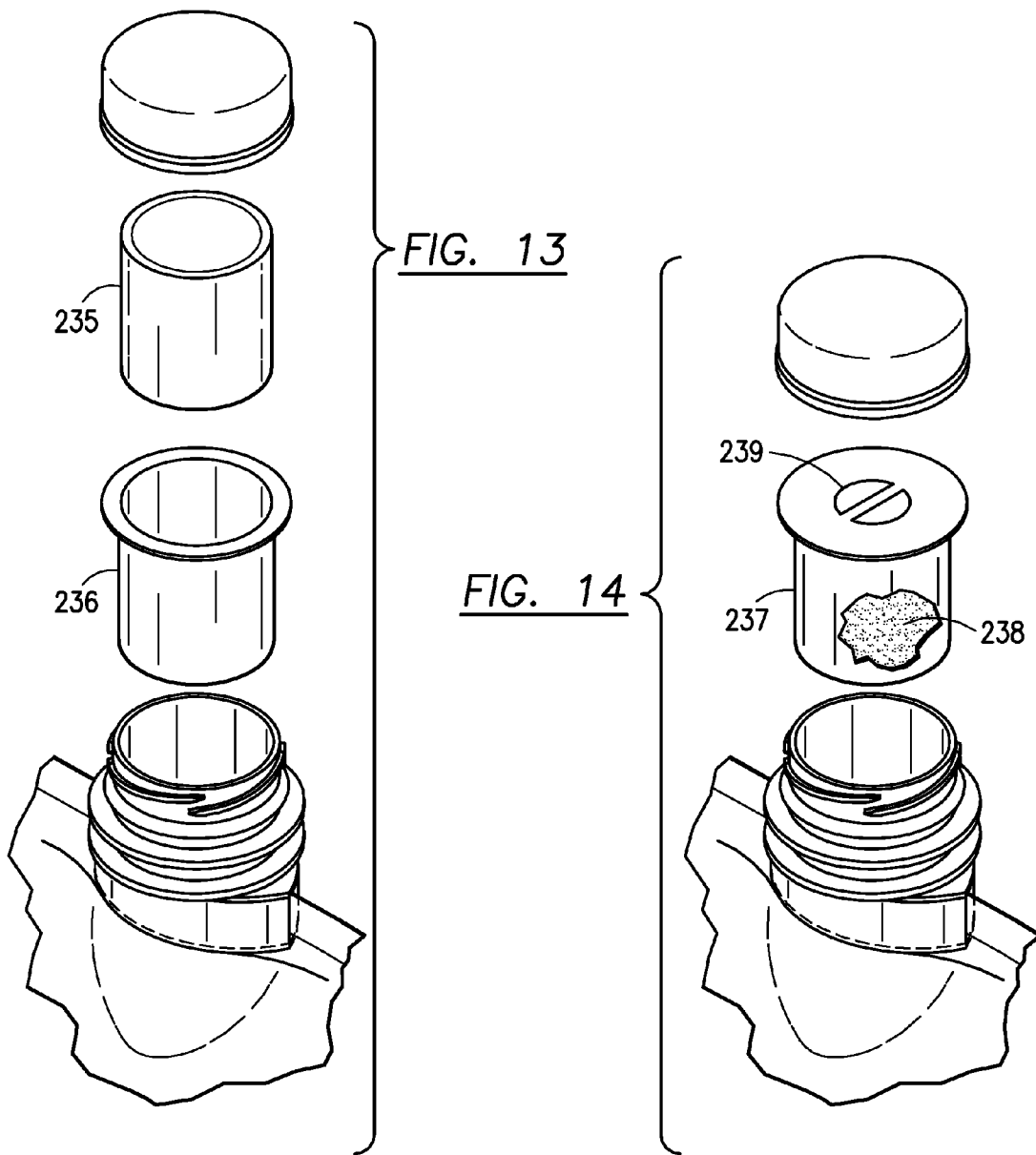


FIG. 15

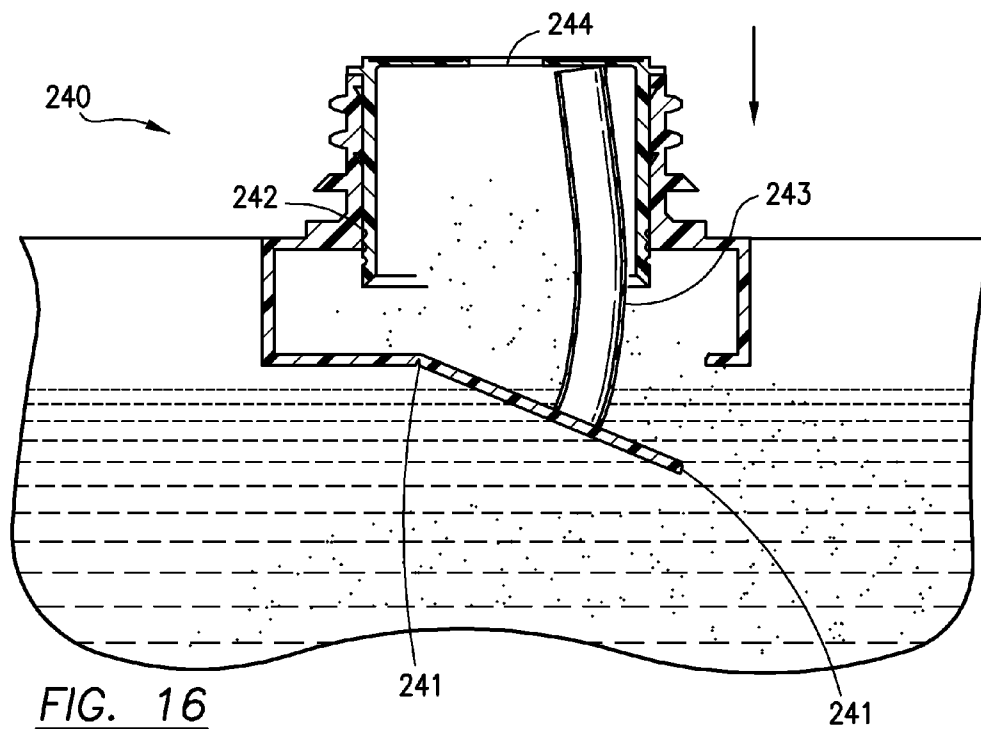
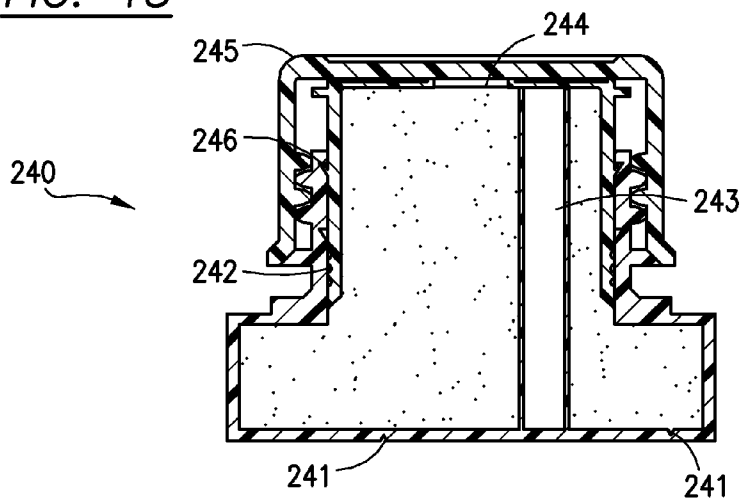
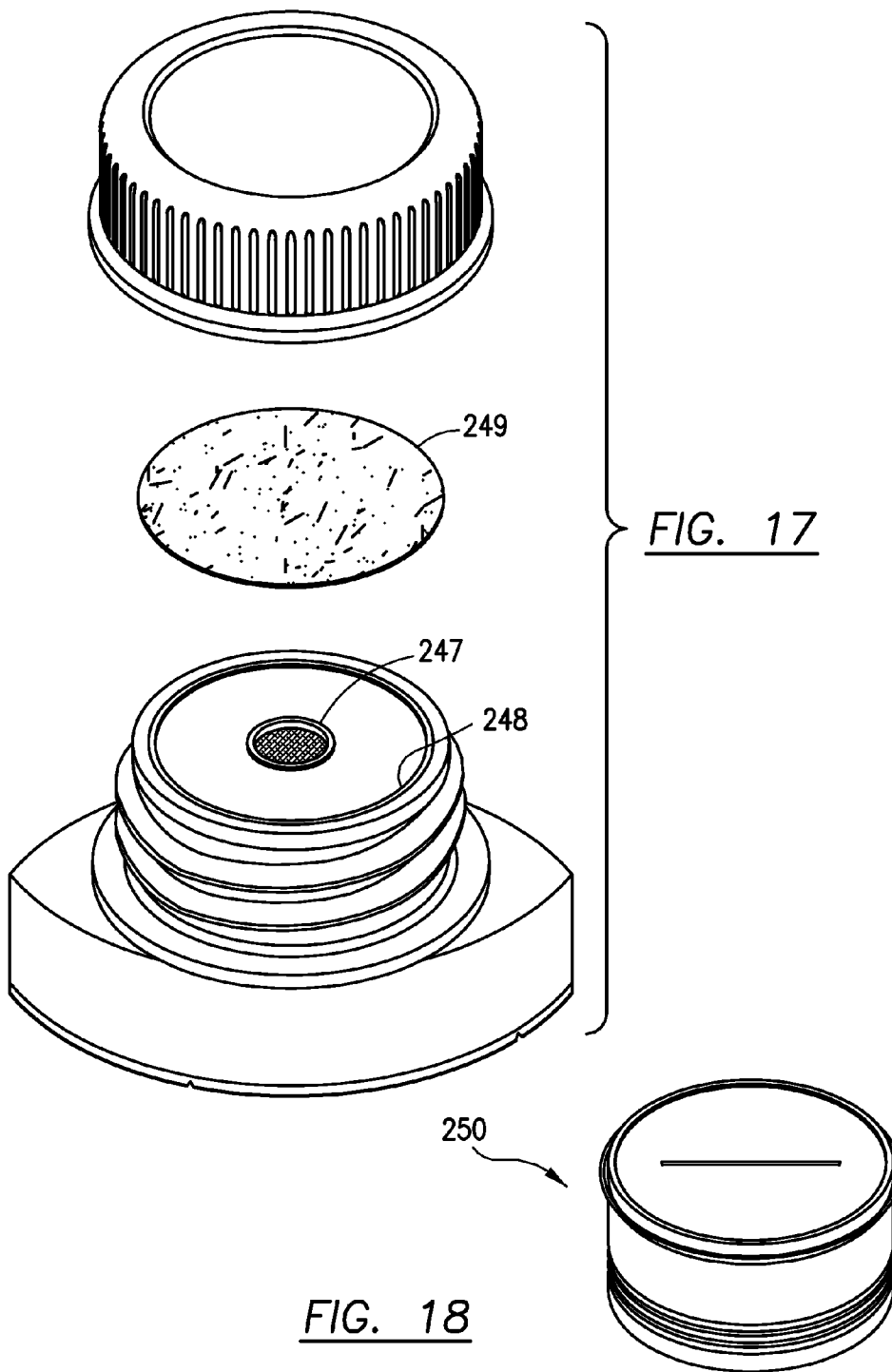


FIG. 16



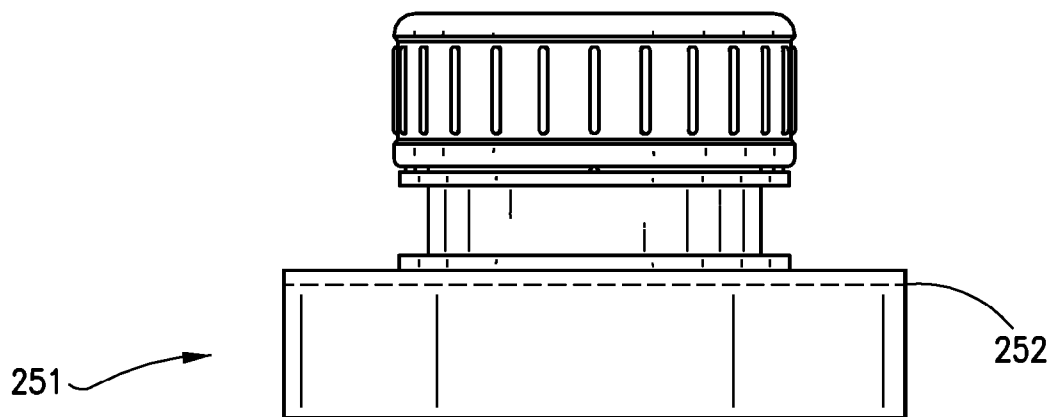


FIG. 20

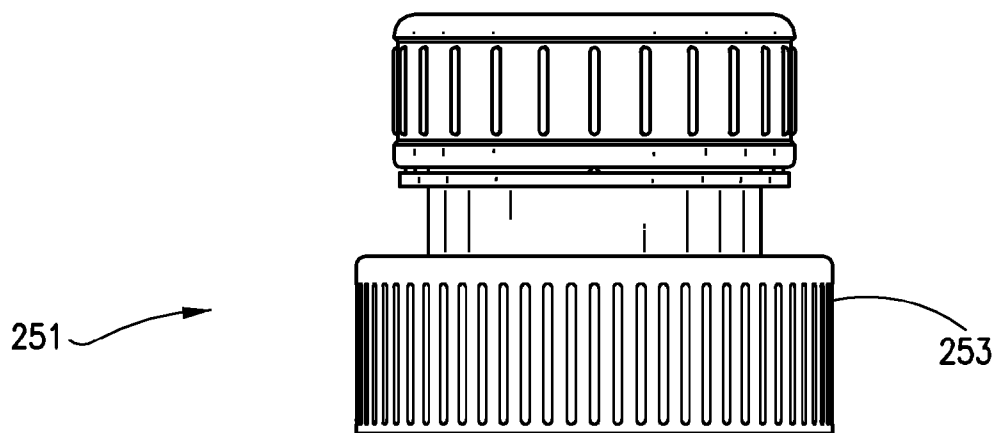


FIG. 19

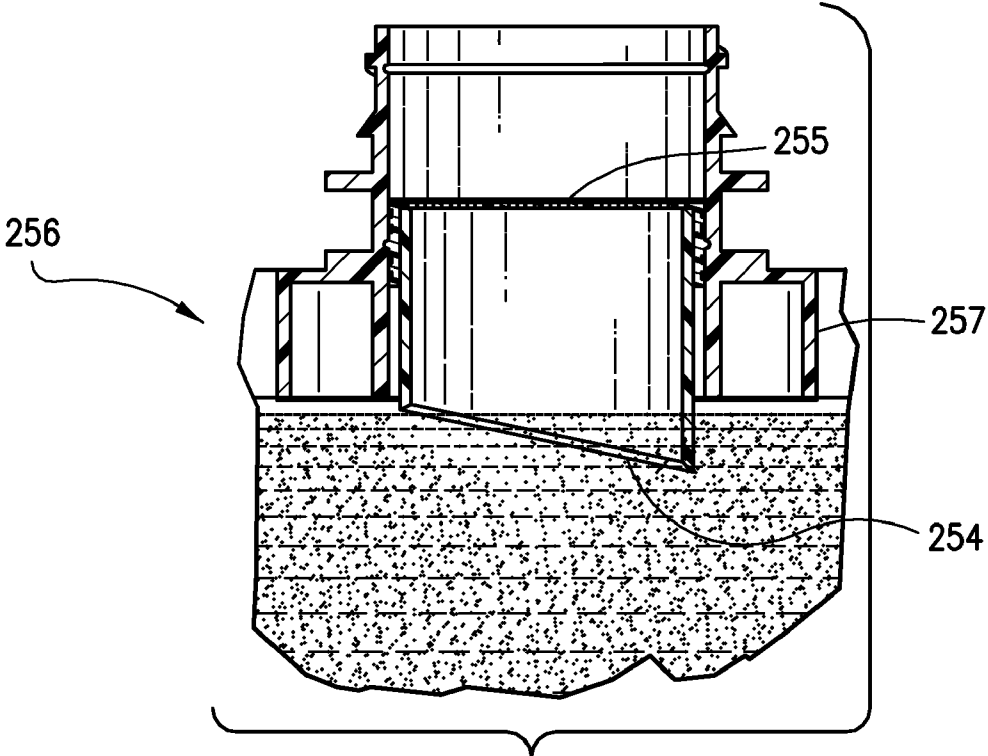


FIG. 21

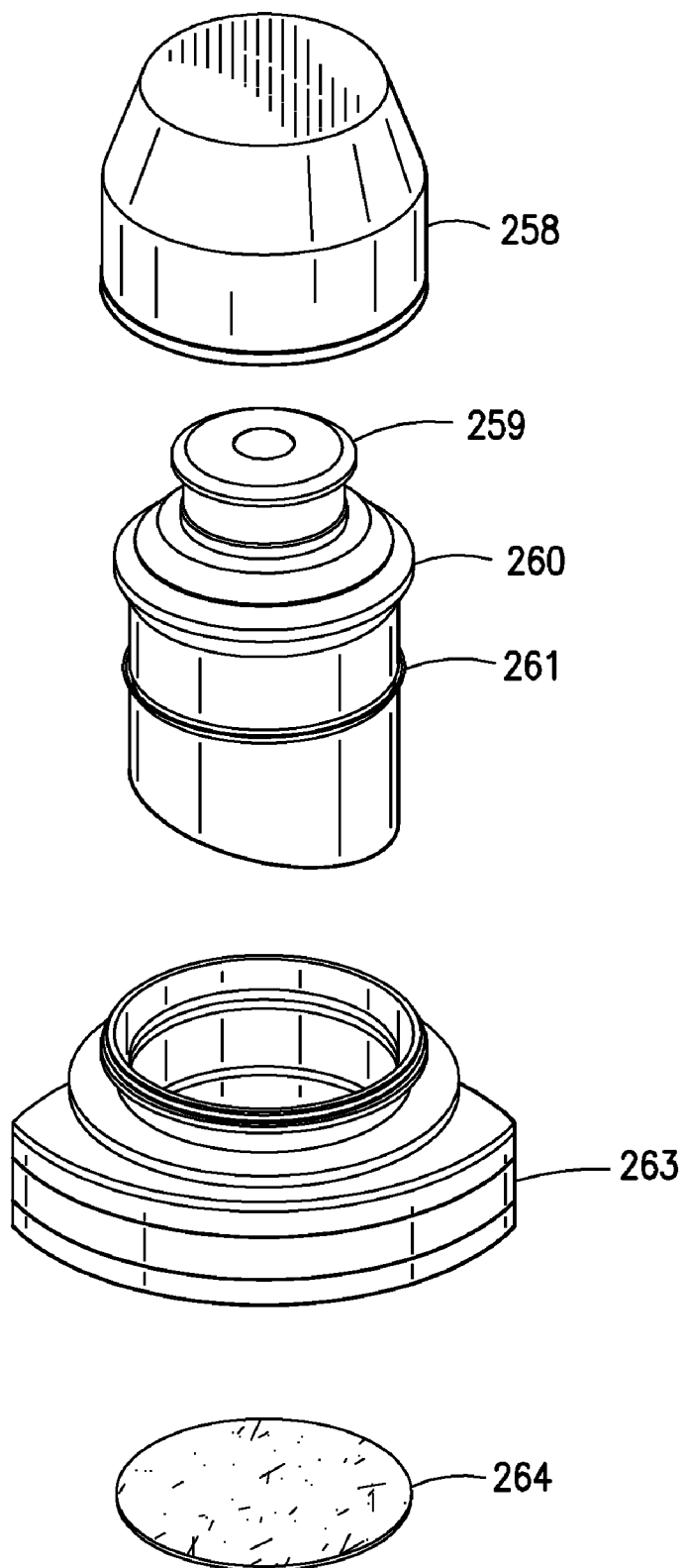


FIG. 22

FIG. 23

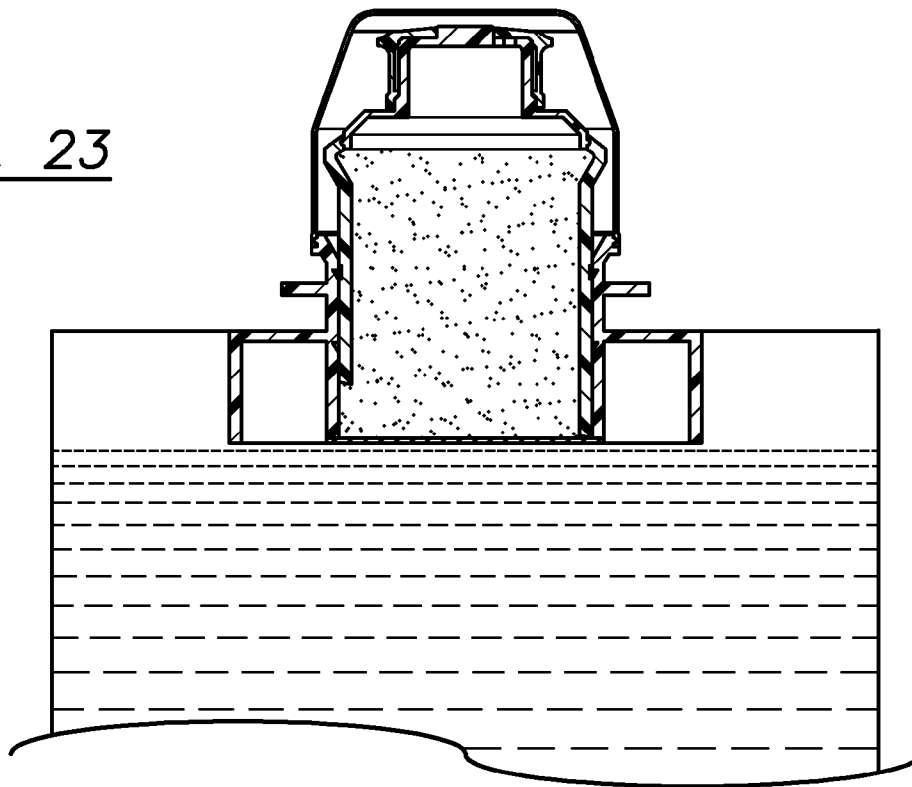
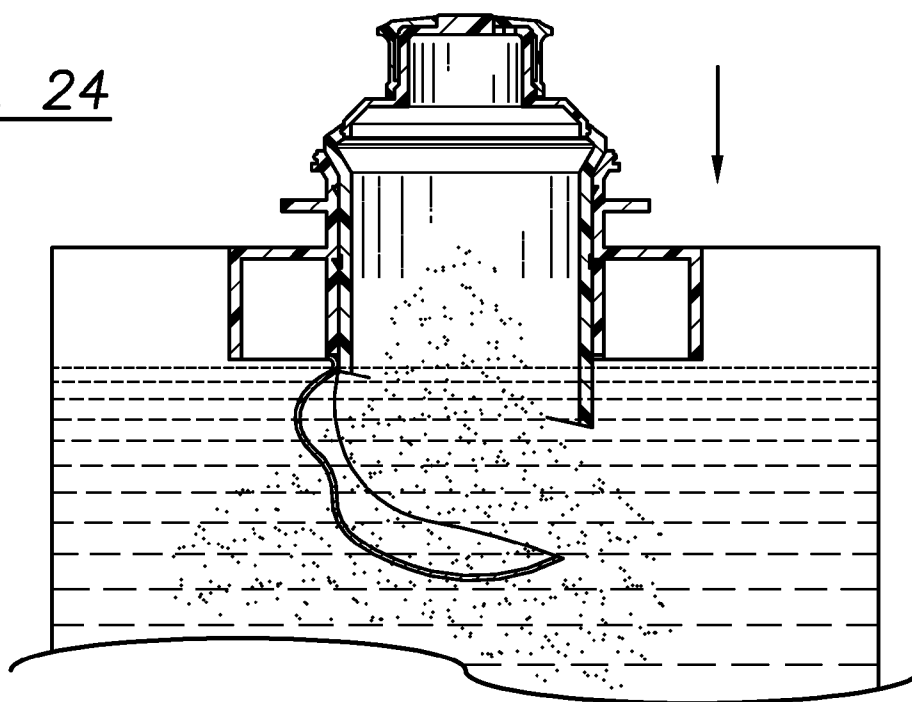


FIG. 24



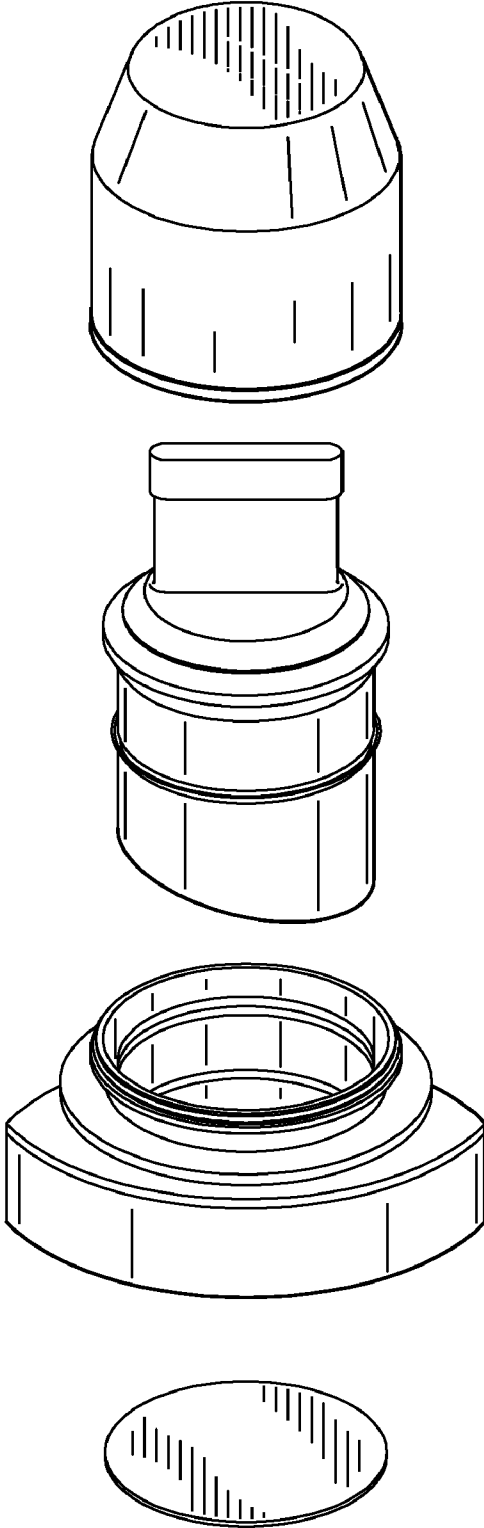


FIG. 25

FIG. 26

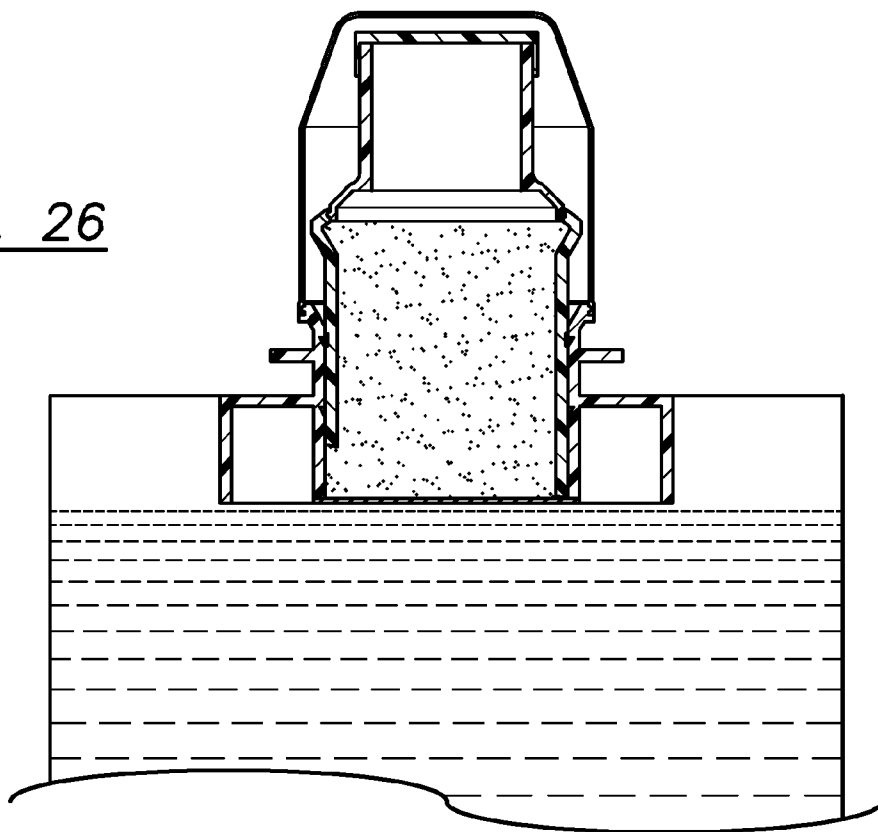
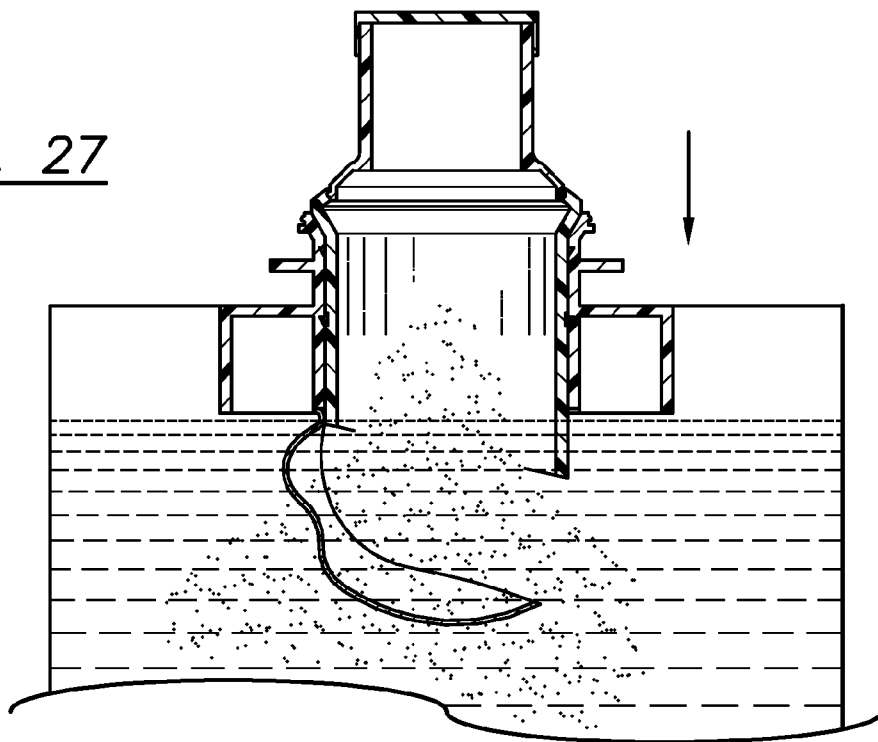


FIG. 27



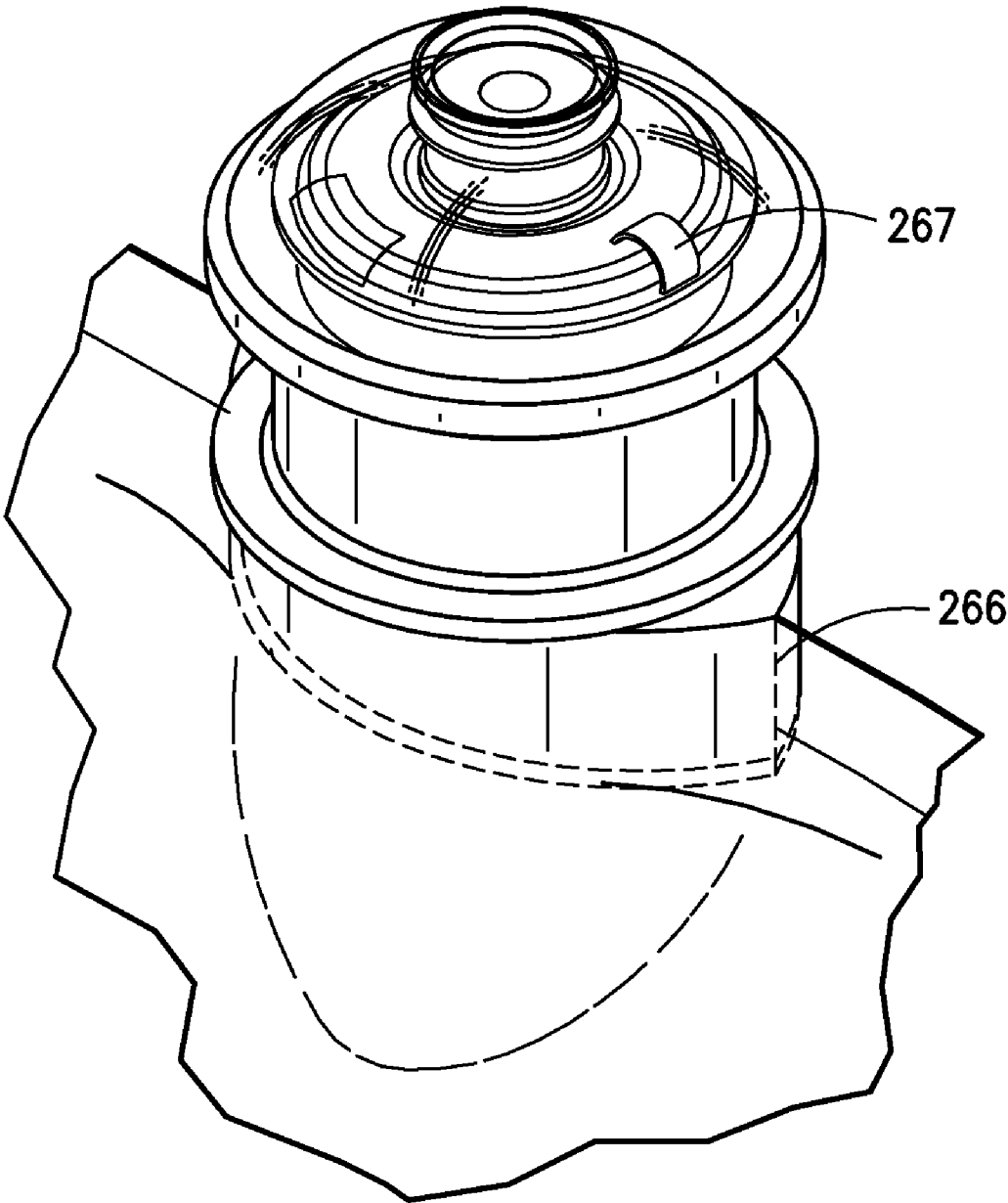


FIG. 28

FIG. 29

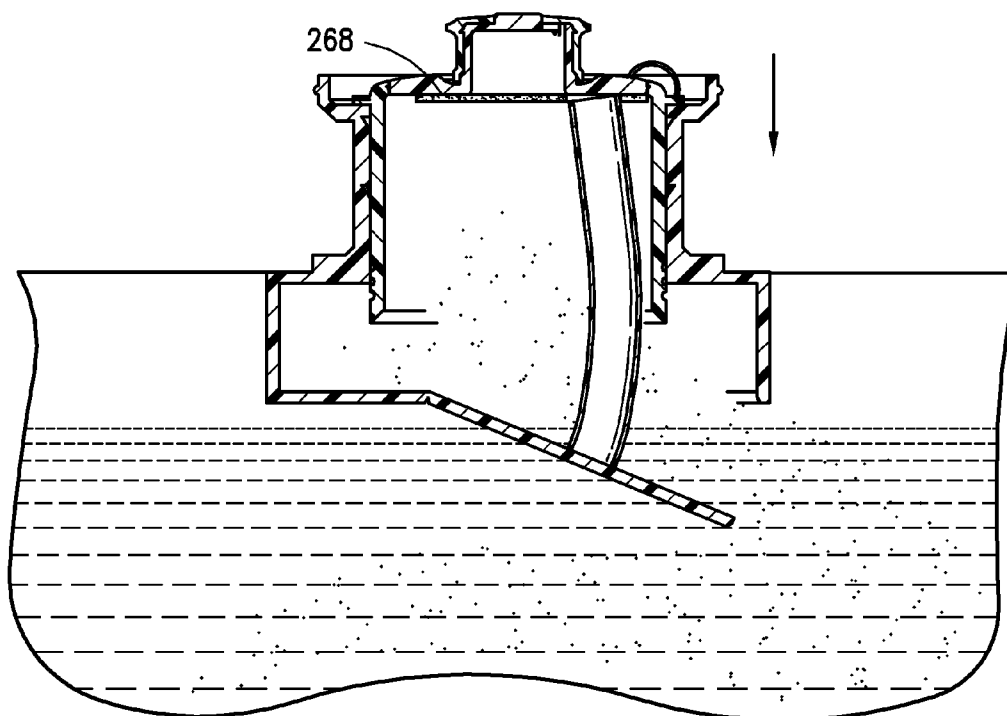
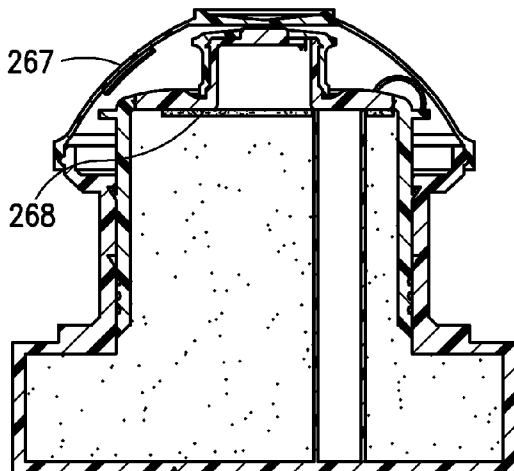
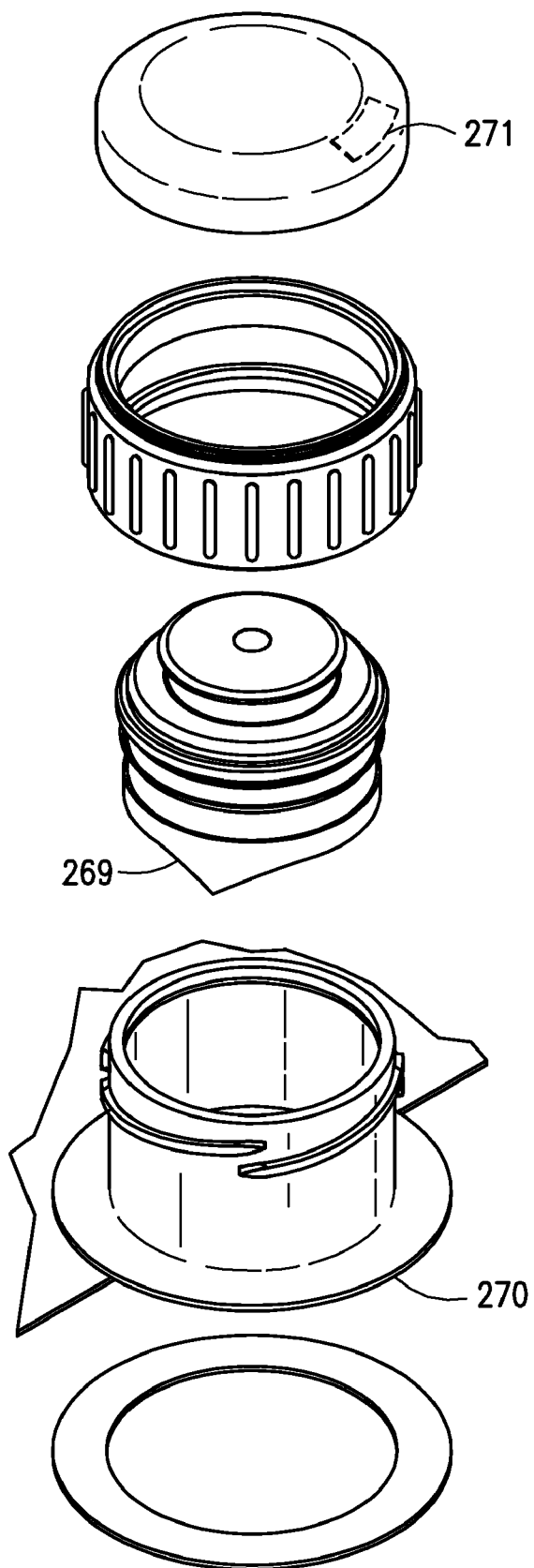


FIG. 30

FIG. 31



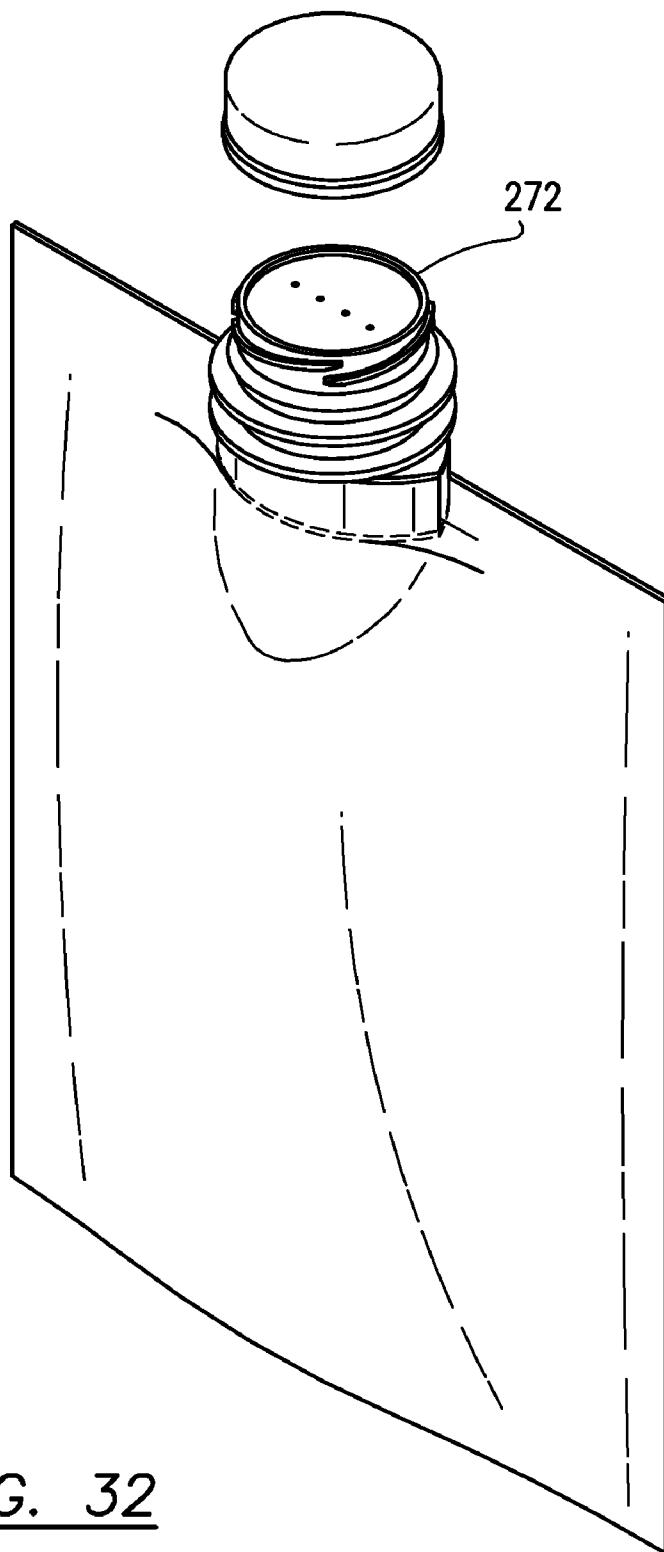


FIG. 32

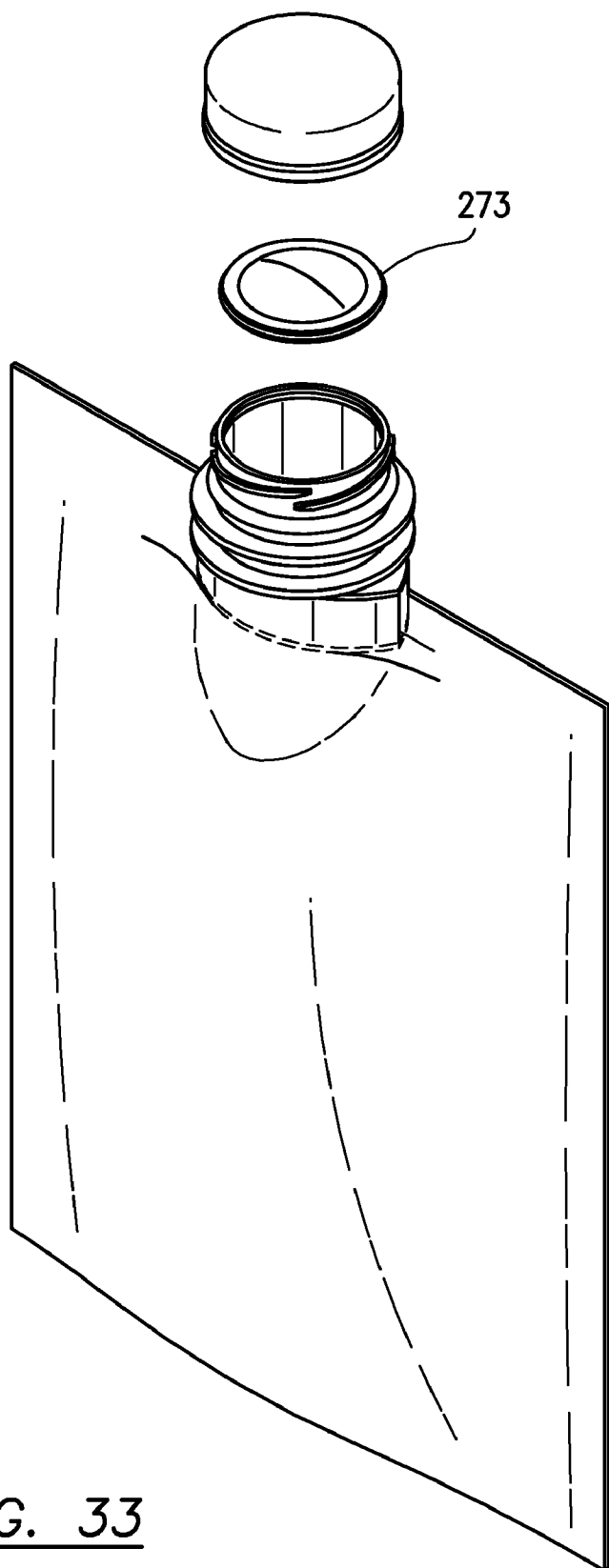


FIG. 33

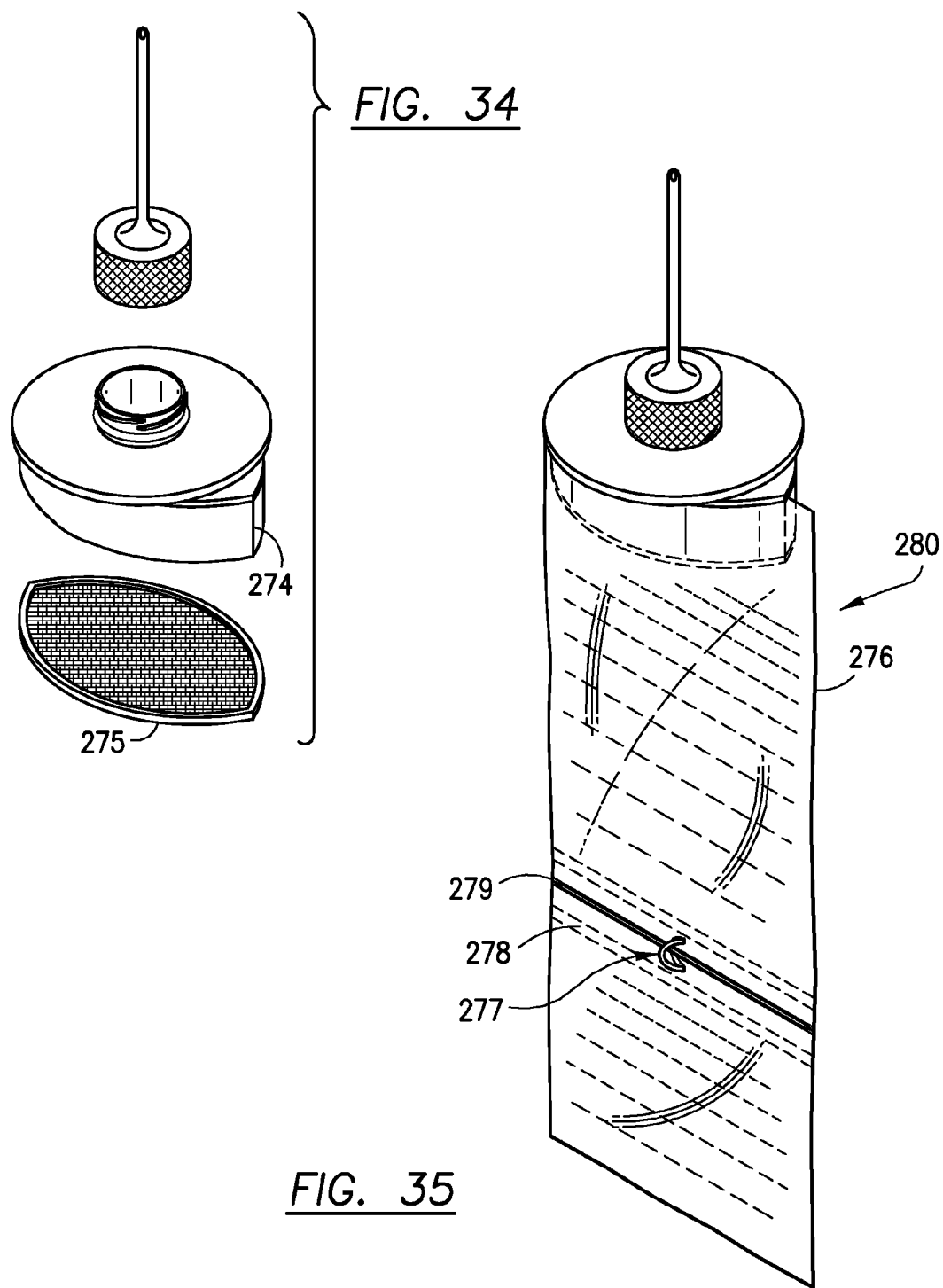


FIG. 34

FIG. 35

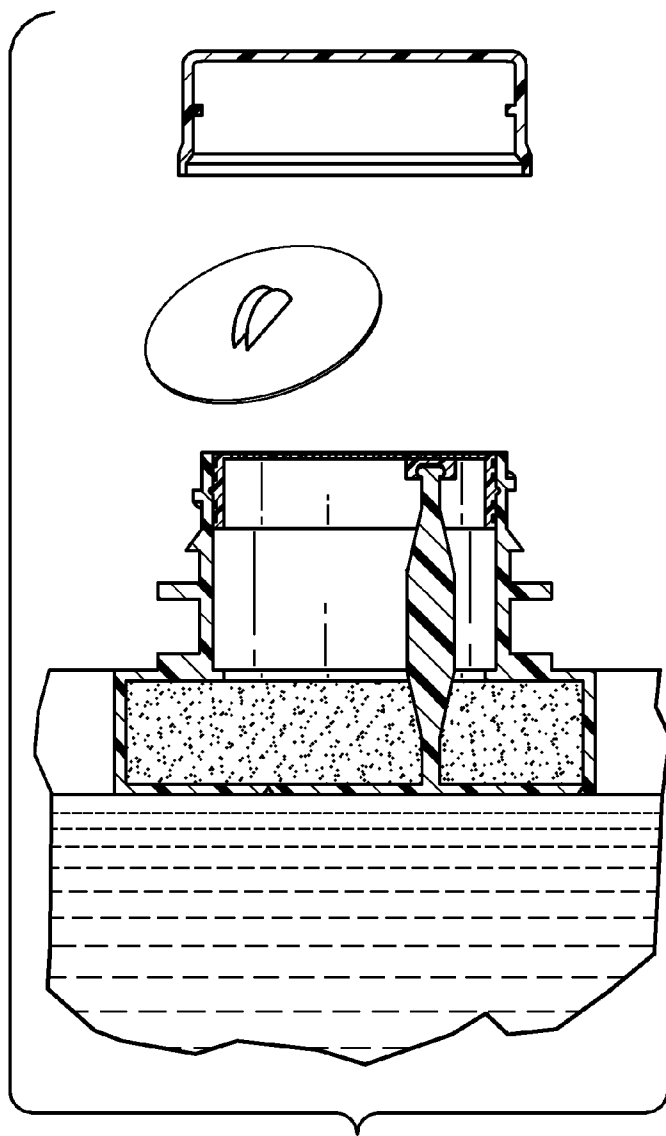


FIG. 36

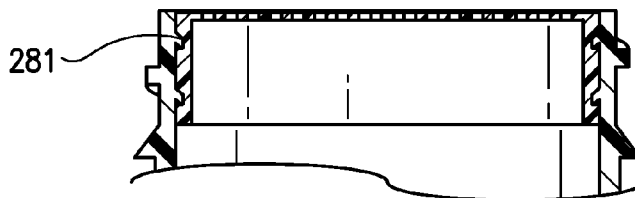


FIG. 37

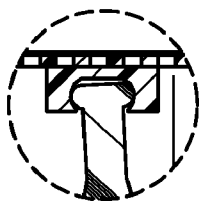


FIG. 39

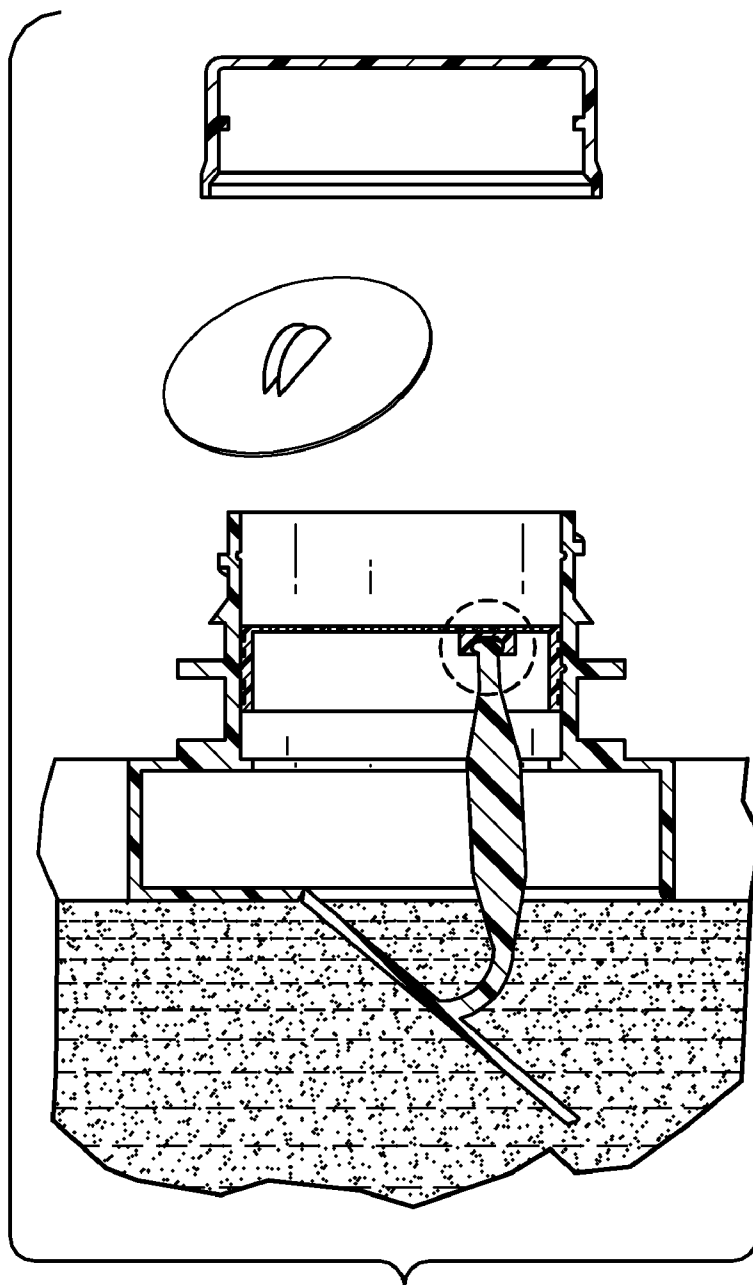


FIG. 40

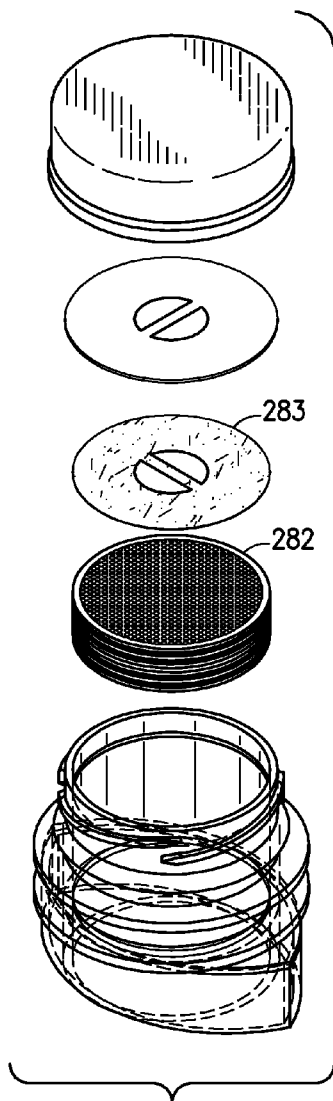


FIG. 41

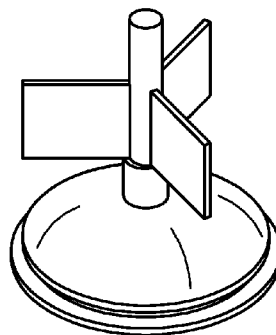


FIG. 40

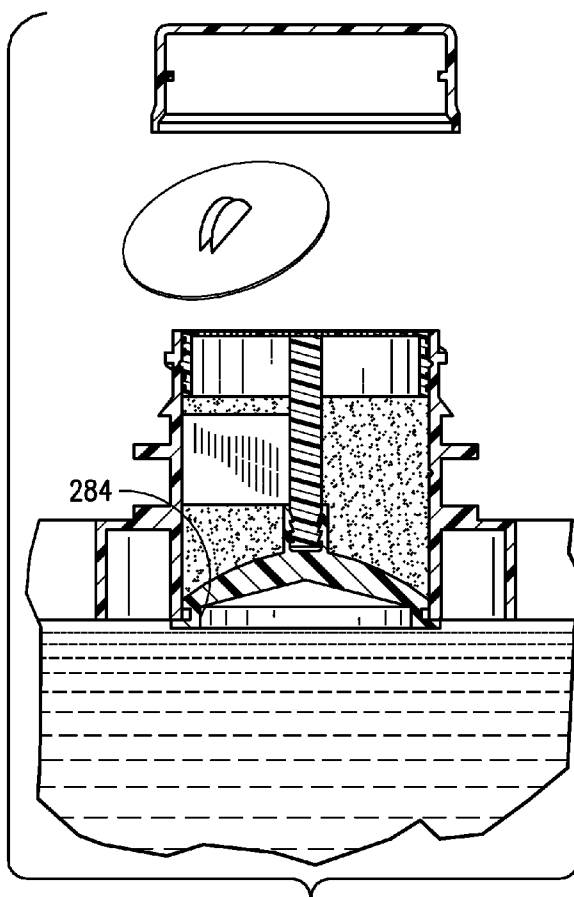


FIG. 42

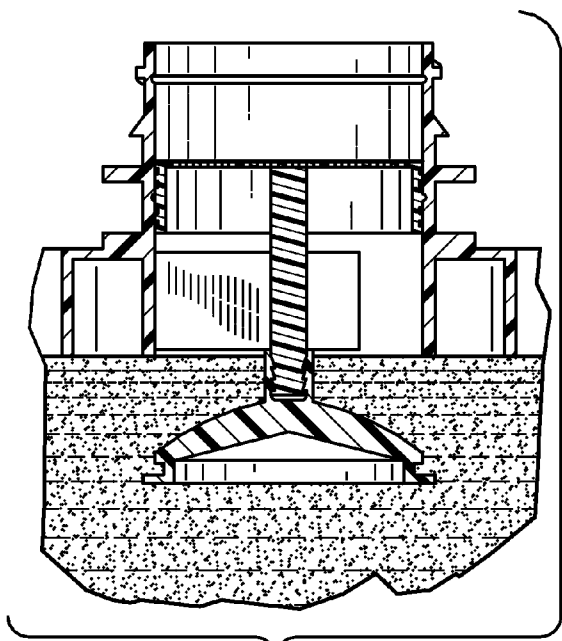


FIG. 43

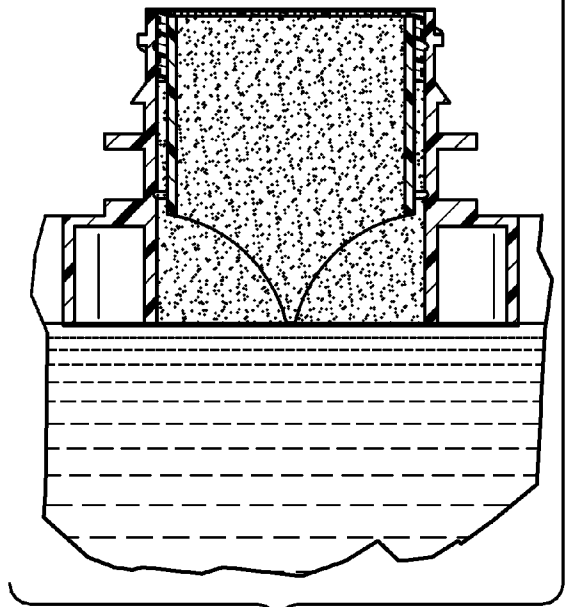


FIG. 44

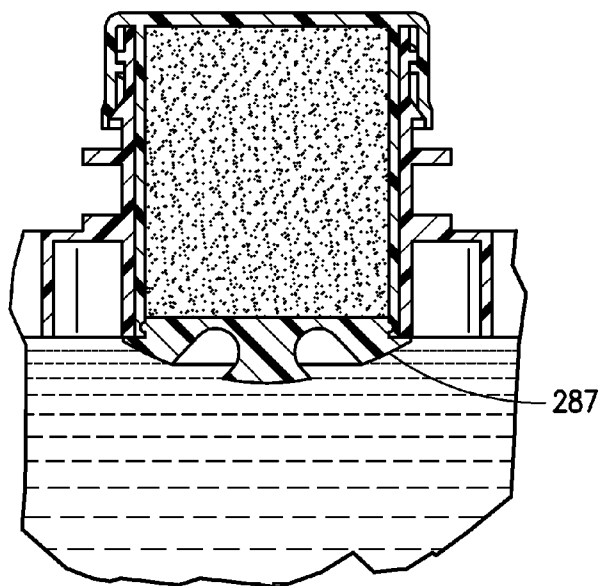


FIG. 45

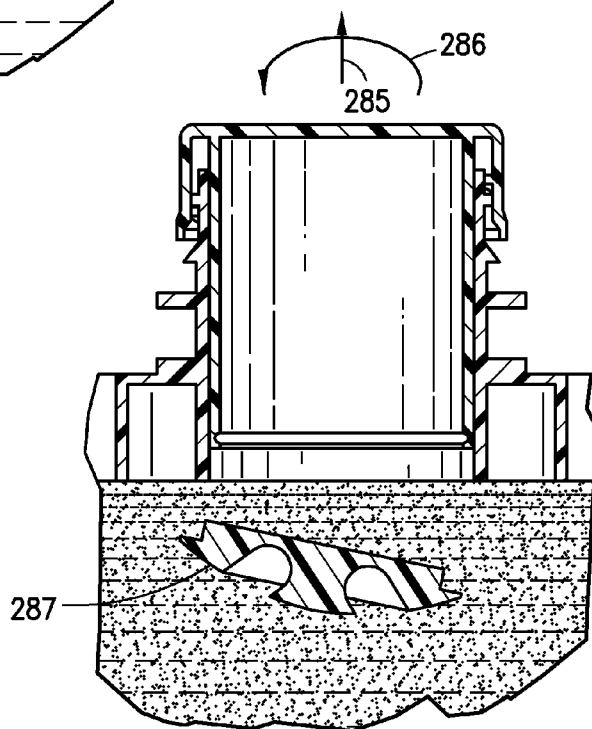
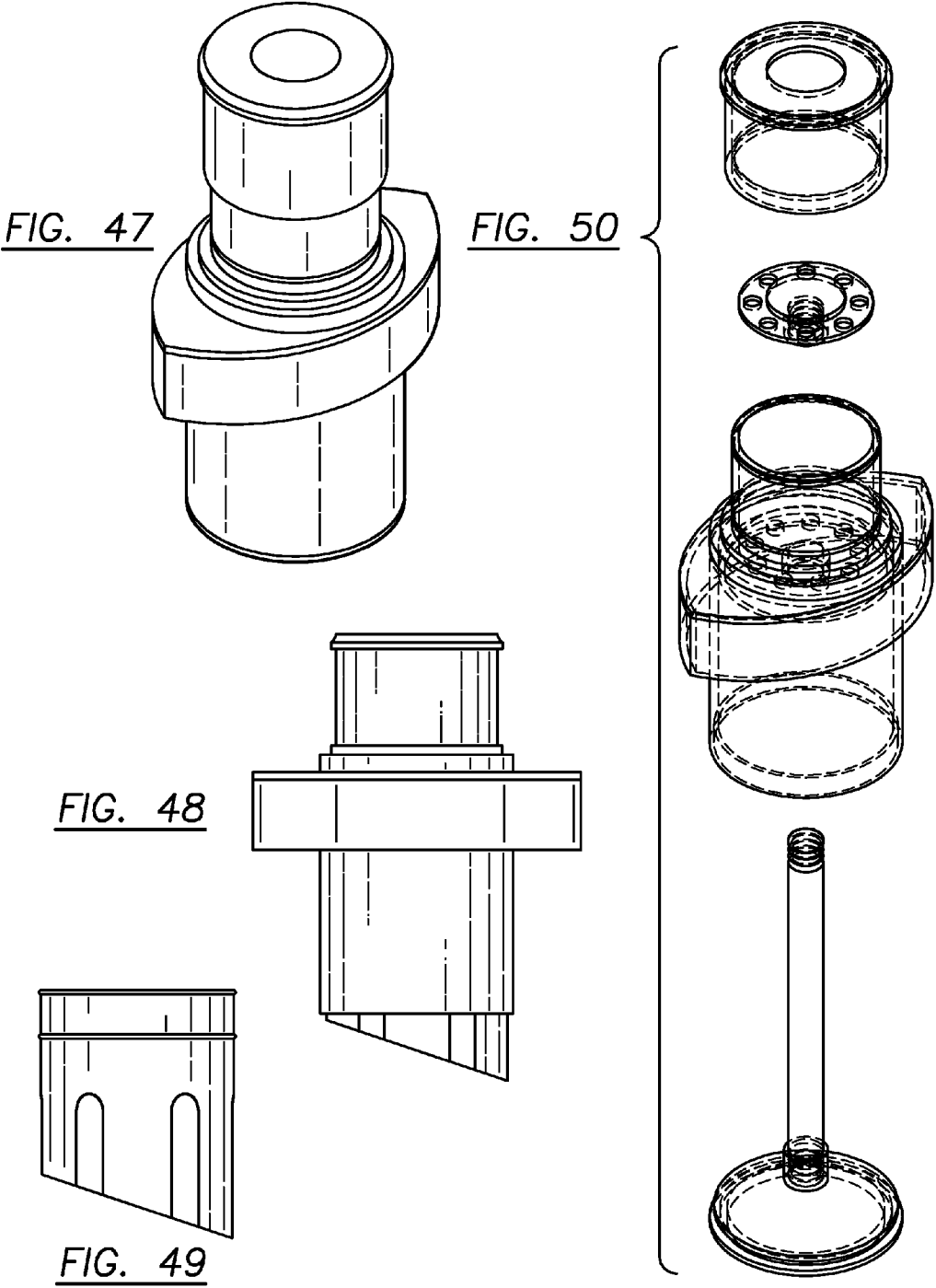


FIG. 46



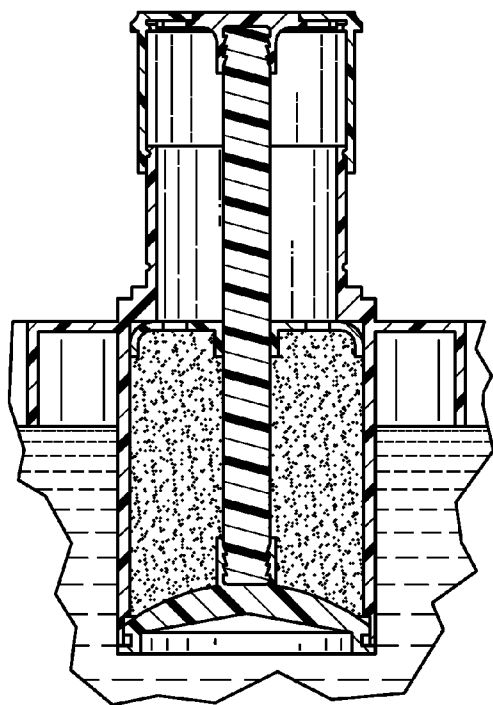


FIG. 51

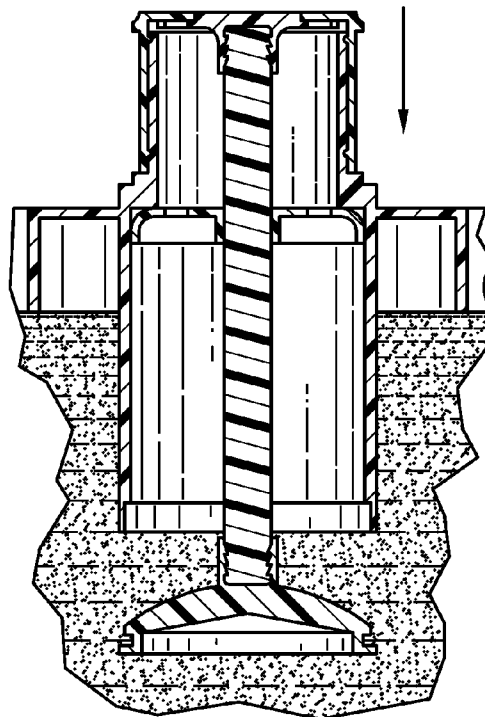


FIG. 52

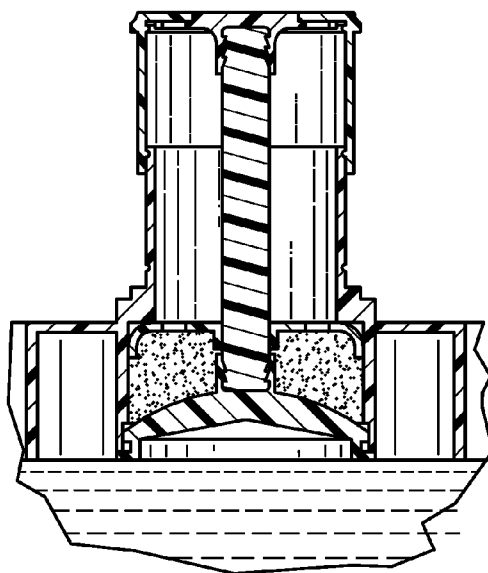


FIG. 53

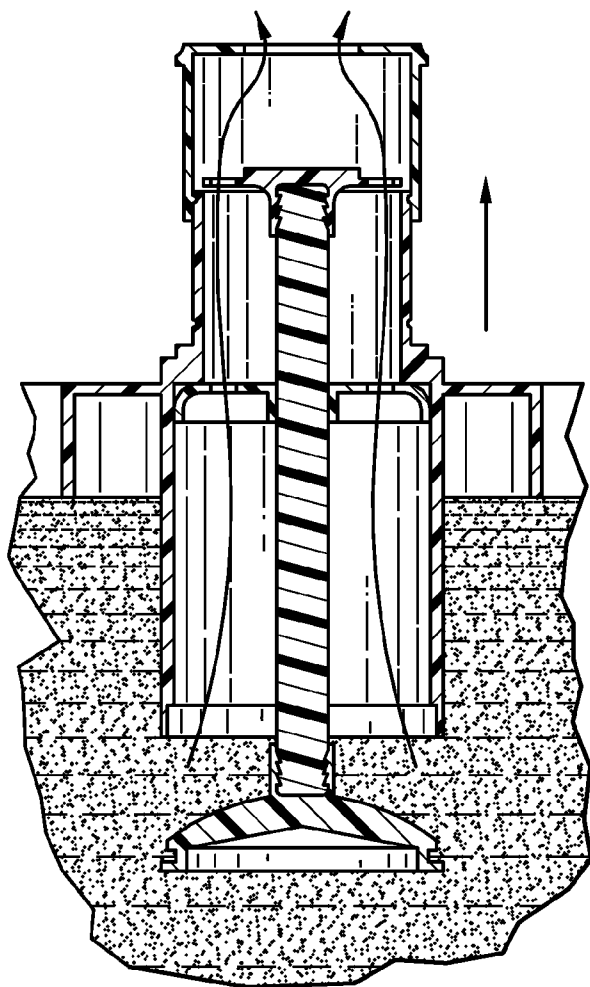


FIG. 54

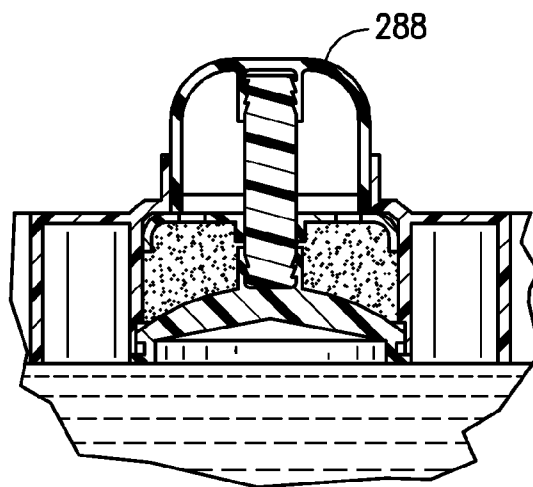


FIG. 55

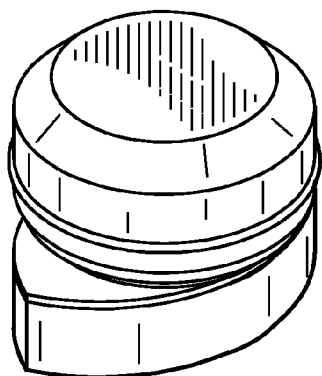


FIG. 56

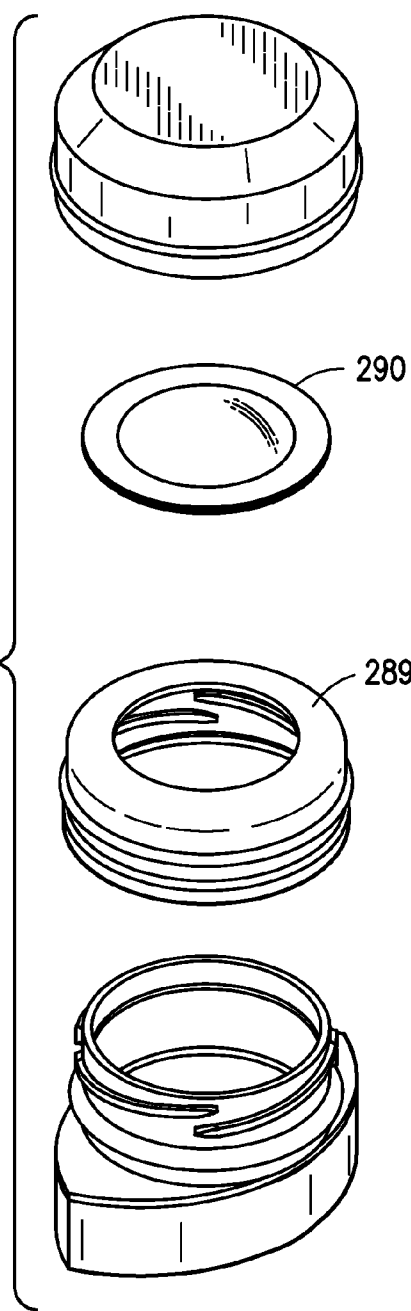


FIG. 57

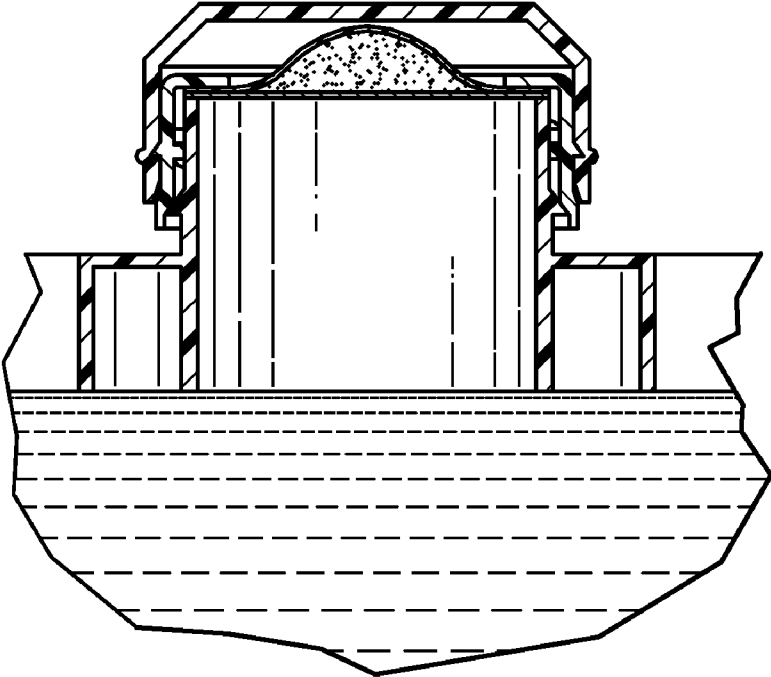


FIG. 58

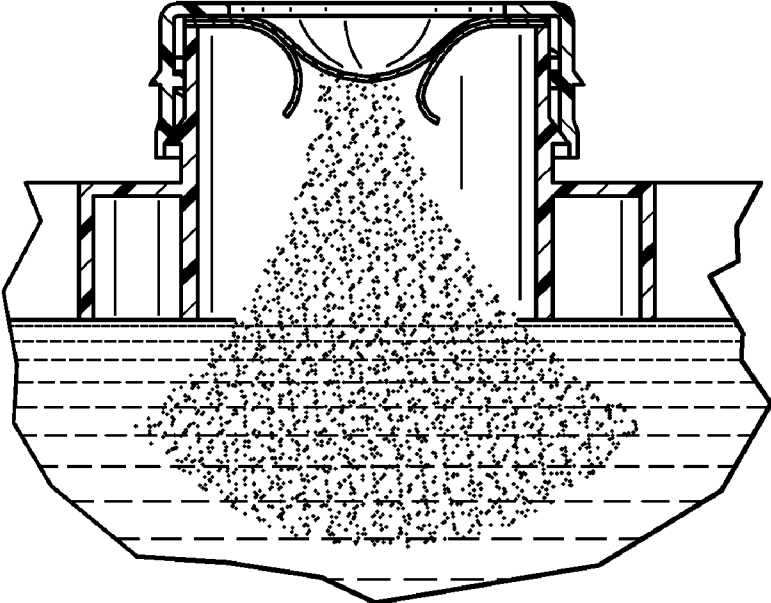


FIG. 59

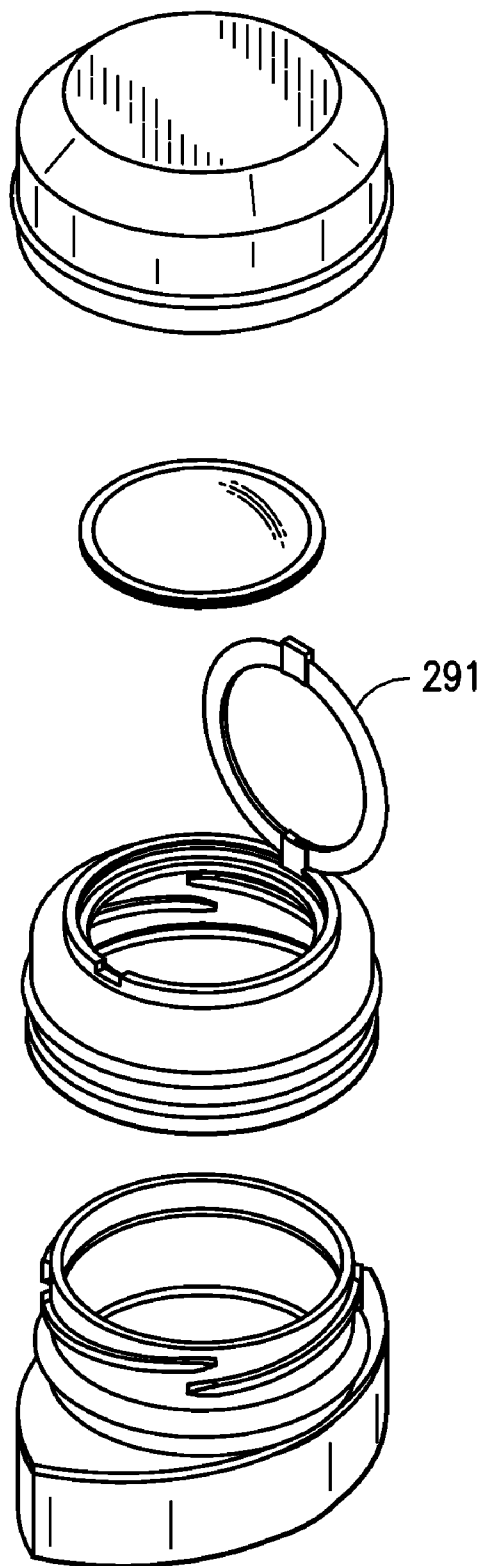


FIG. 60

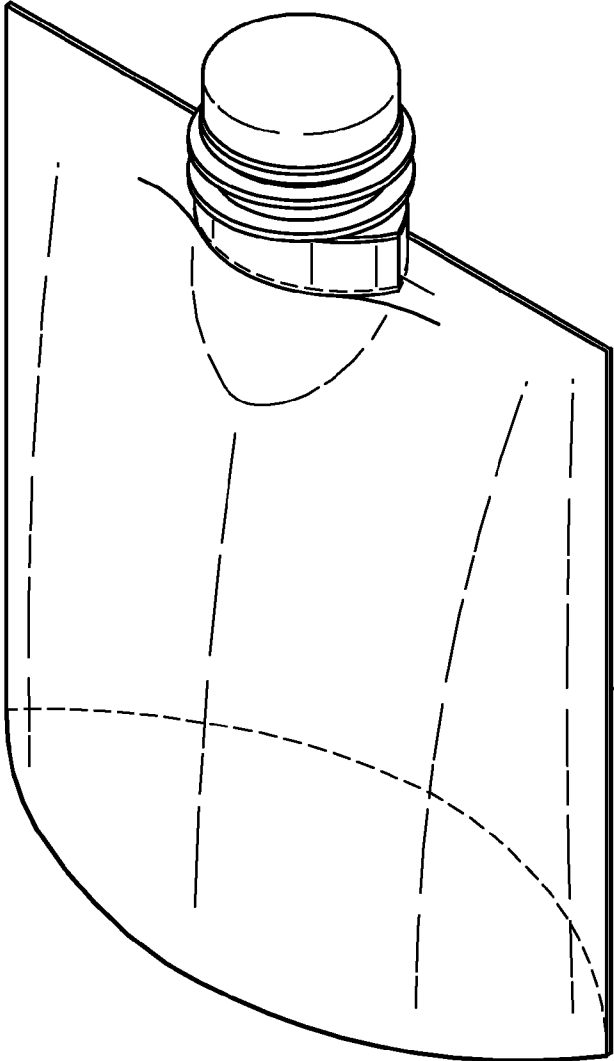
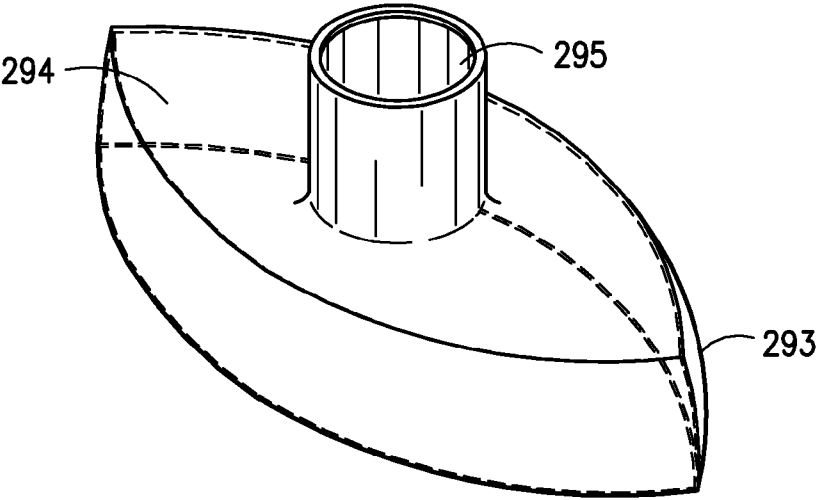


FIG. 61



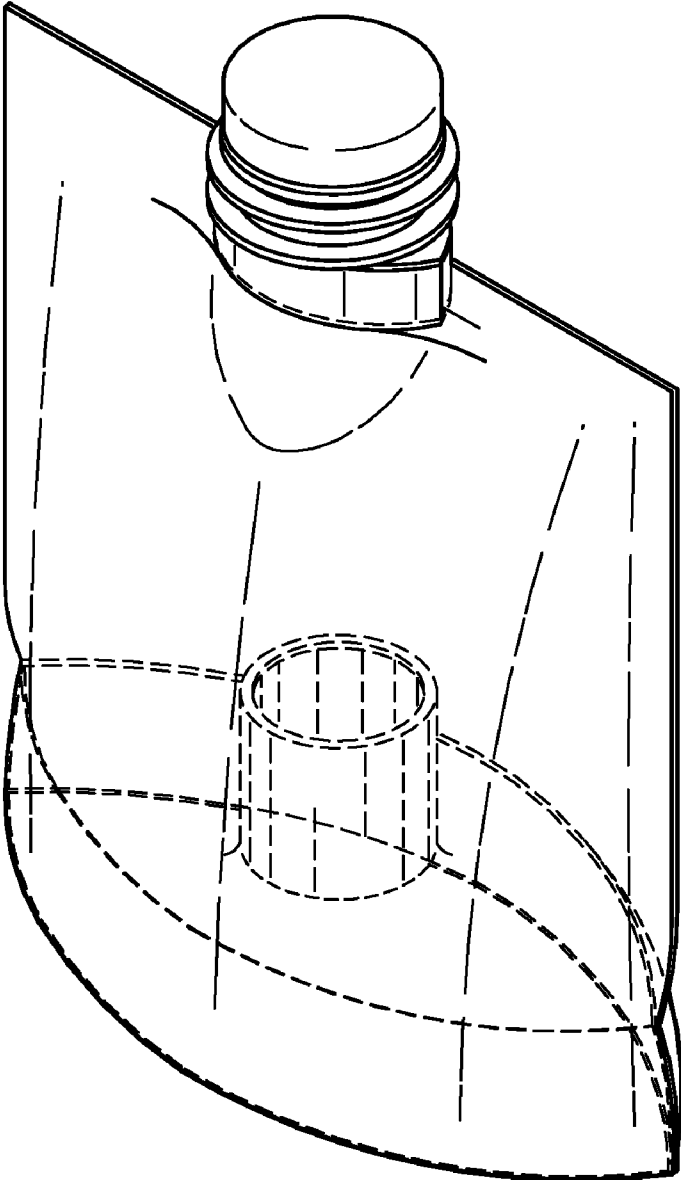


FIG. 62

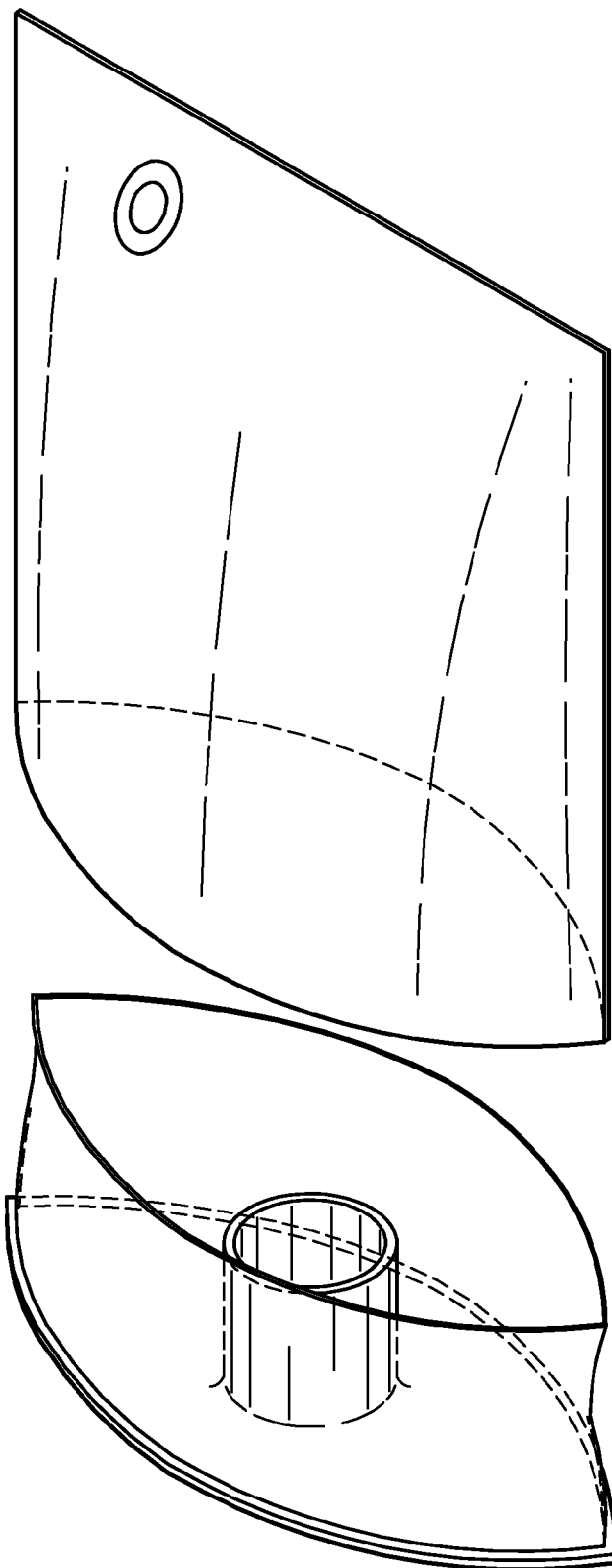


FIG. 63

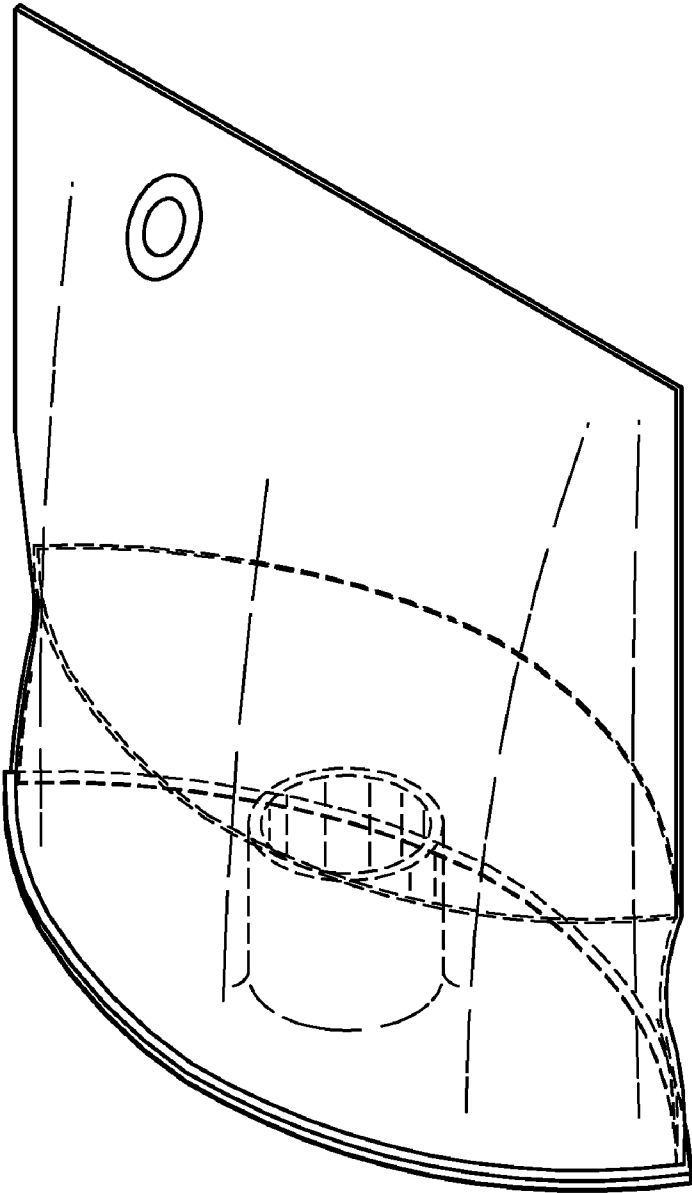
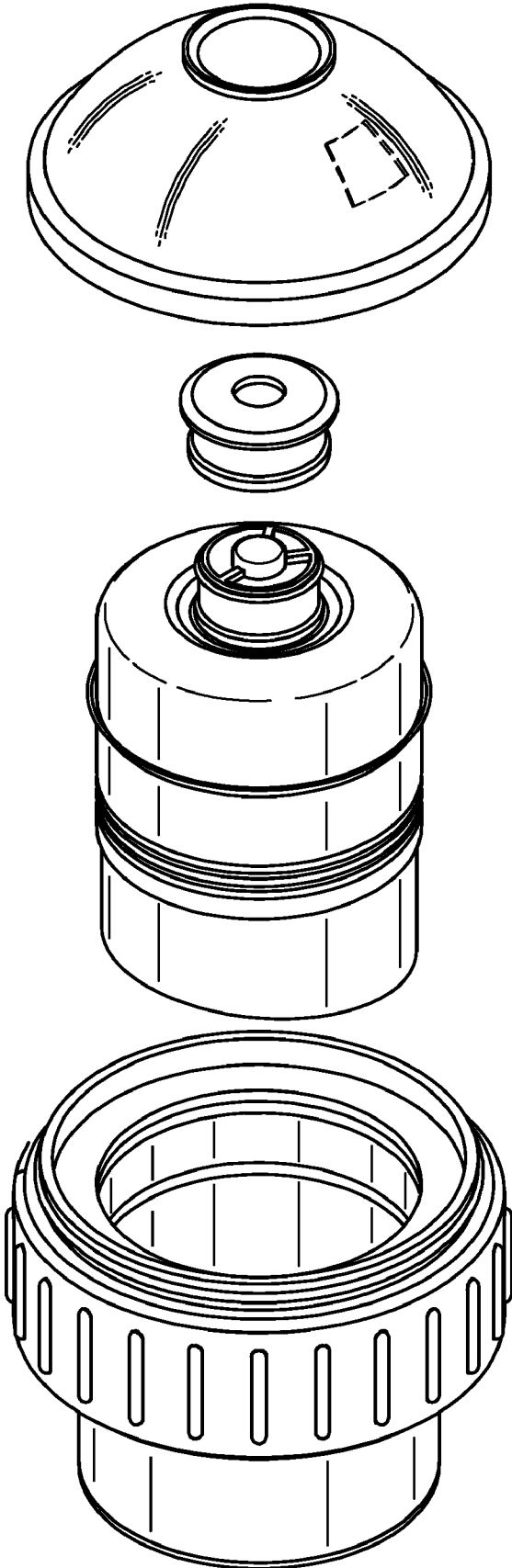
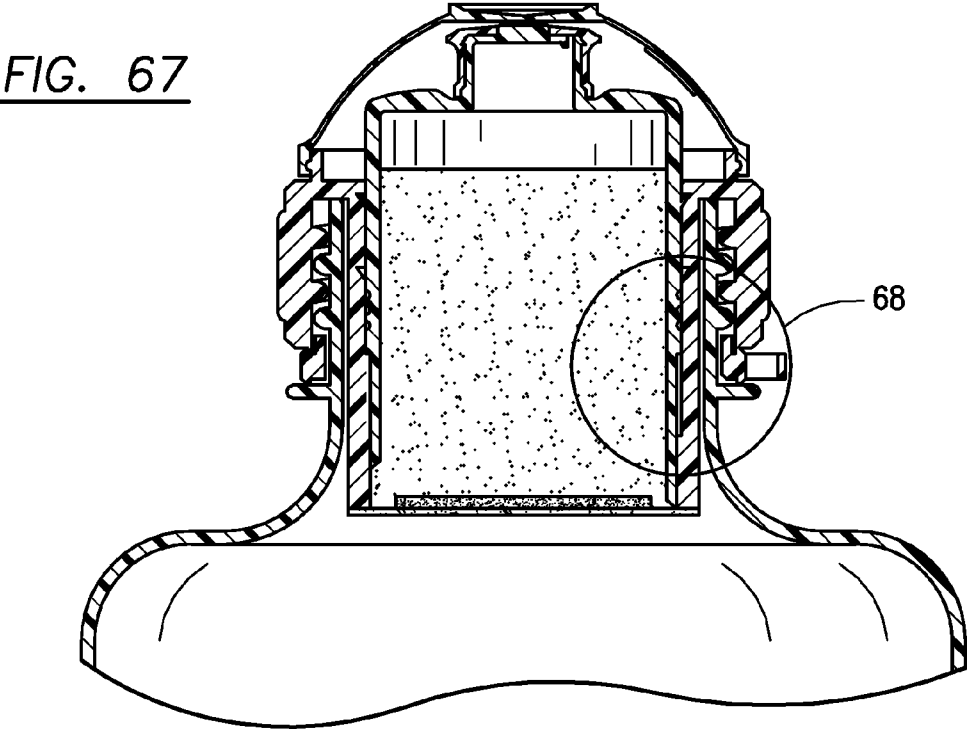
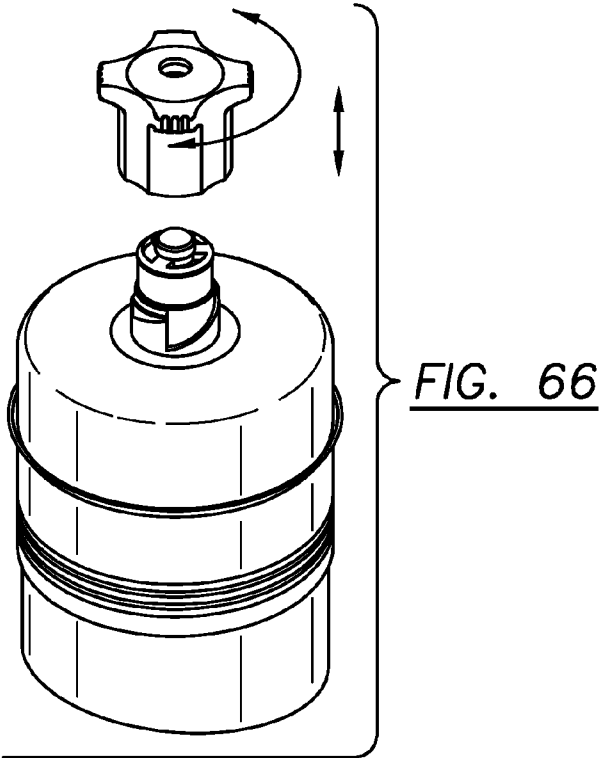


FIG. 64

FIG. 65





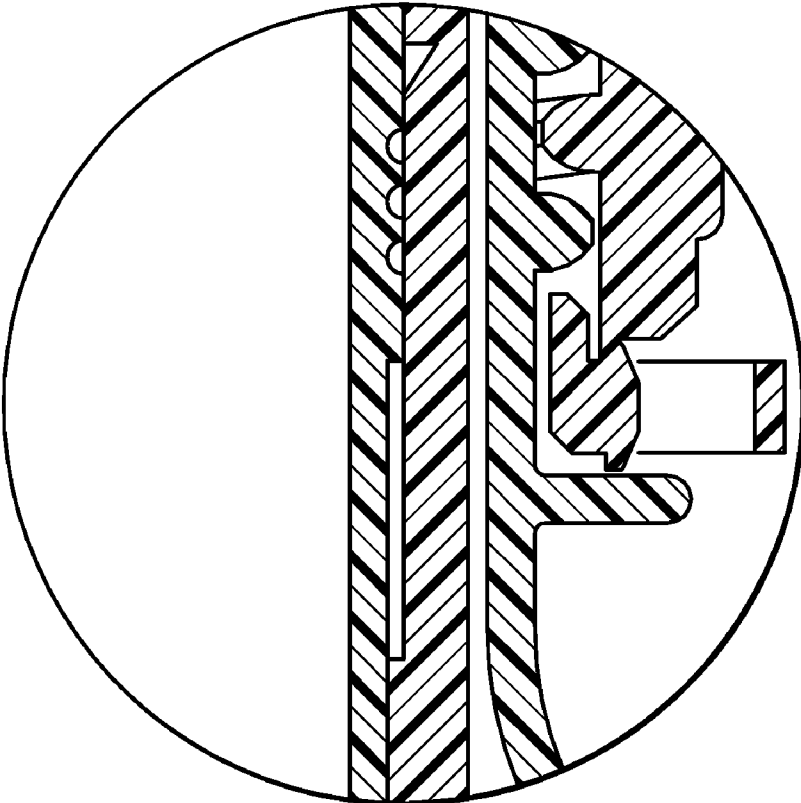


FIG. 68

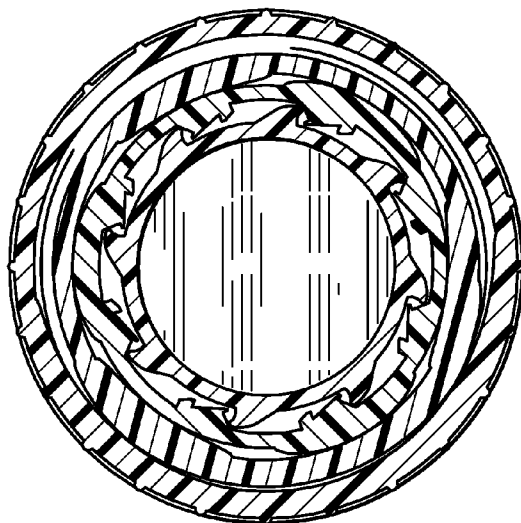


FIG. 69

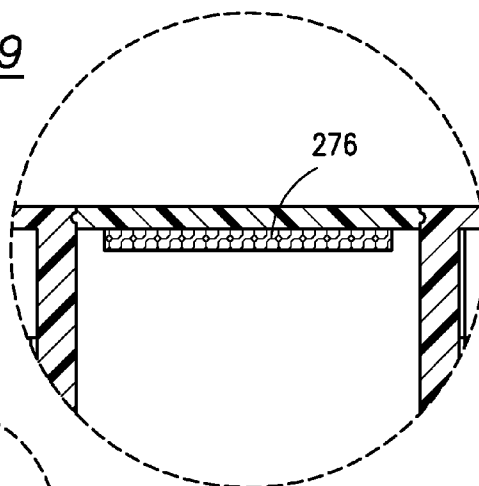


FIG. 70

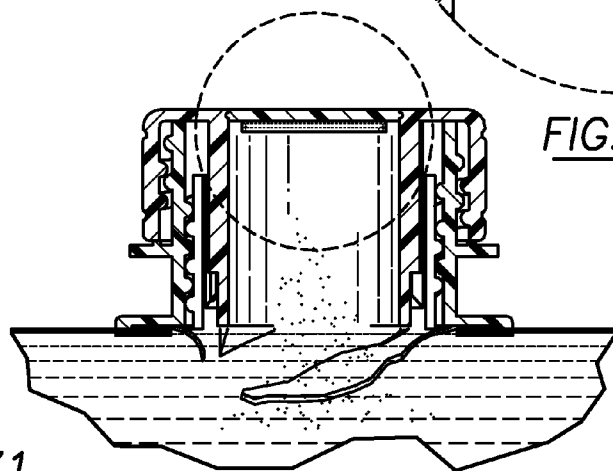


FIG. 71

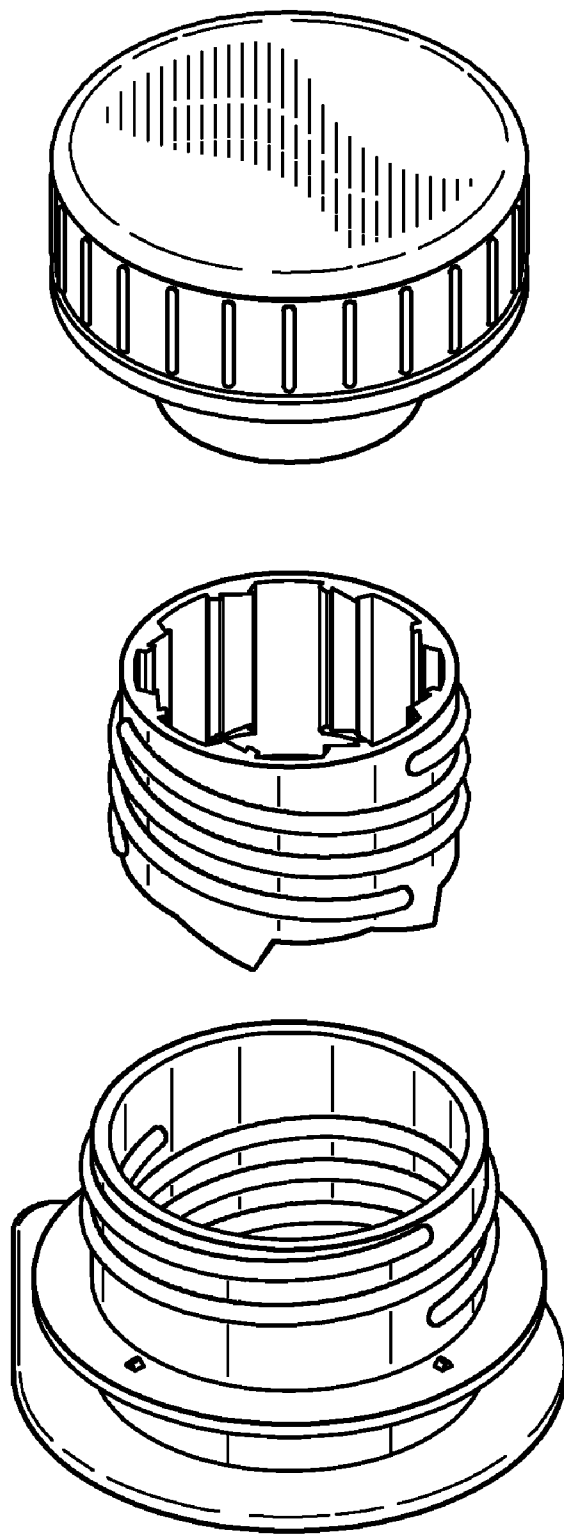


FIG. 72

FIG. 73

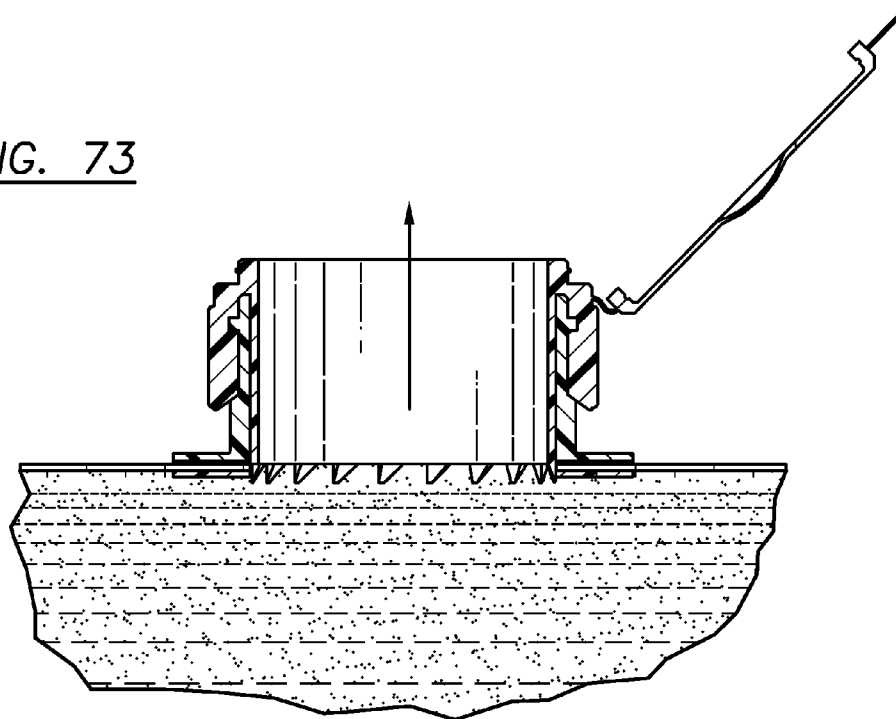
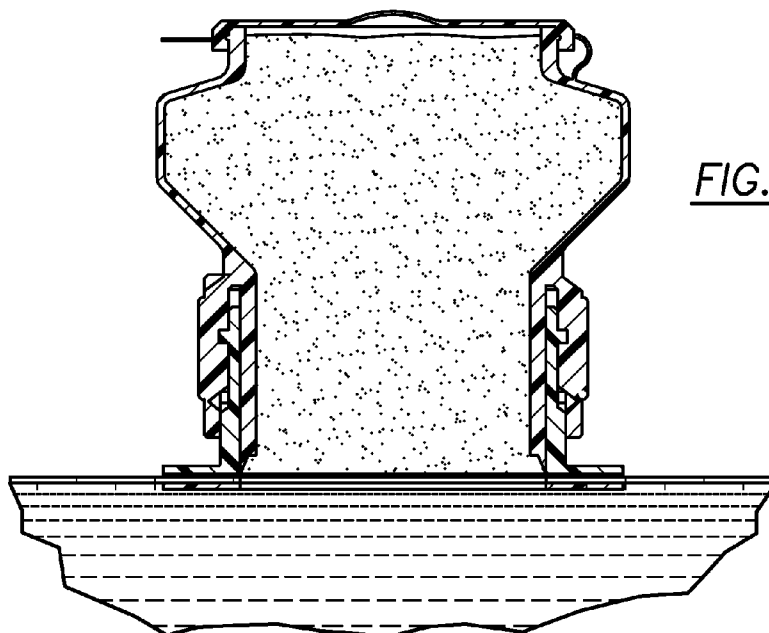


FIG. 74



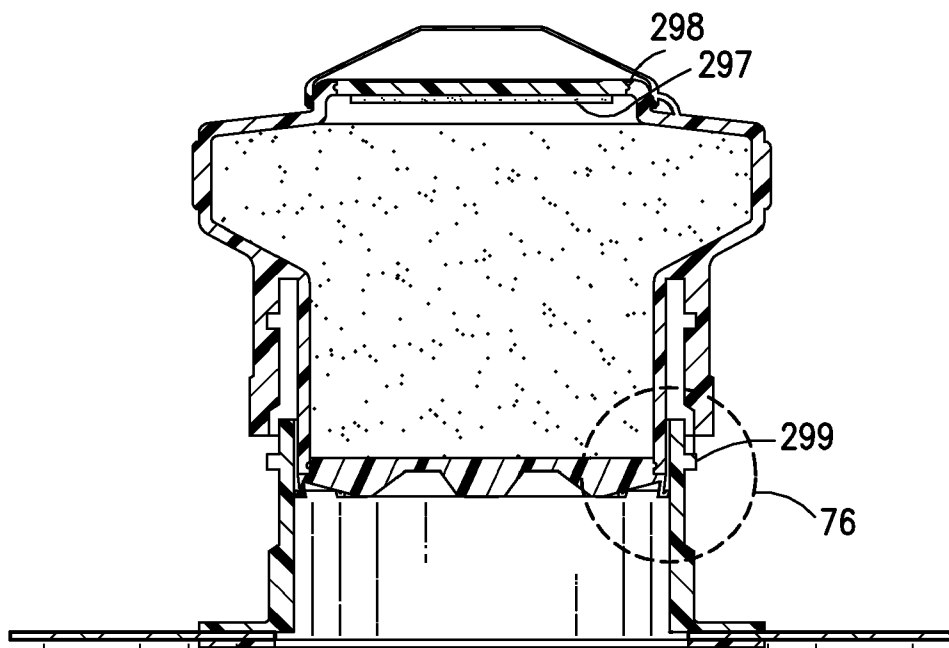


FIG. 75

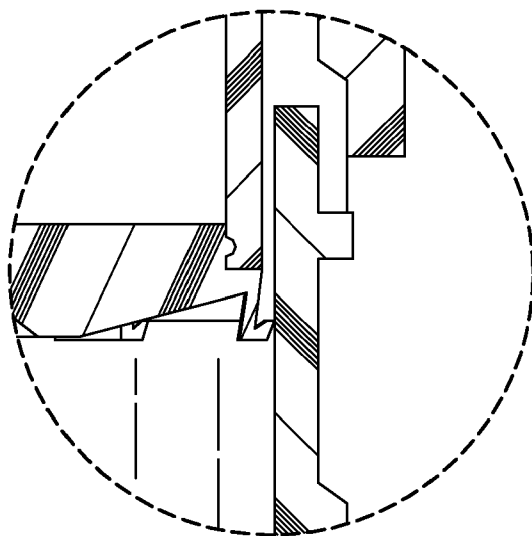


FIG. 76

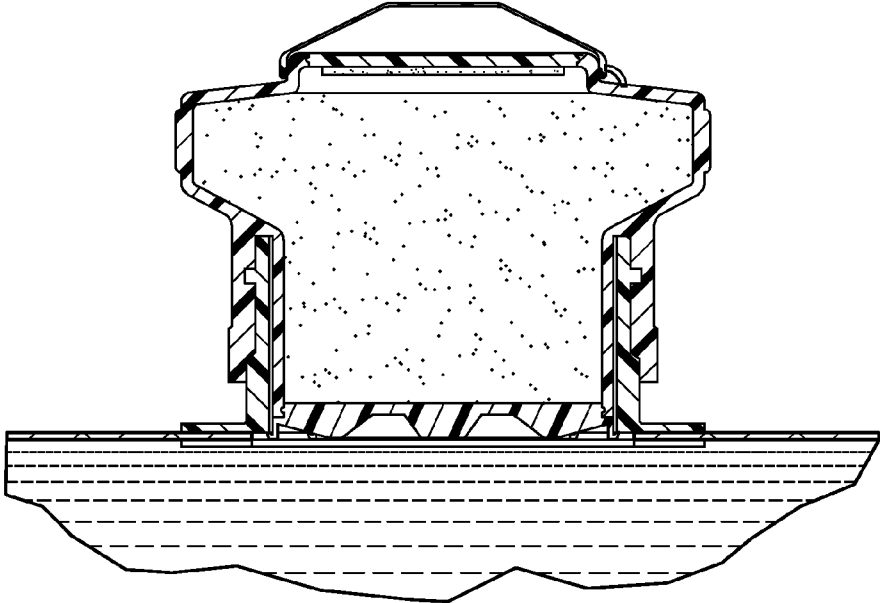


FIG. 77

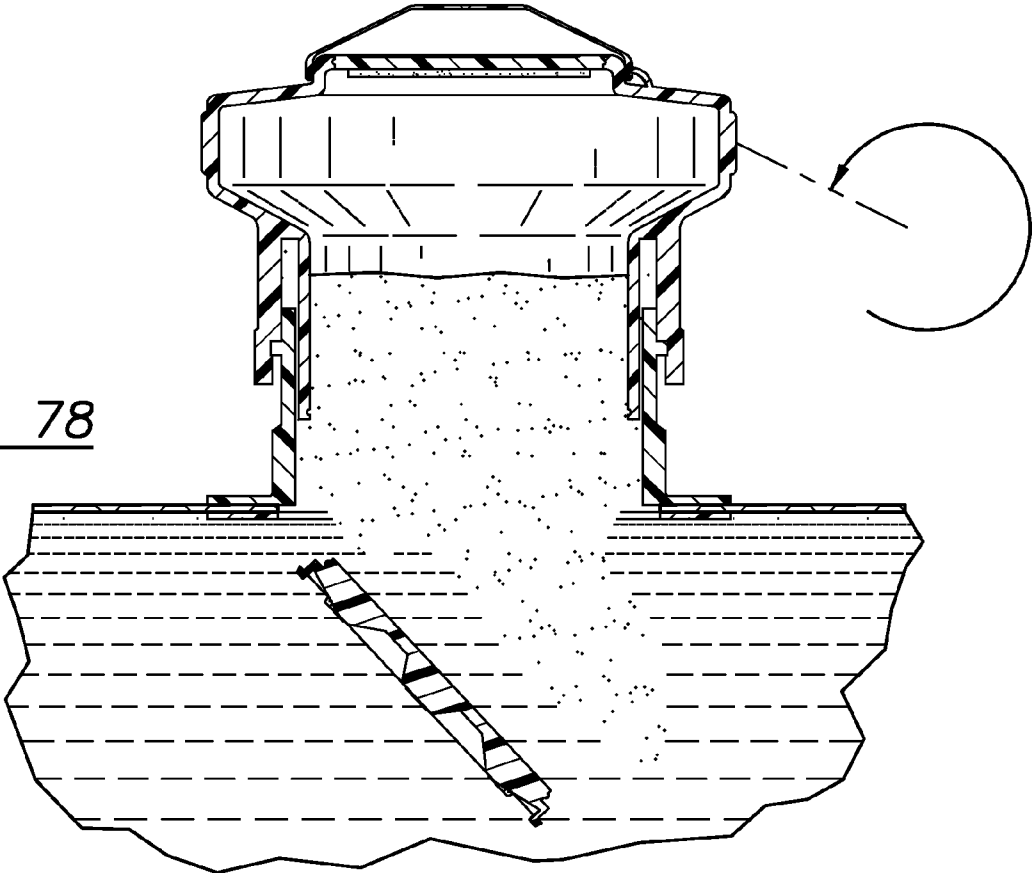


FIG. 78

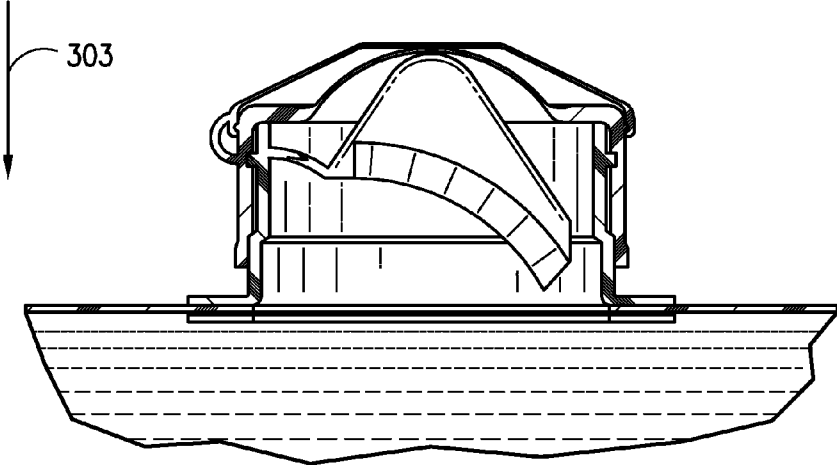
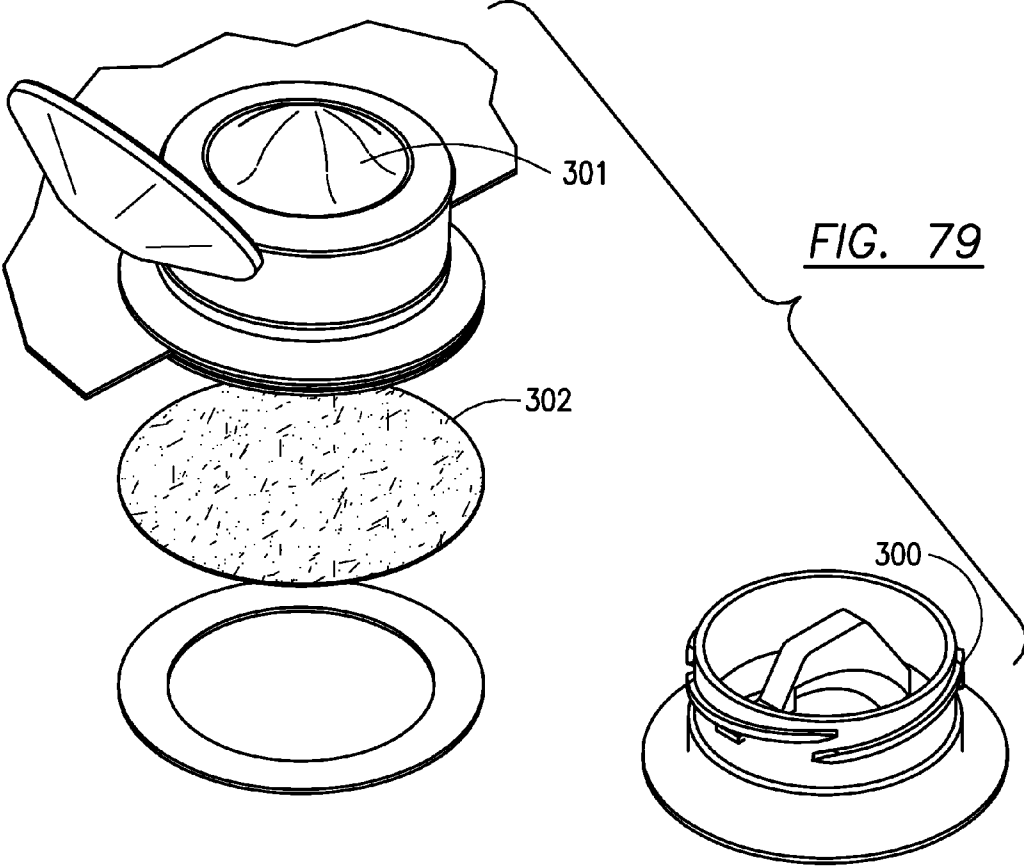


FIG. 80

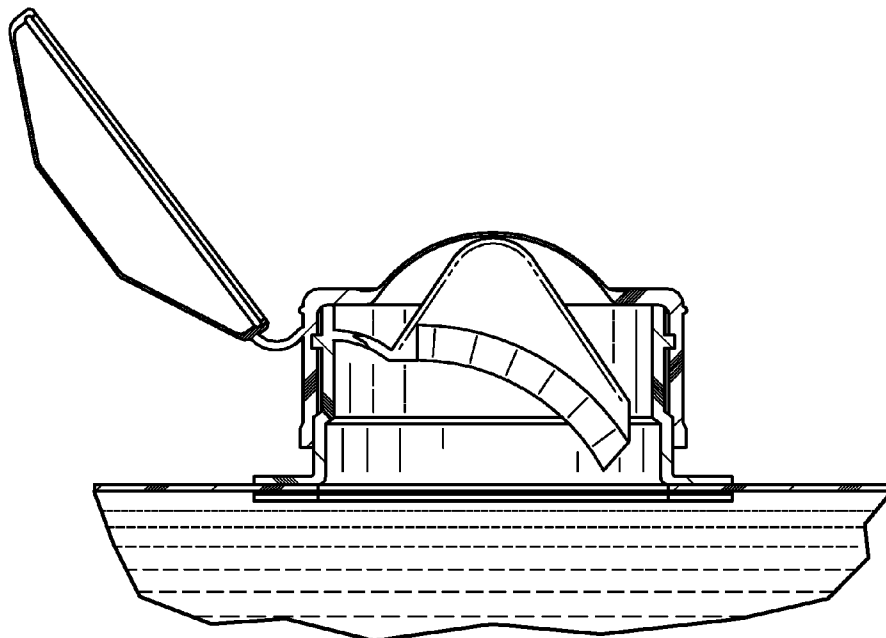


FIG. 81

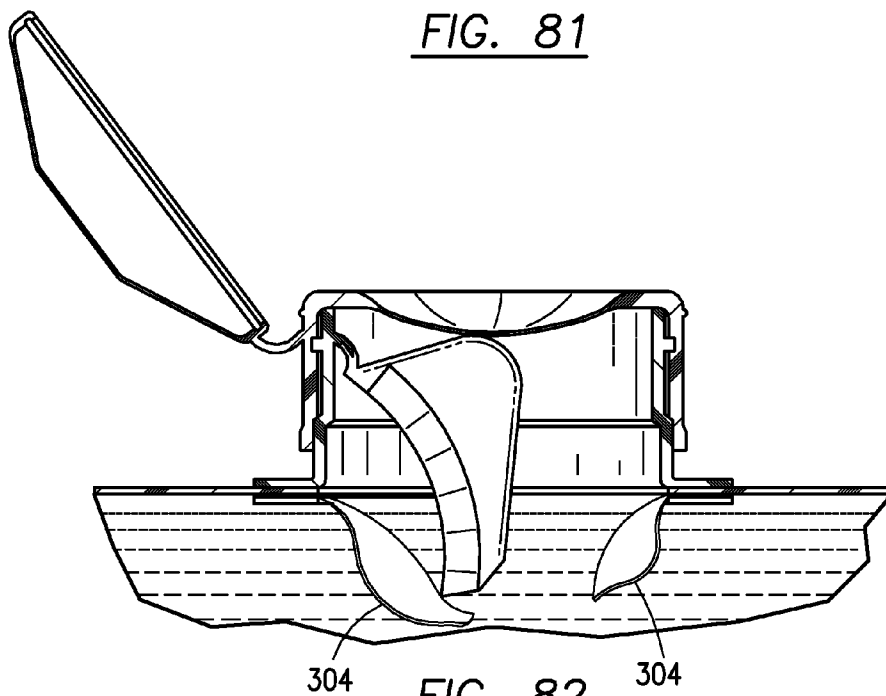


FIG. 82

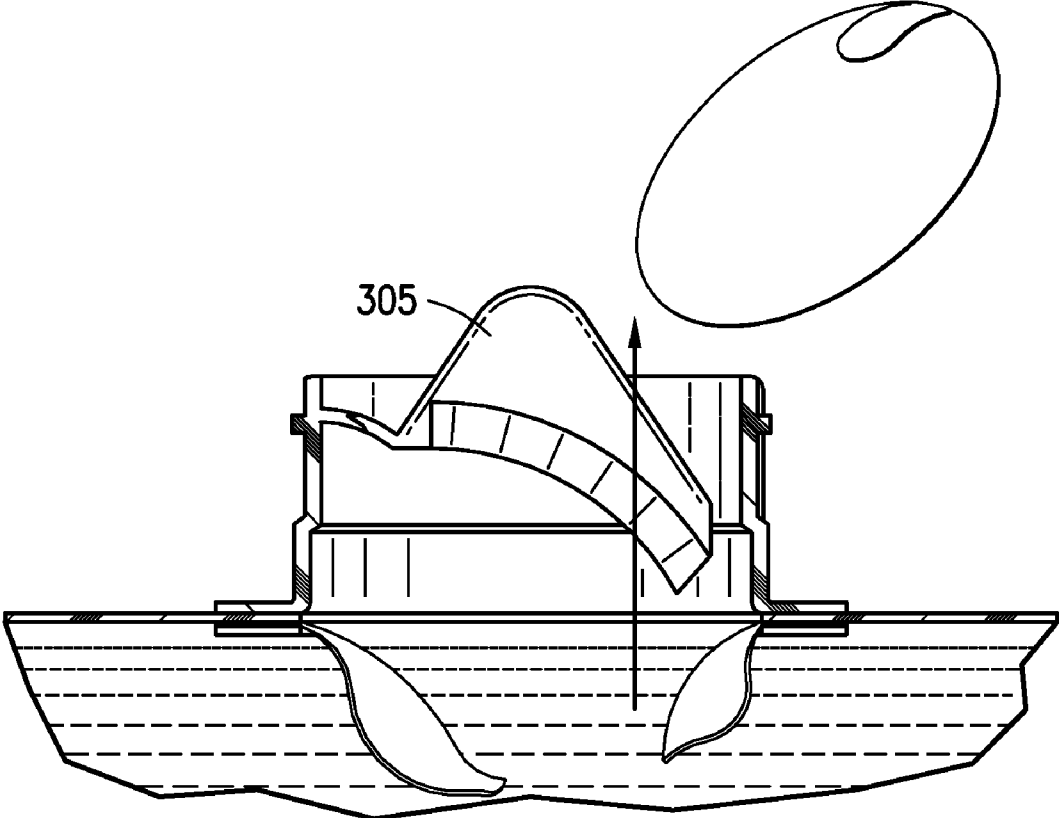


FIG. 83

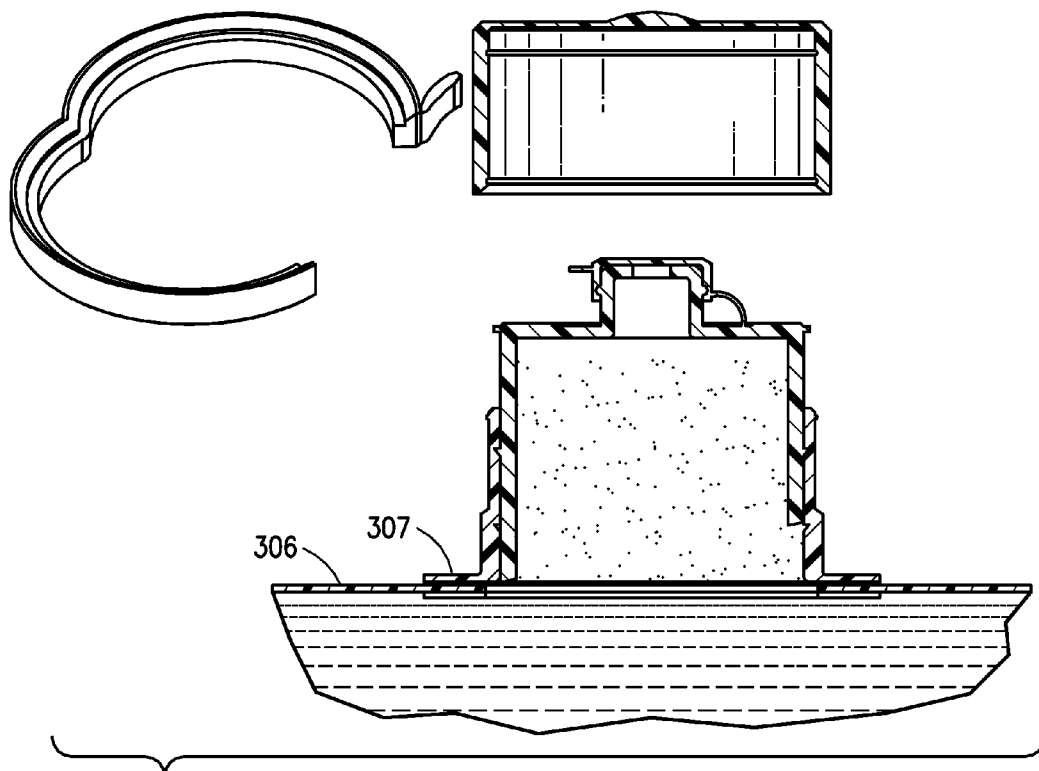


FIG. 84

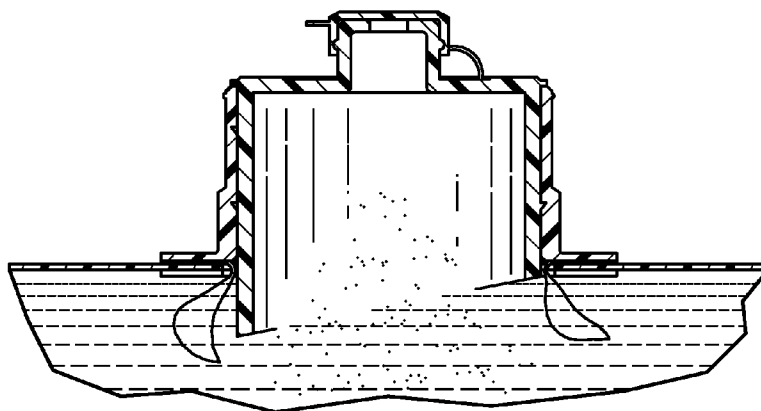


FIG. 85

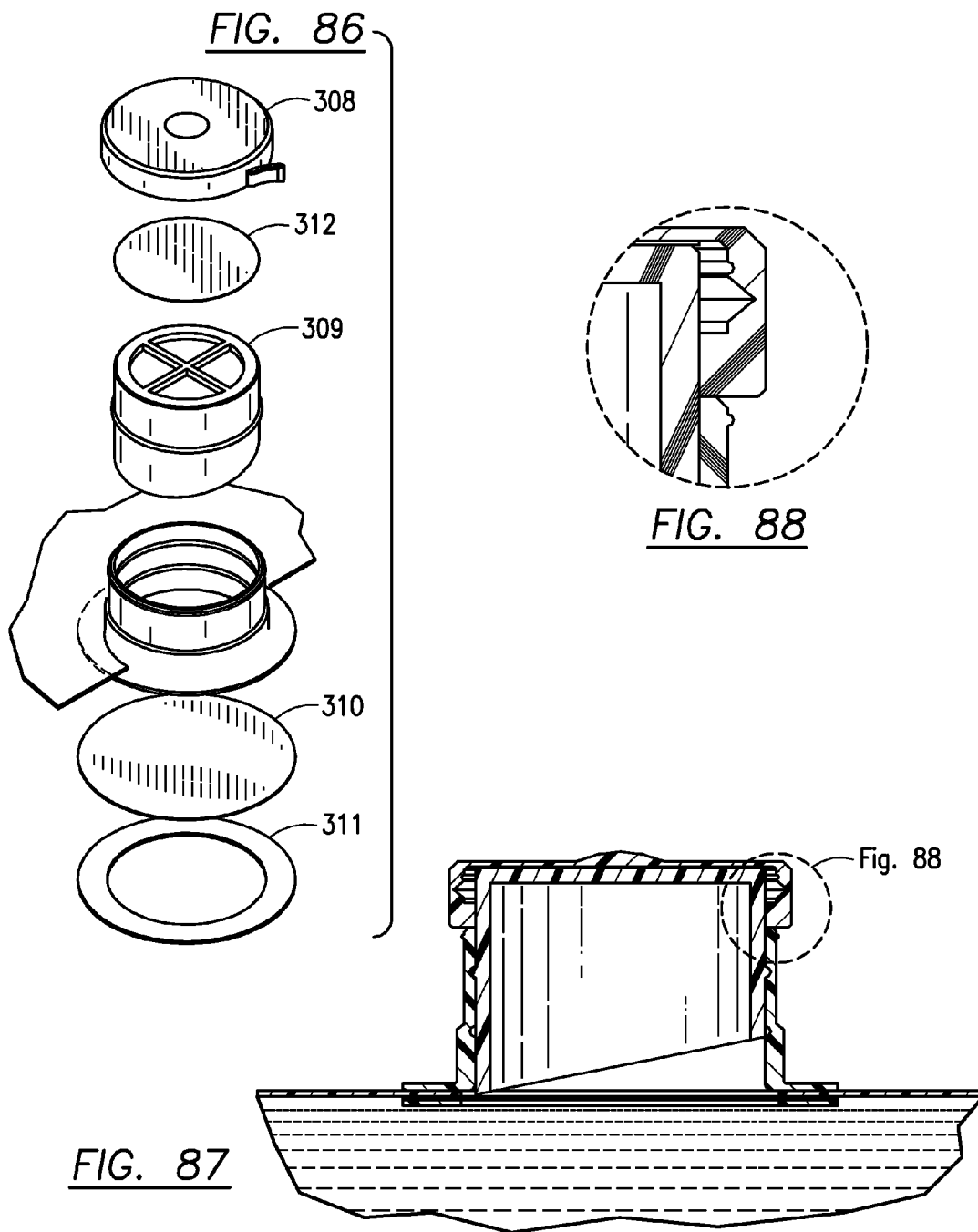


FIG. 89

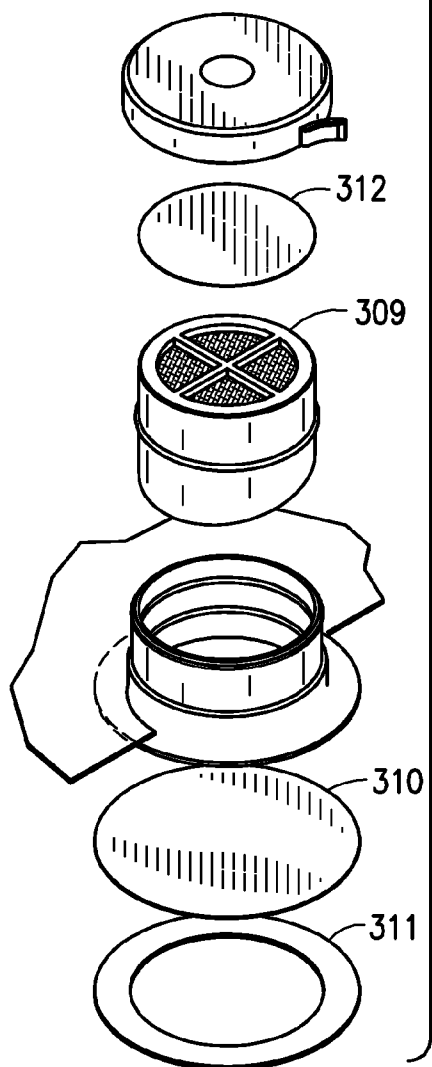


FIG. 90

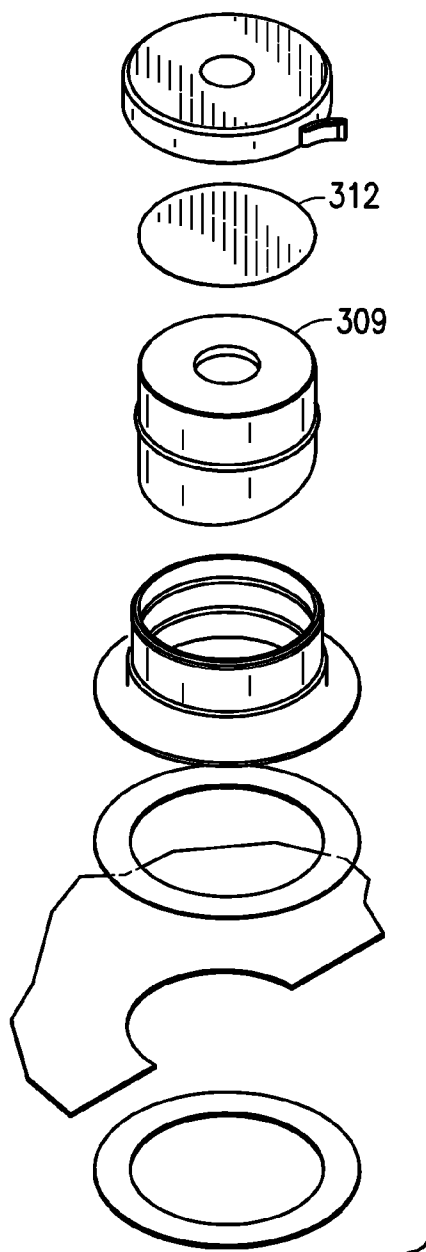


FIG. 91

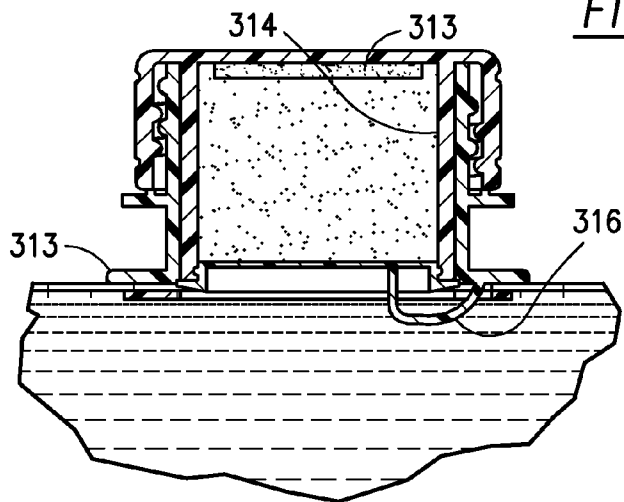


FIG. 92

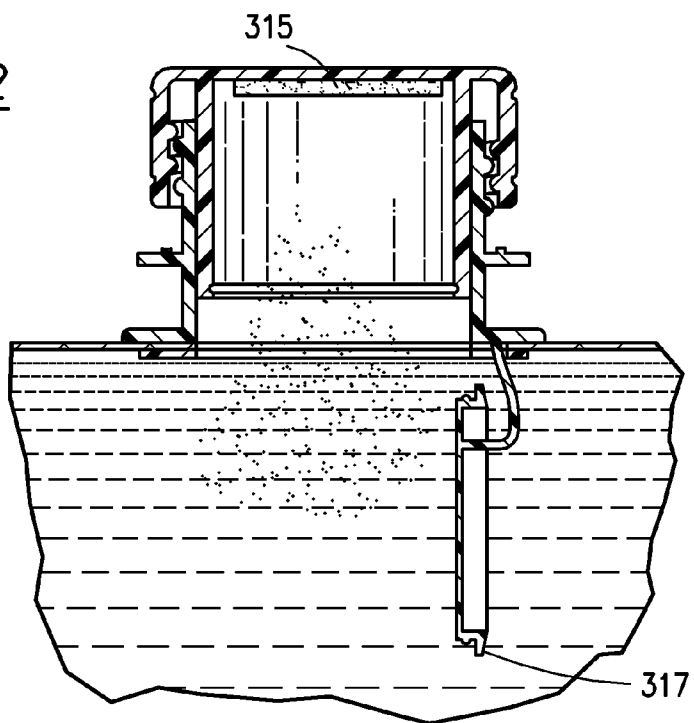


FIG. 93

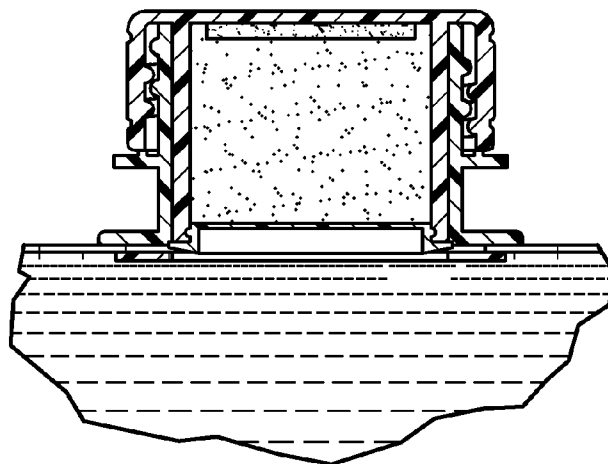


FIG. 94

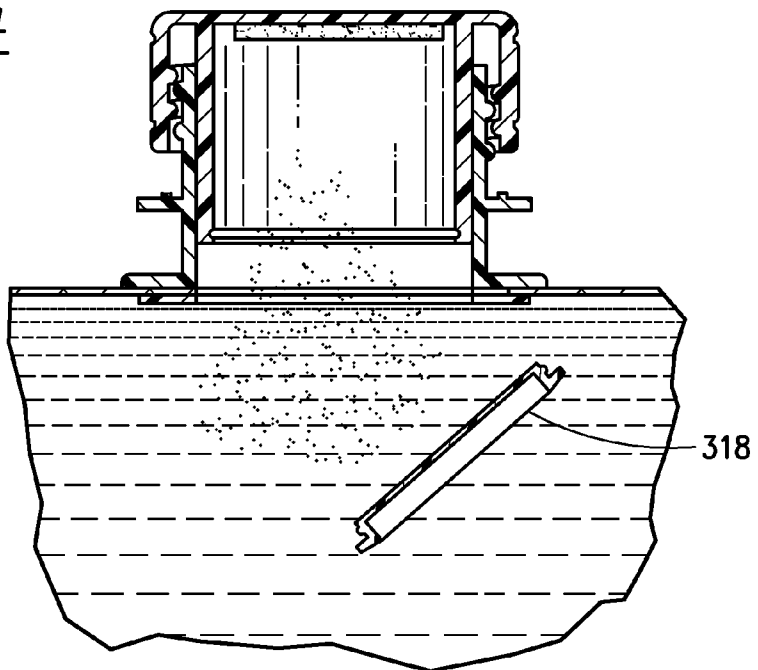


FIG. 95

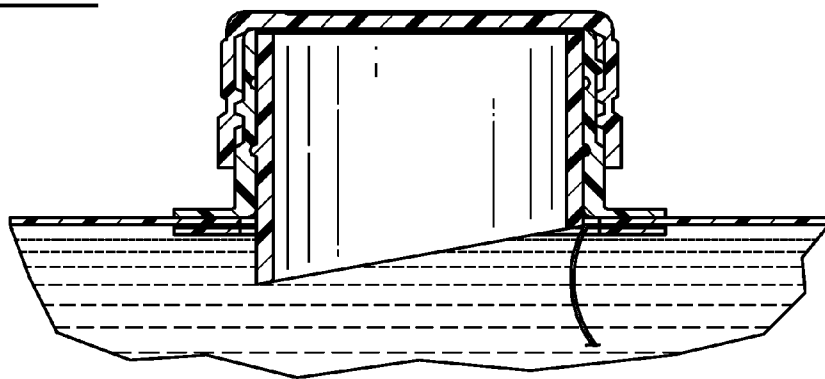
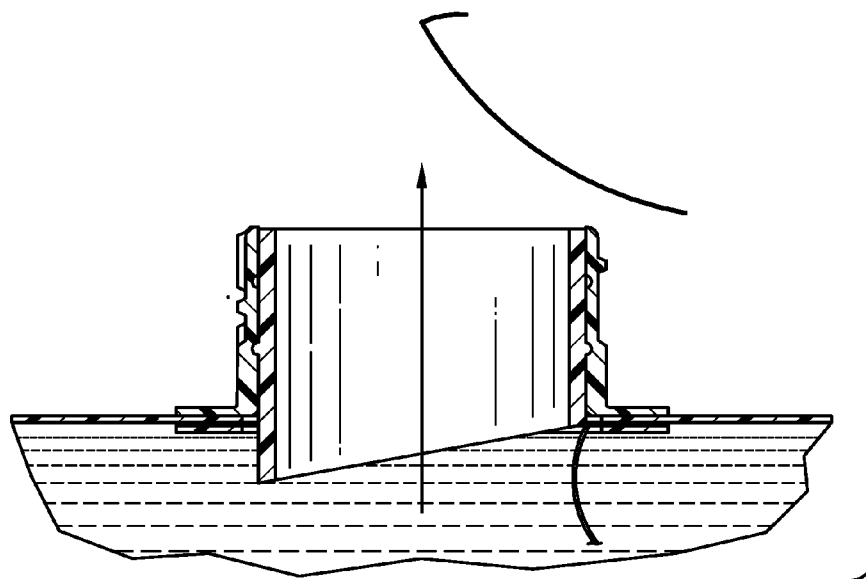


FIG. 96



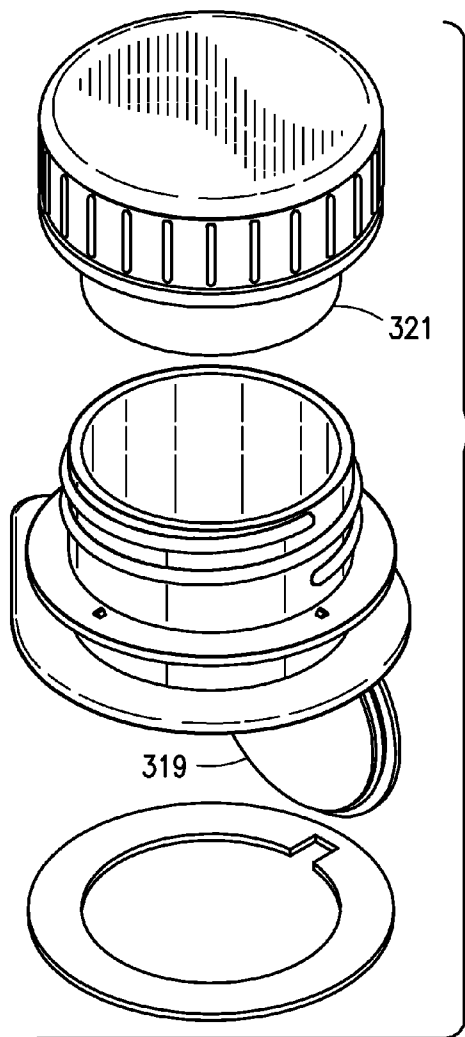


FIG. 97

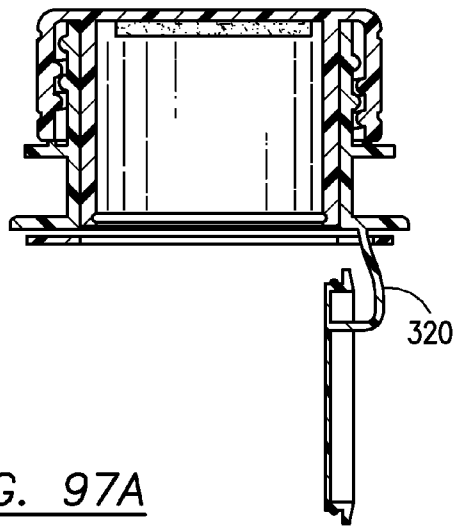


FIG. 97A

FIG. 98

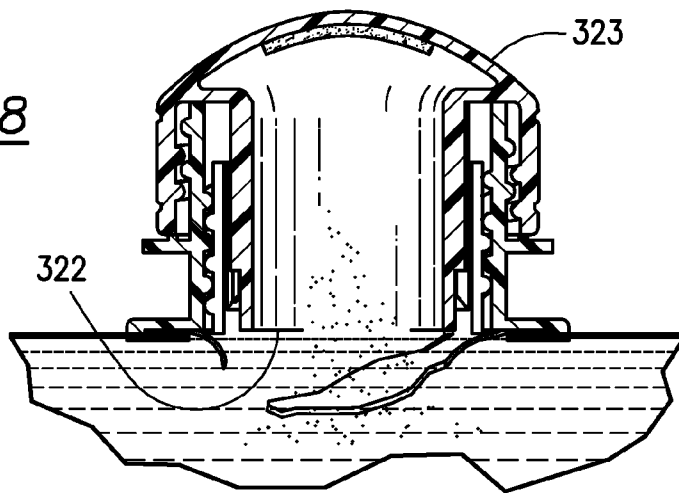
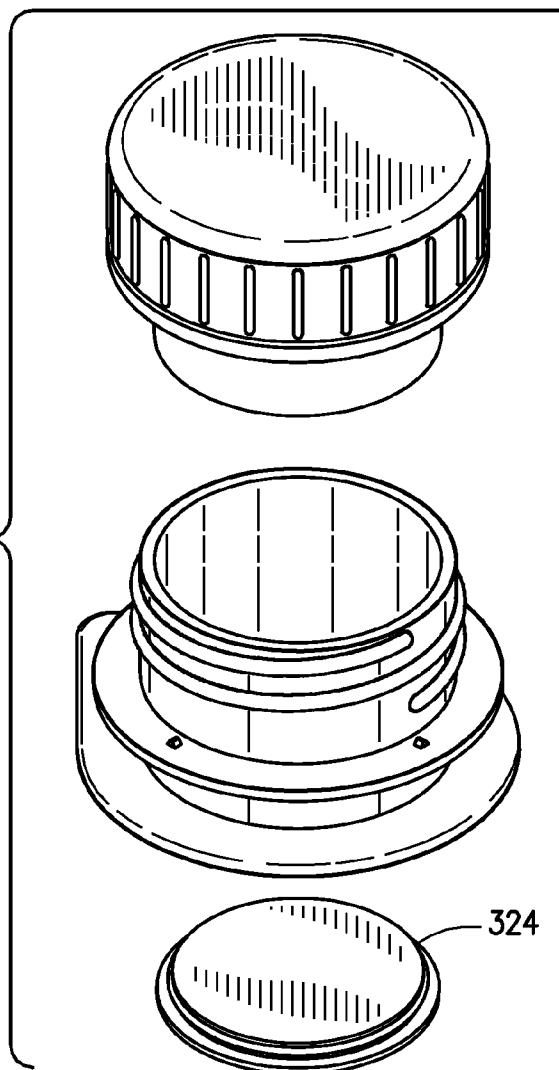


FIG. 98A



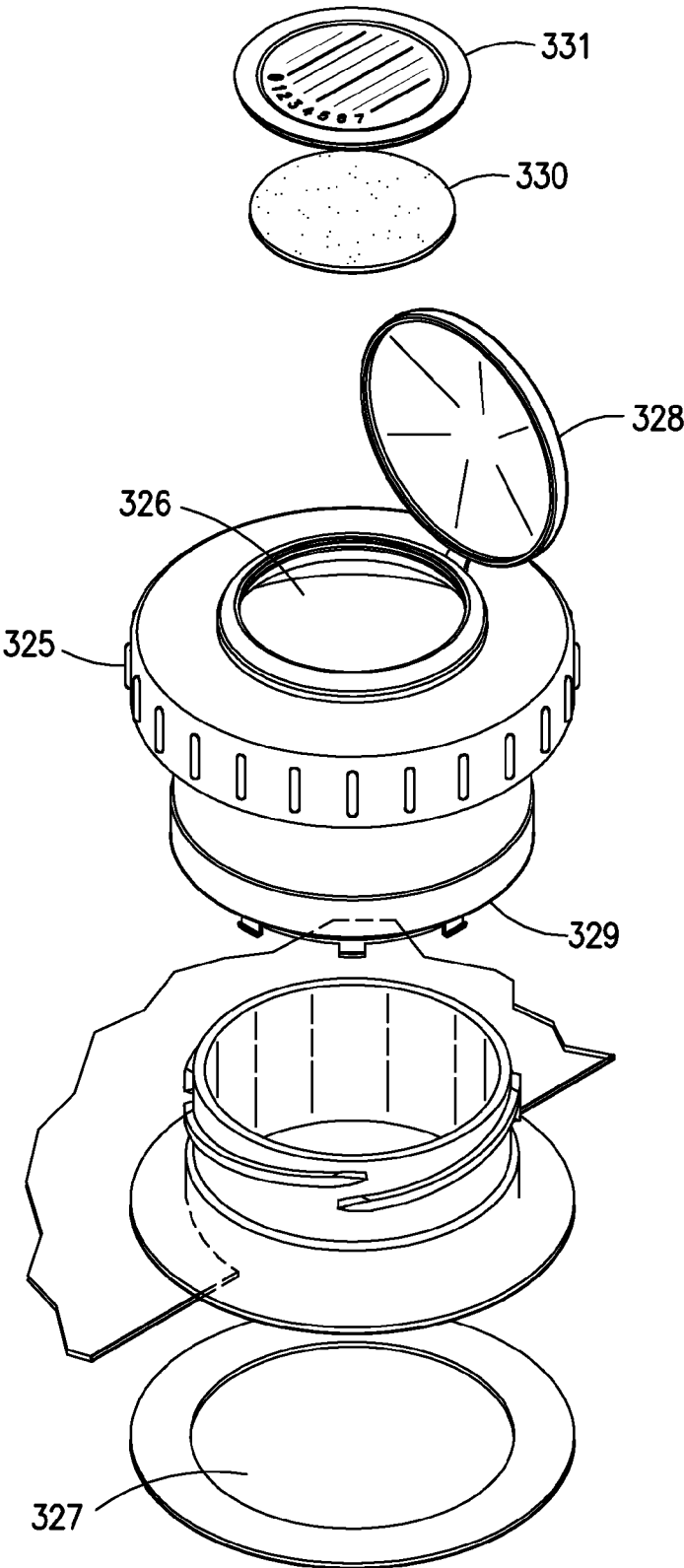
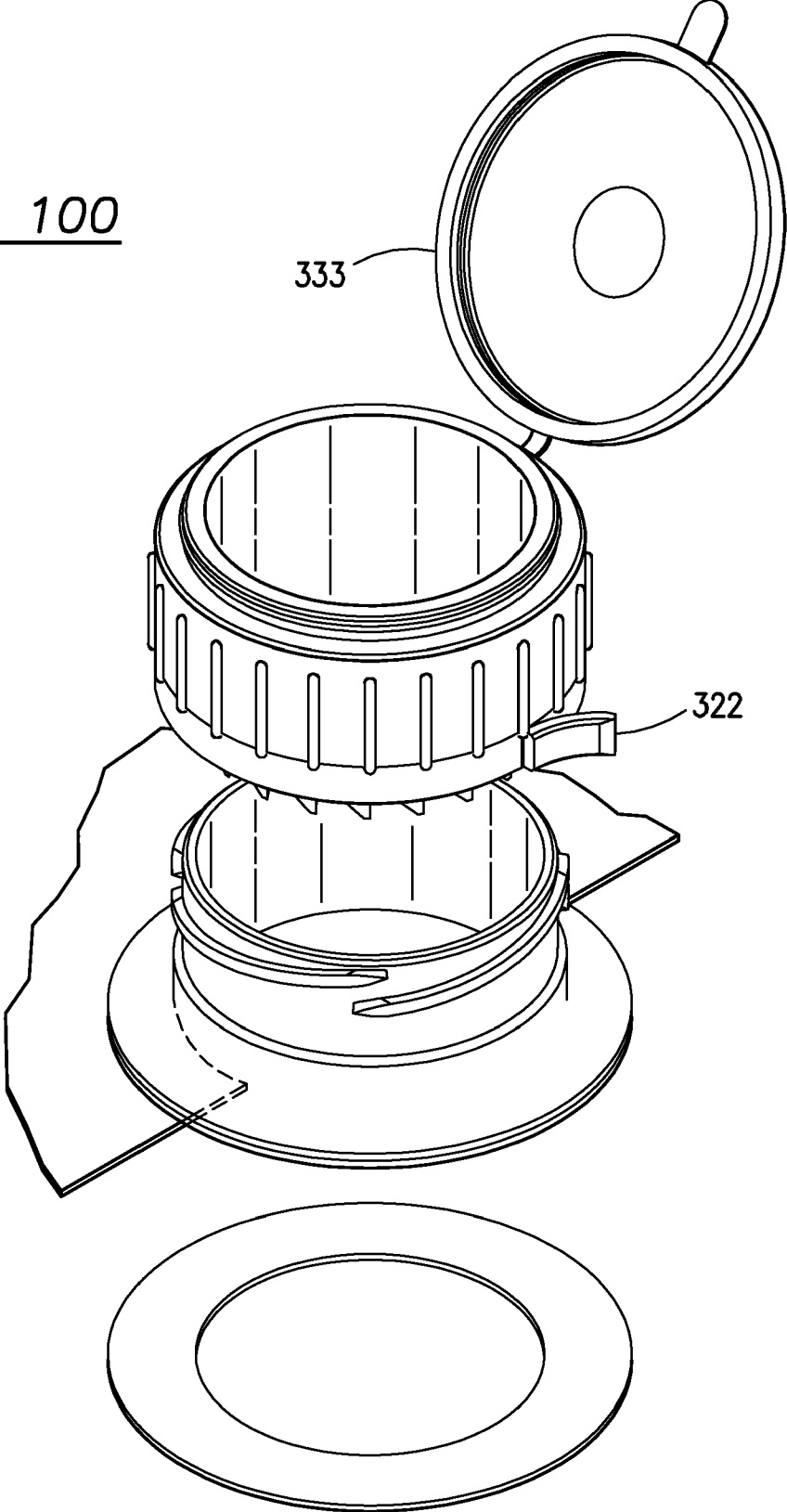


FIG. 99

FIG. 100



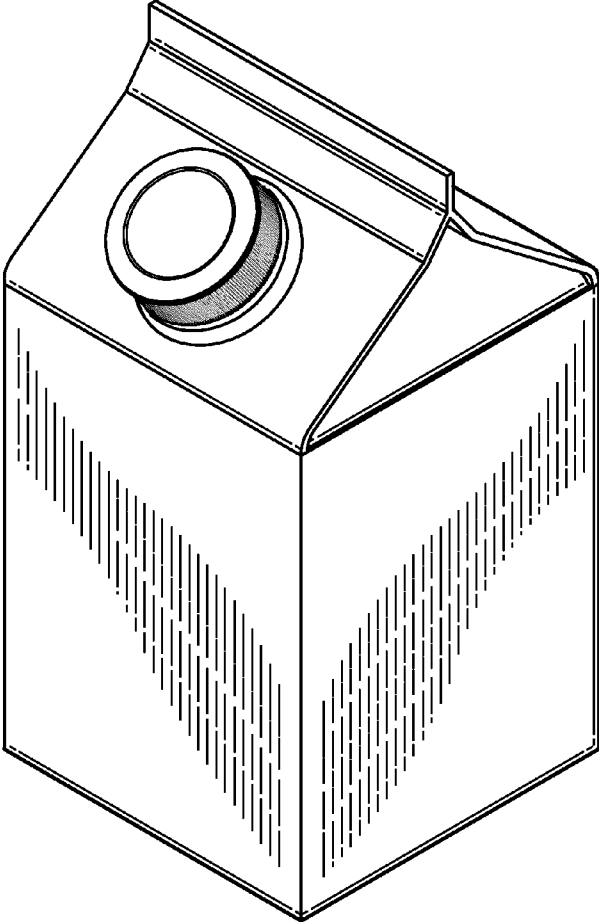
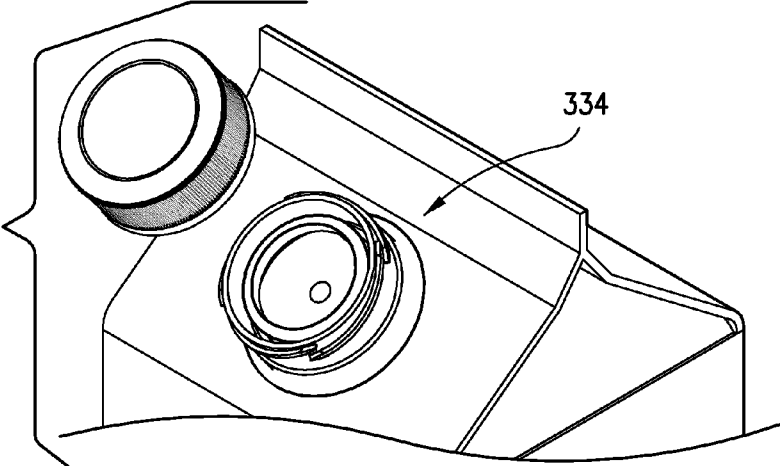


FIG. 101

FIG. 102



334

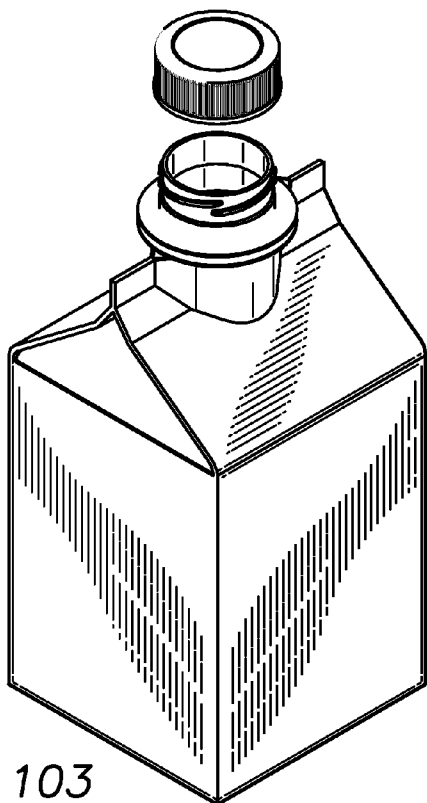


FIG. 103

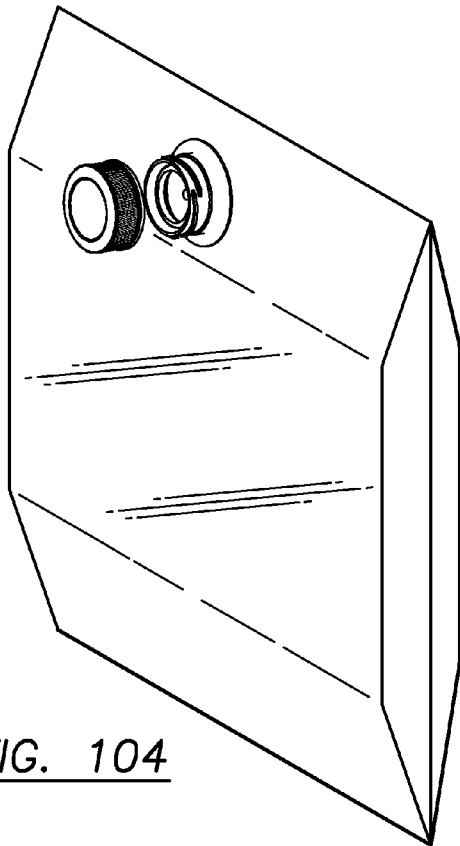


FIG. 104

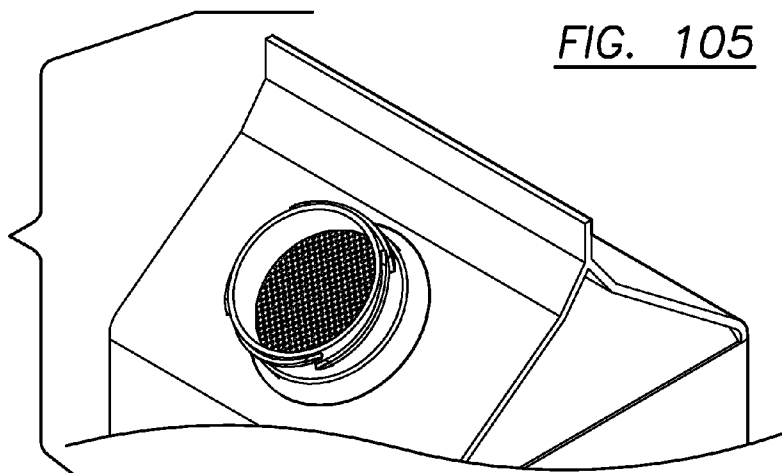


FIG. 105

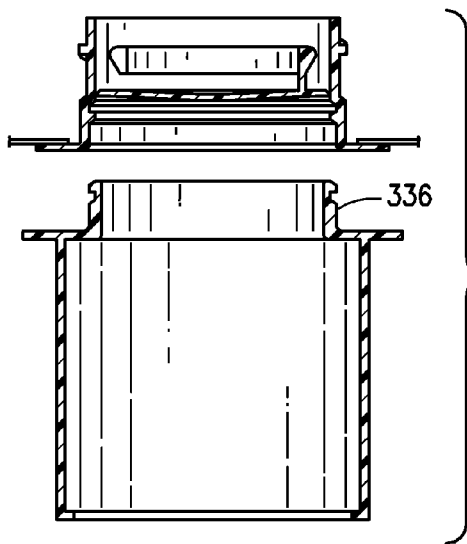


FIG. 106

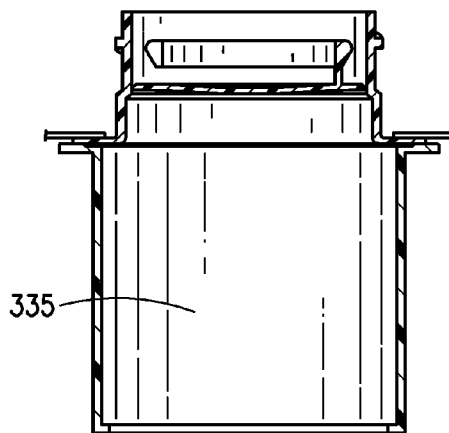


FIG. 107

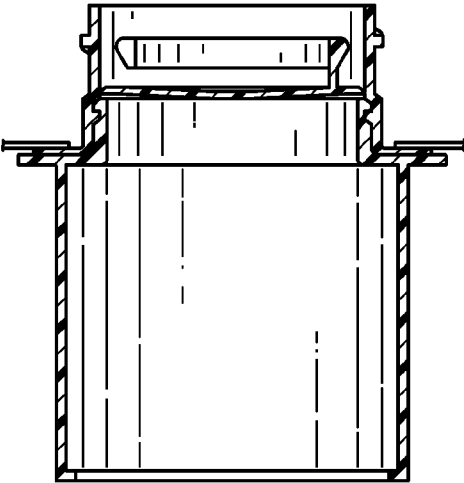


FIG. 108

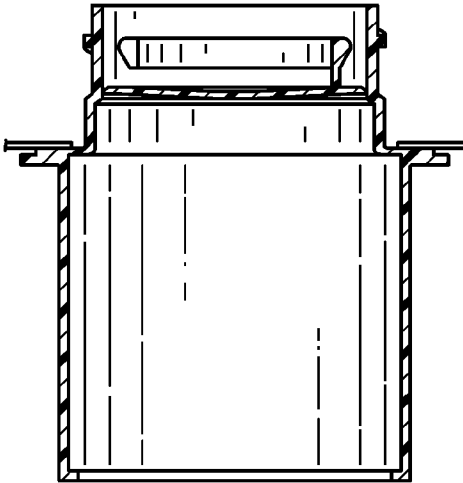
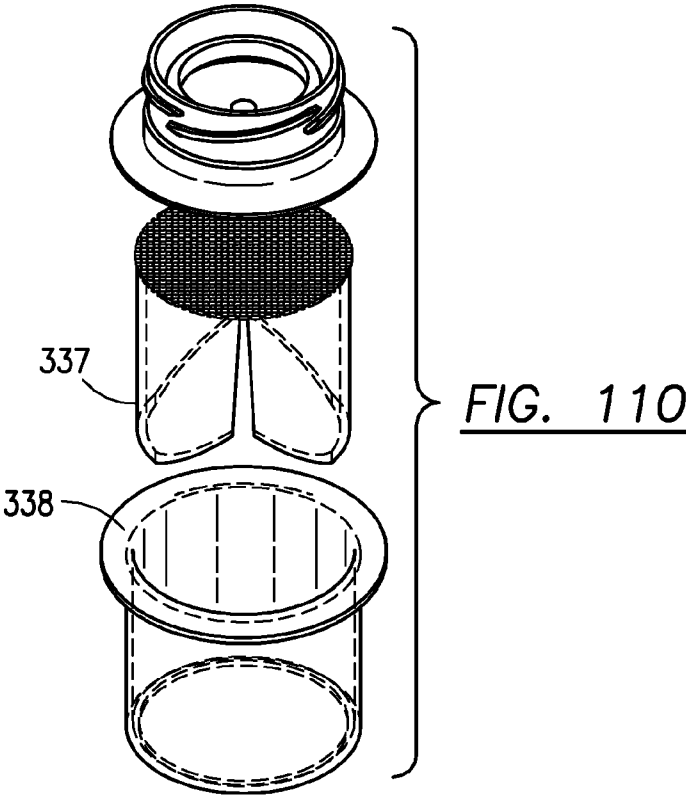


FIG. 109



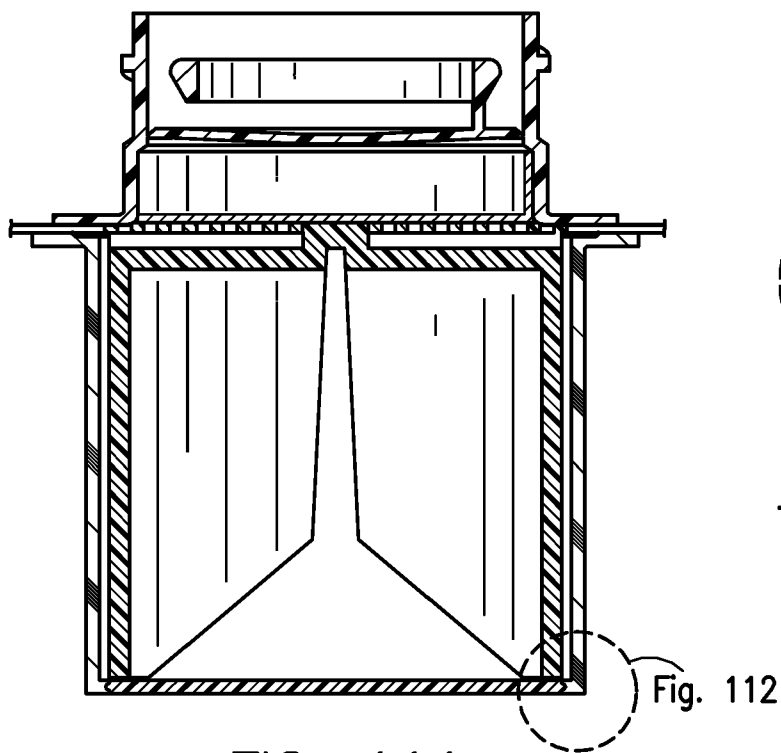


FIG. 111

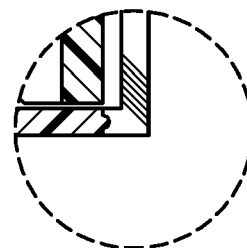


FIG. 112

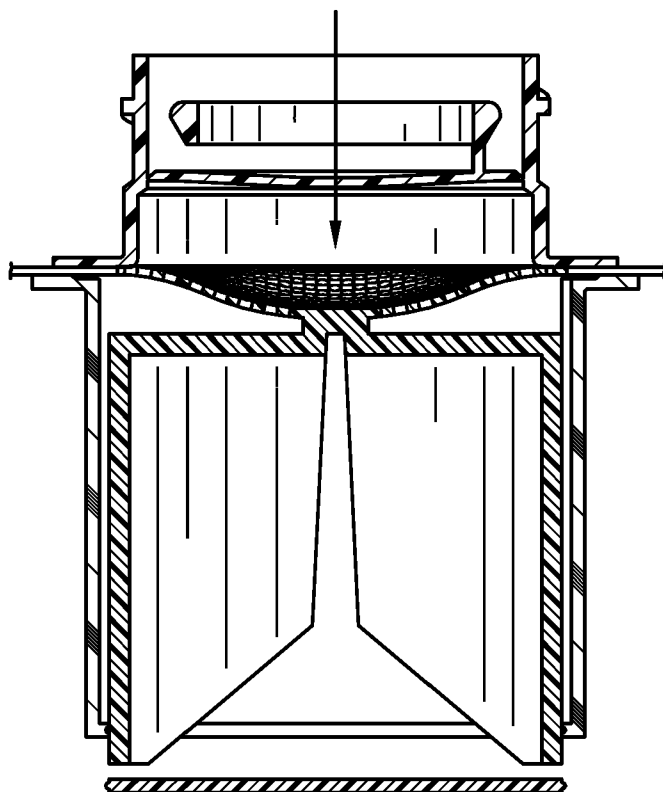


FIG. 113

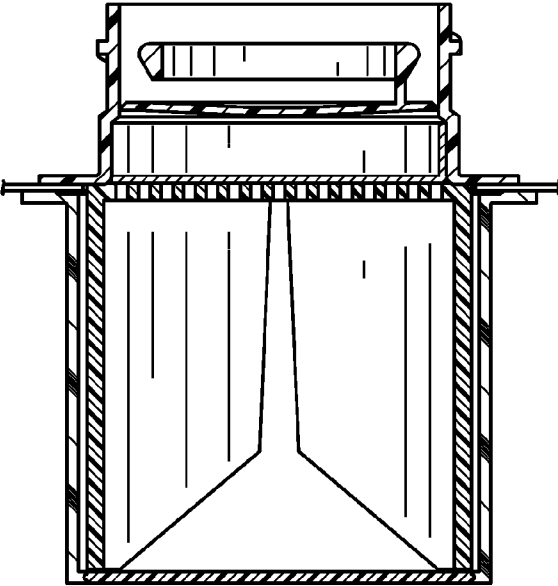


FIG. 114

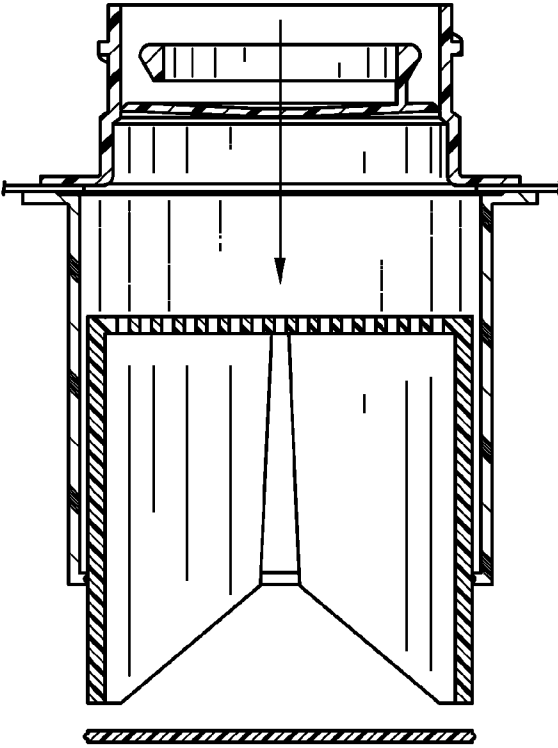


FIG. 115

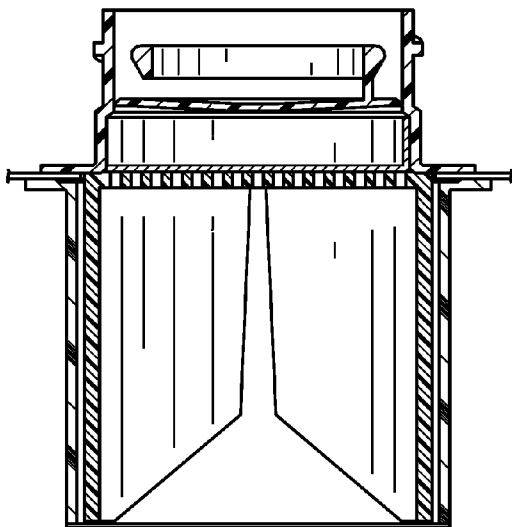
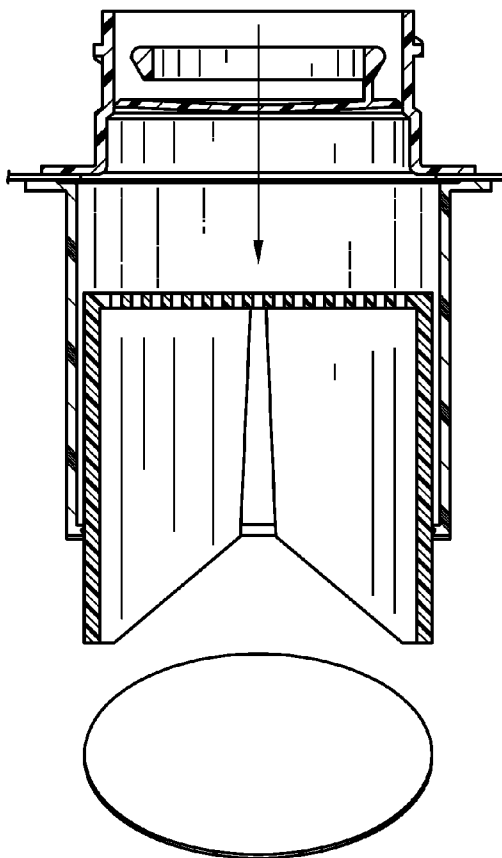
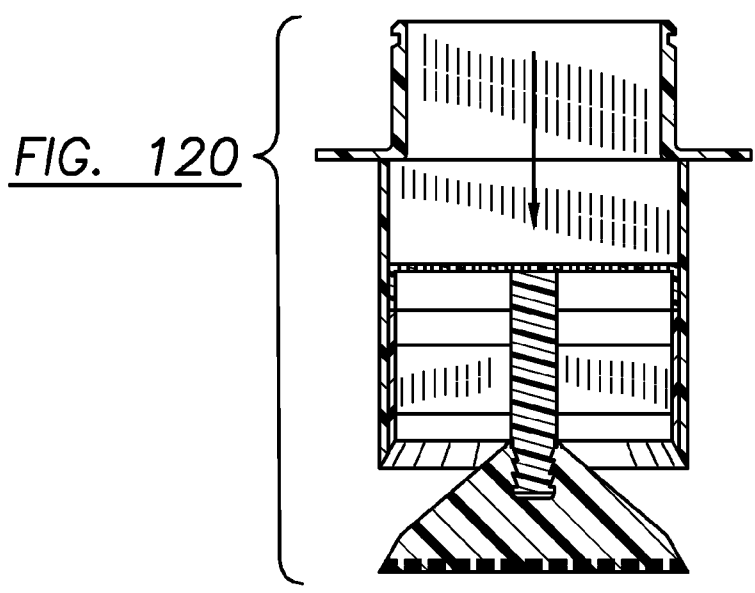
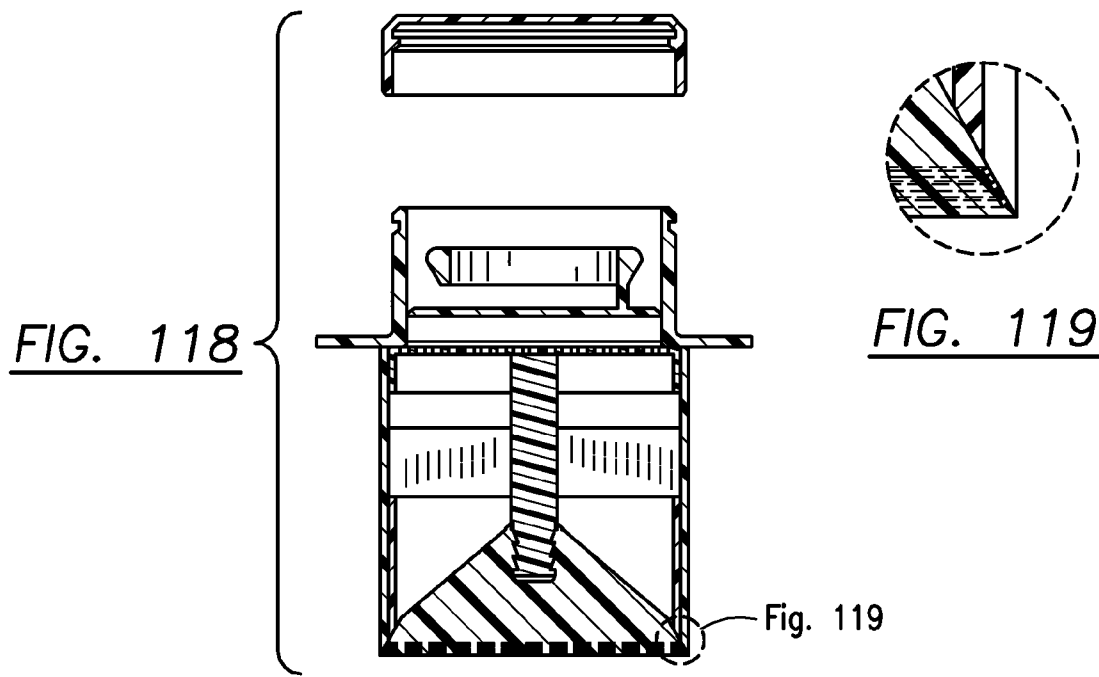


FIG. 116

FIG. 117





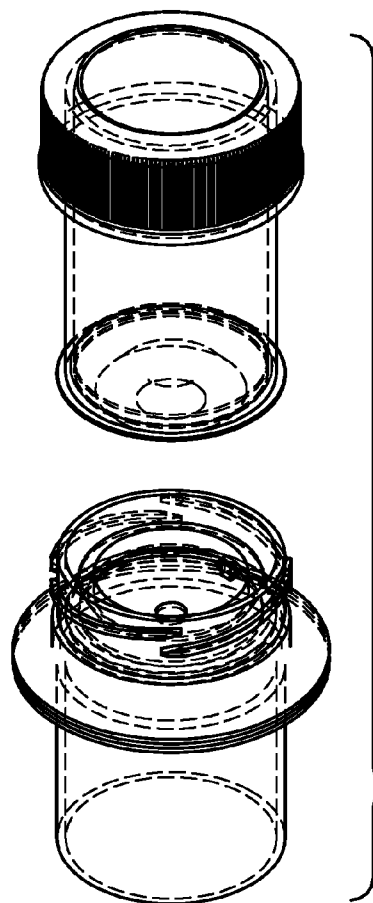


FIG. 122

FIG. 121

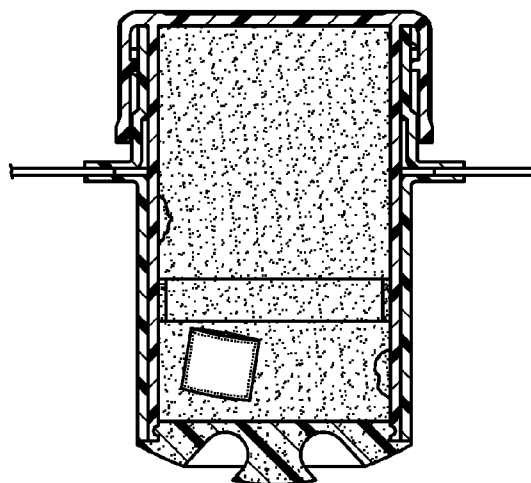


FIG. 123

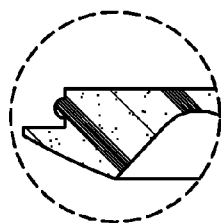
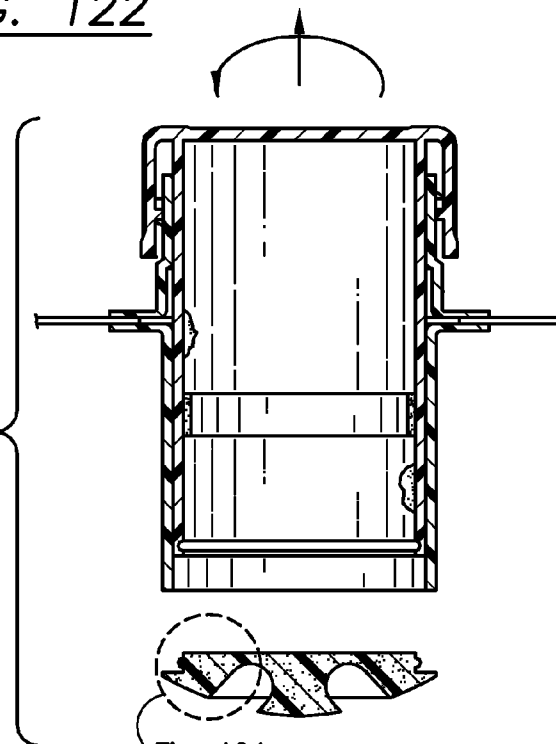


FIG. 124



Fig. 124

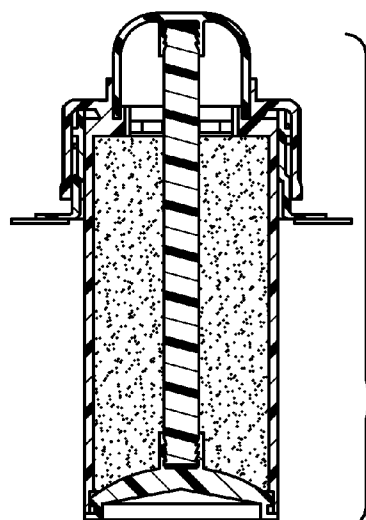
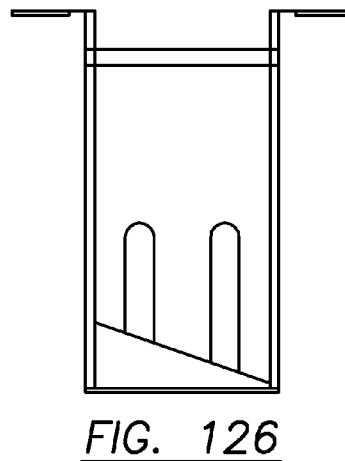
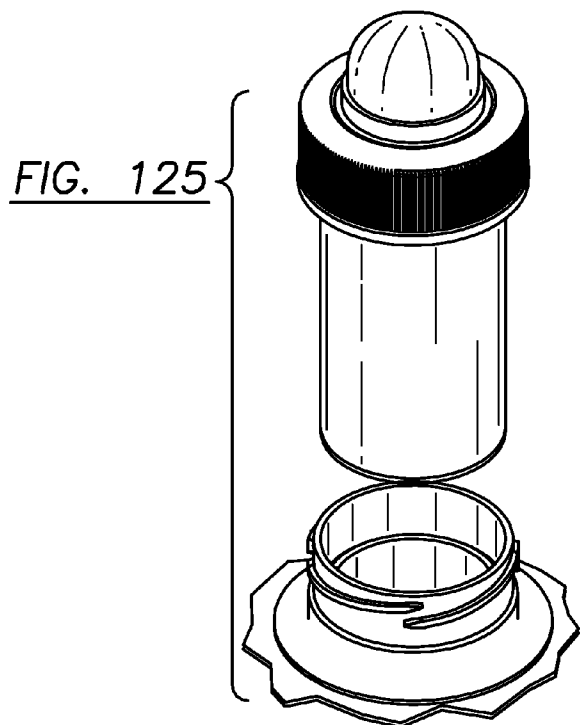
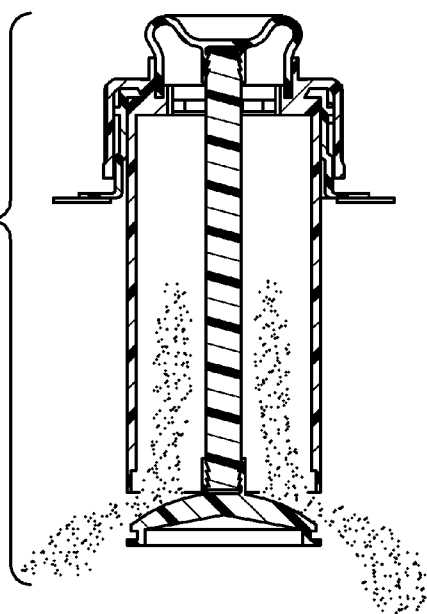


FIG. 127

FIG. 128



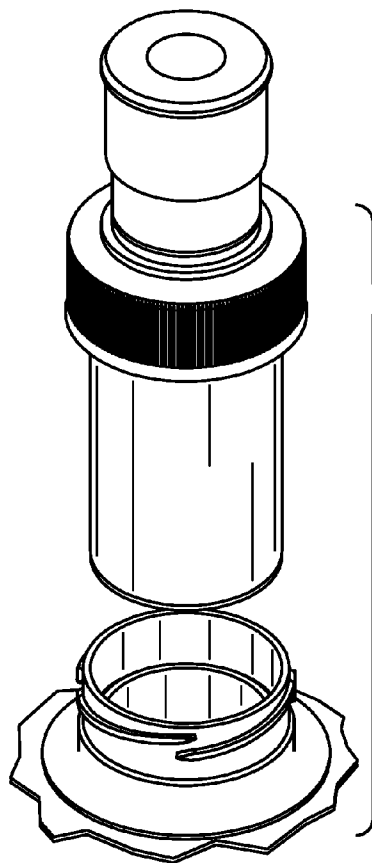


FIG. 129

FIG. 130

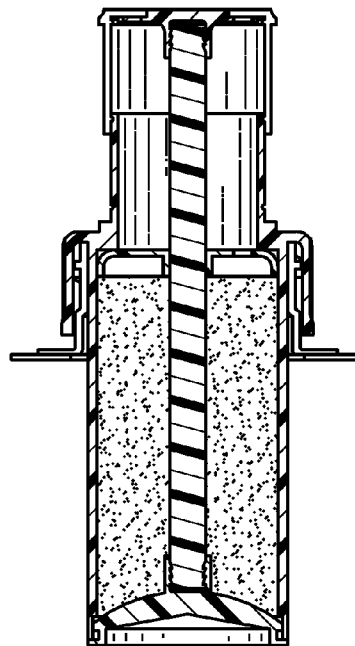
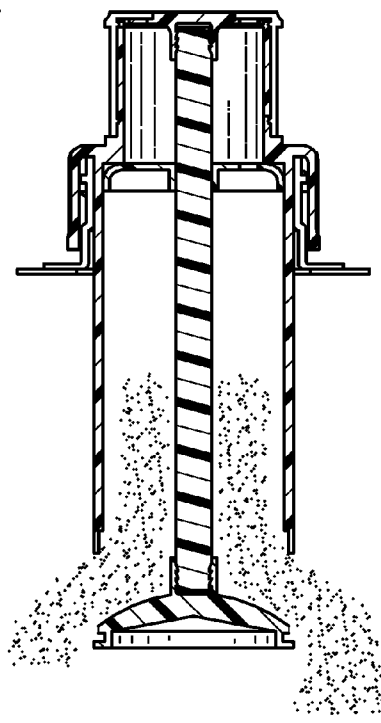


FIG. 131



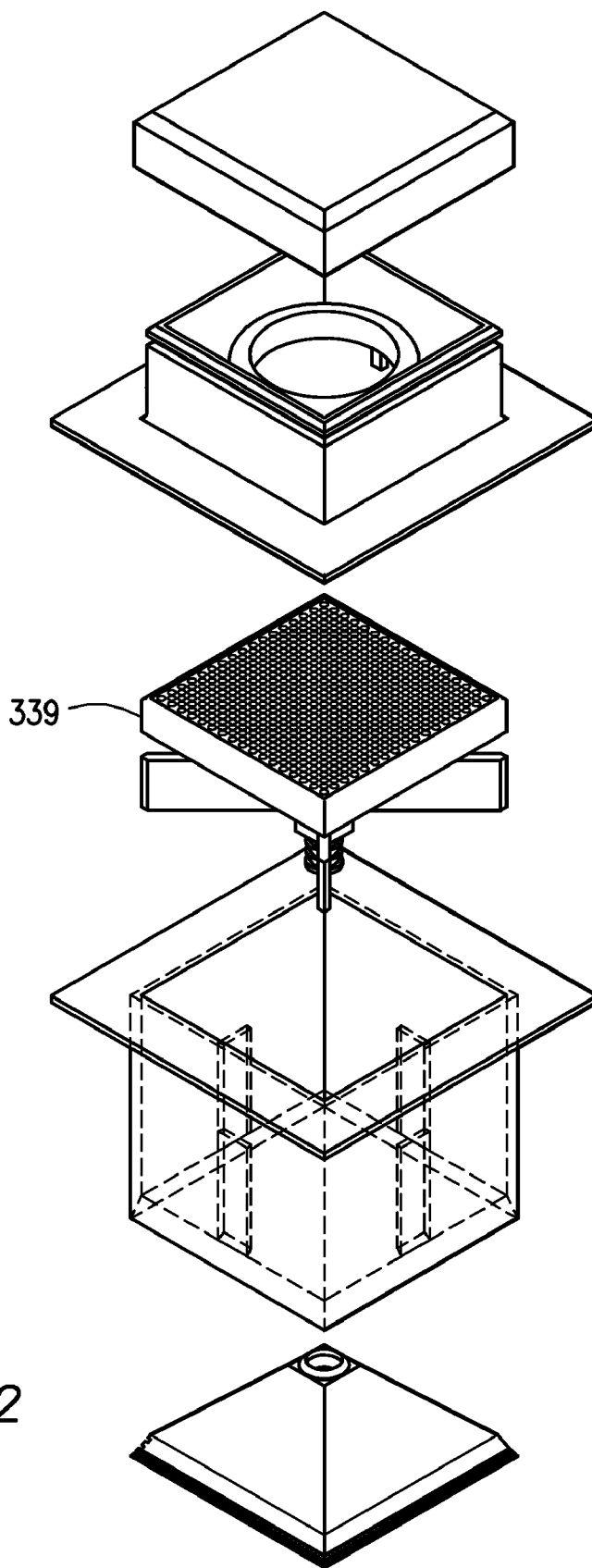
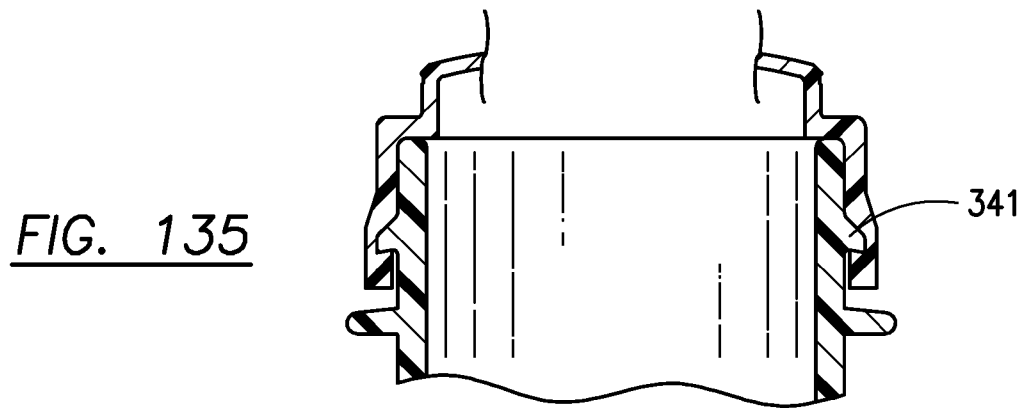
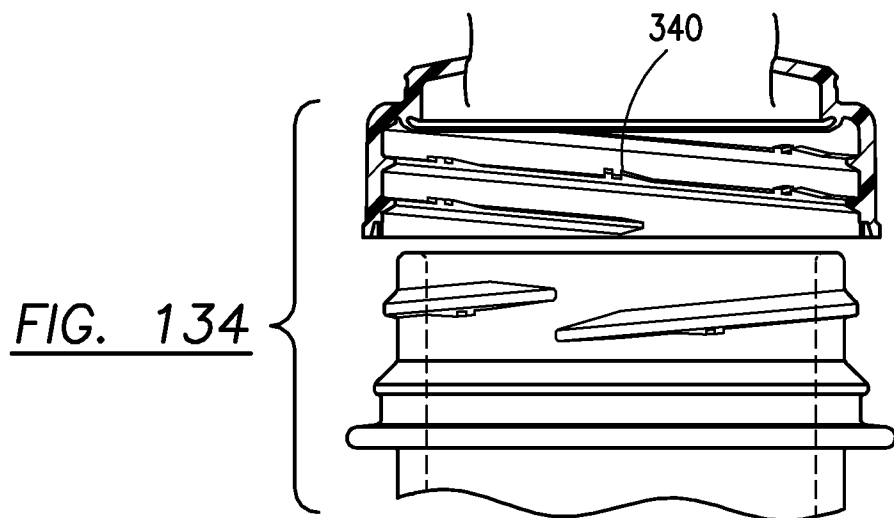
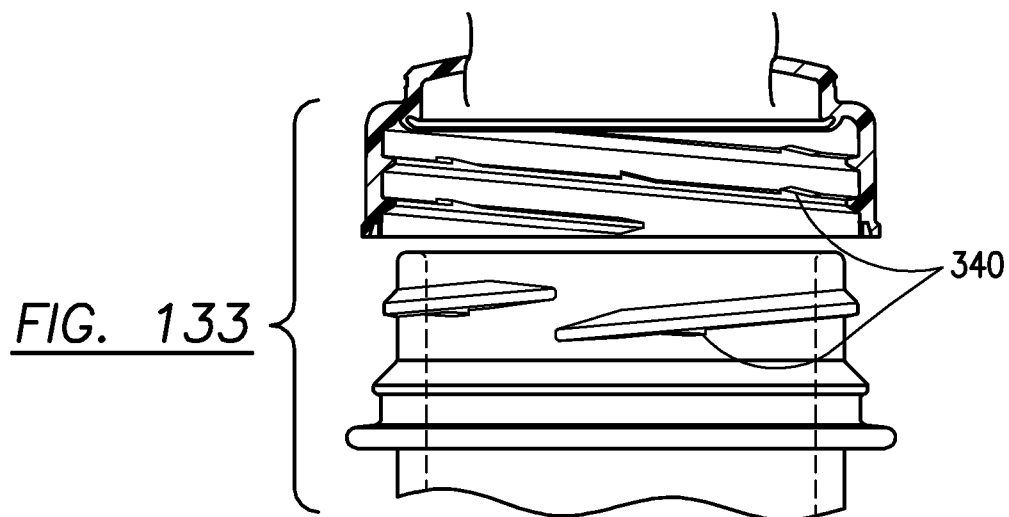


FIG. 132



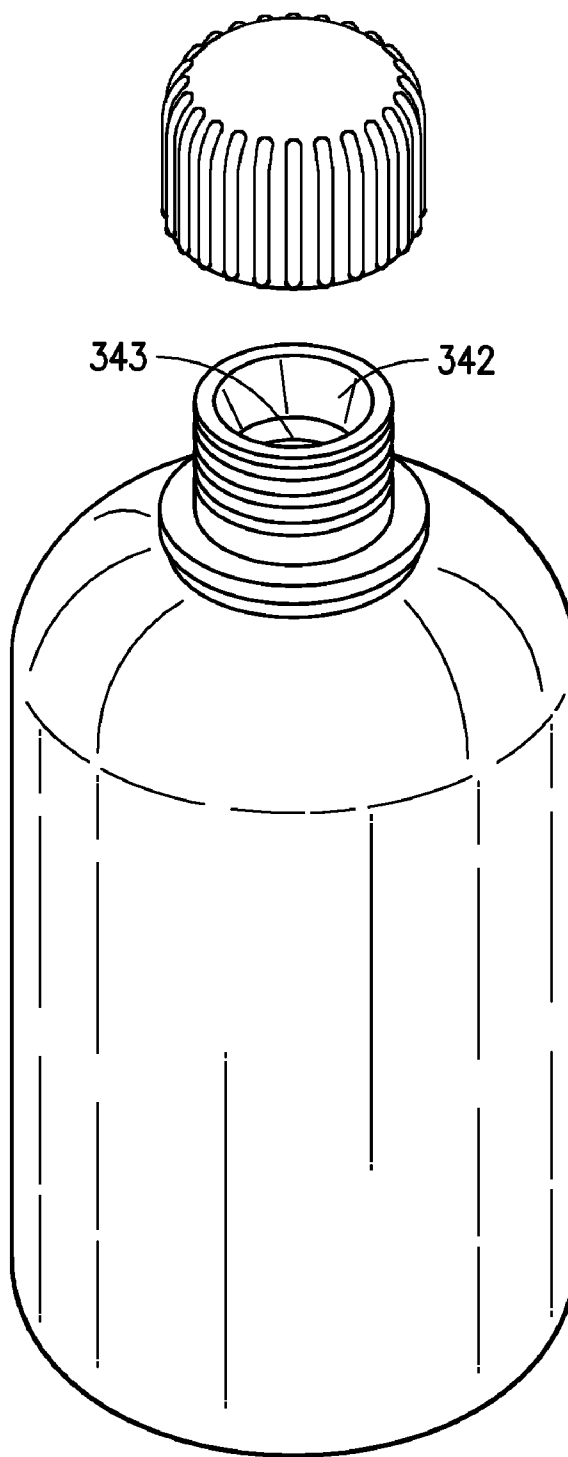


FIG. 136

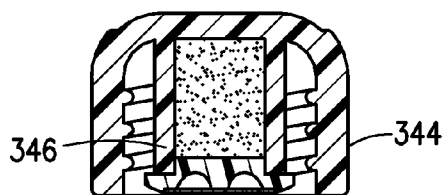


FIG. 137

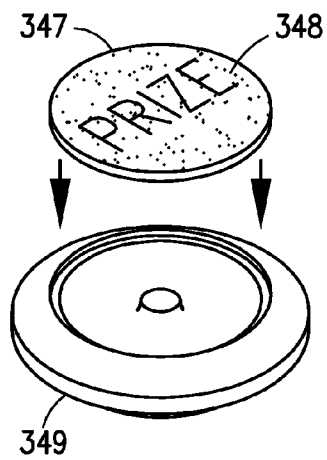
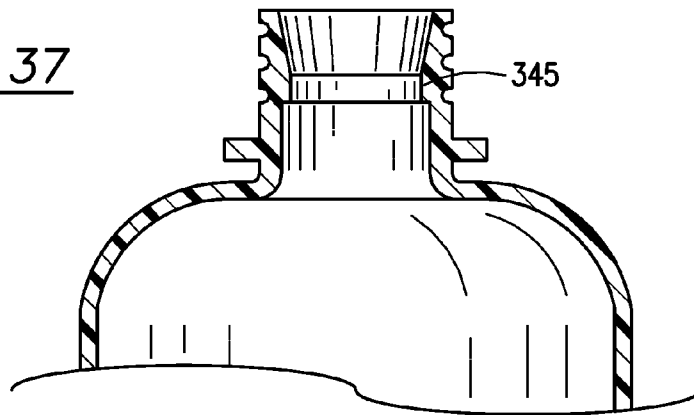


FIG. 138

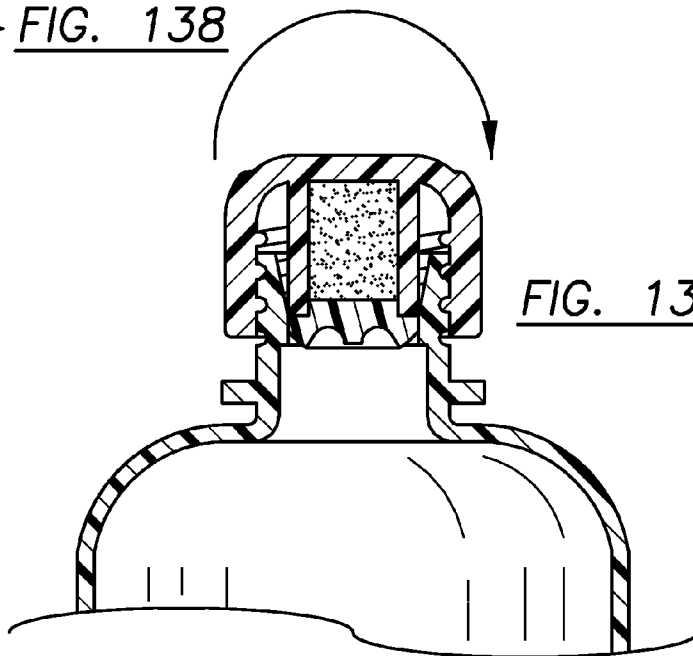


FIG. 139

FIG. 140

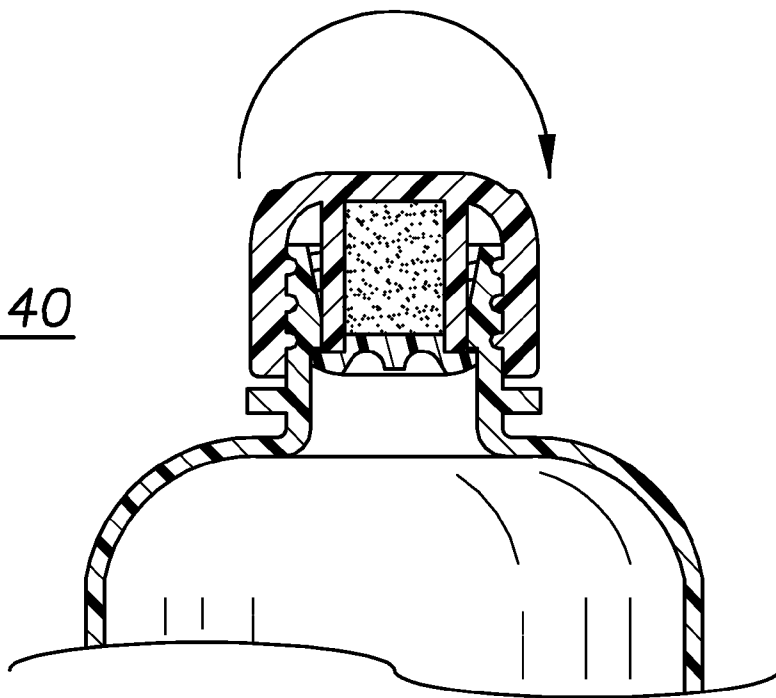


FIG. 141

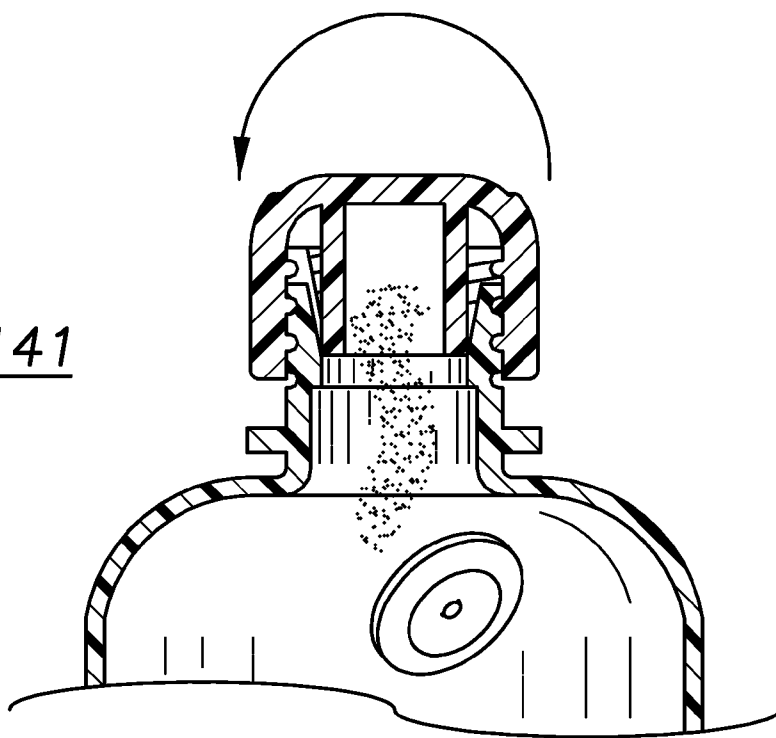


FIG. 155

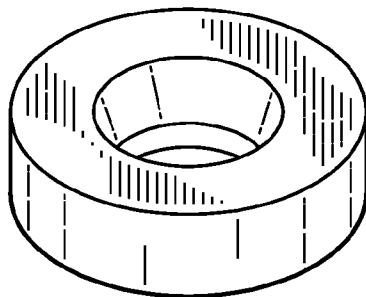


FIG. 142

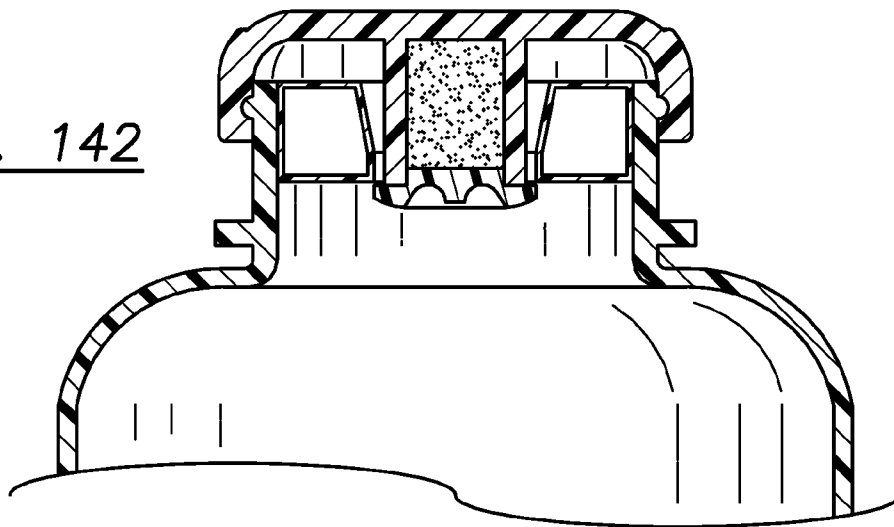


FIG. 143

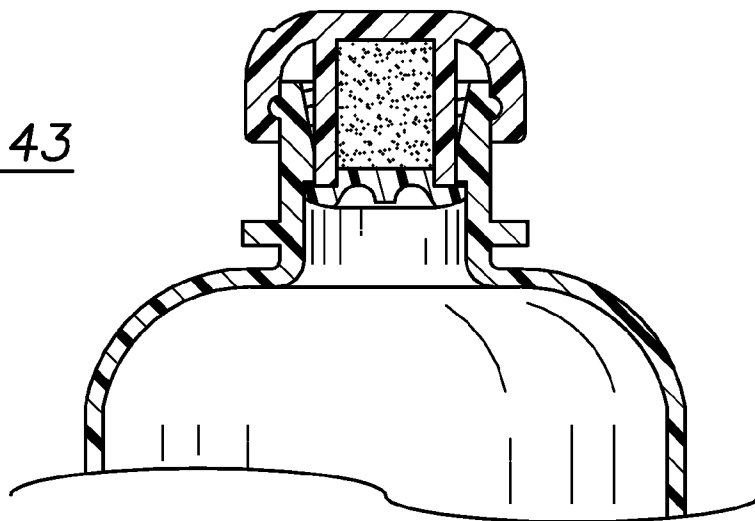


FIG. 144

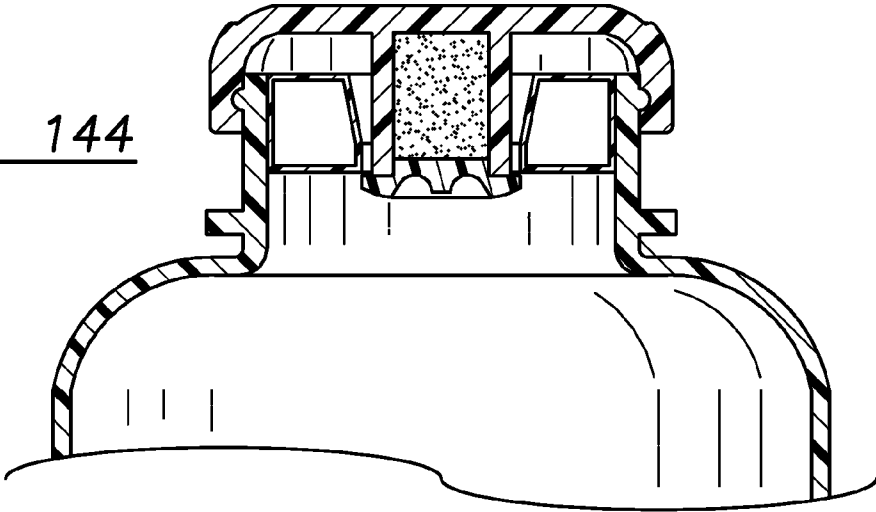


FIG. 145

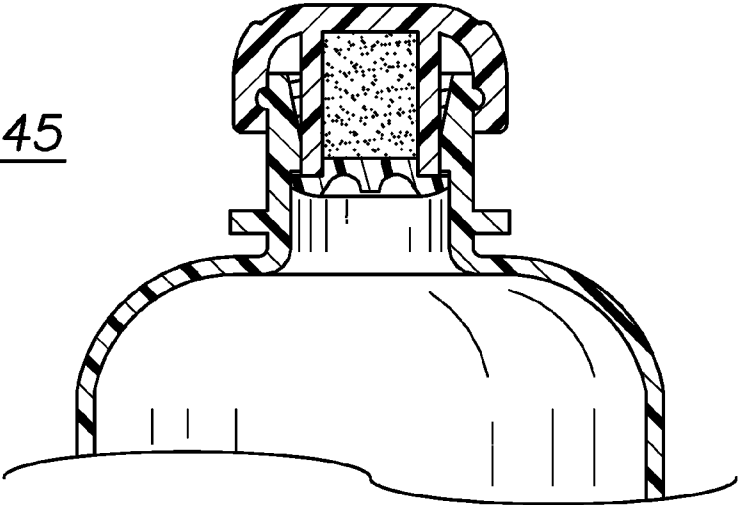


FIG. 146

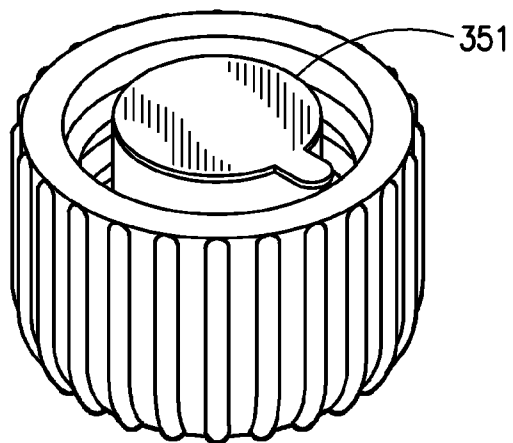


FIG. 147

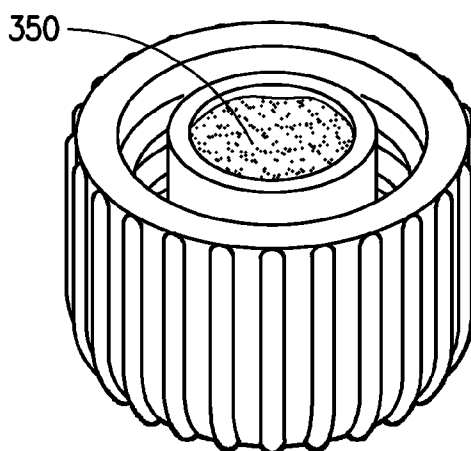
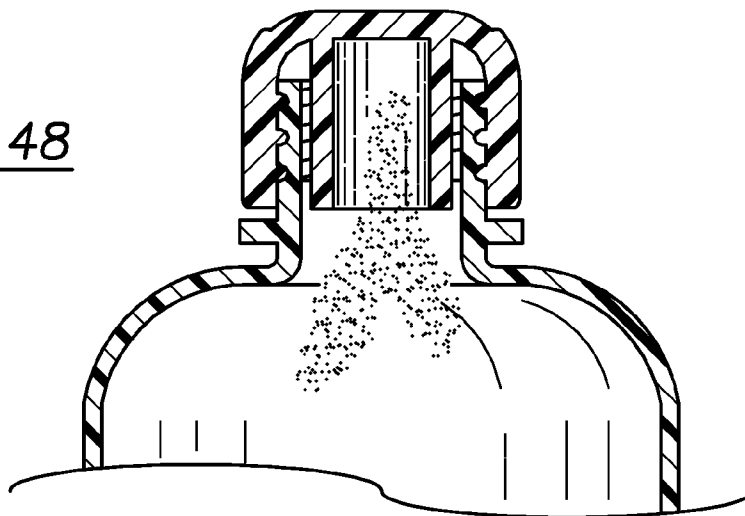


FIG. 148



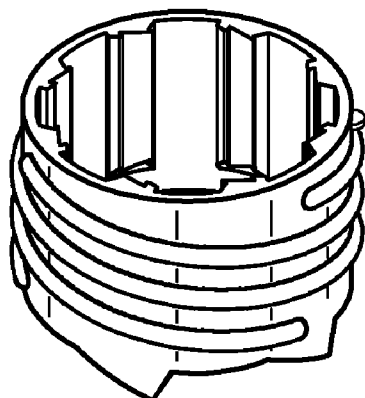
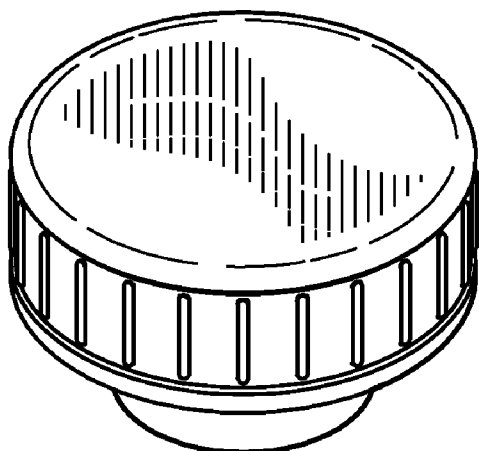
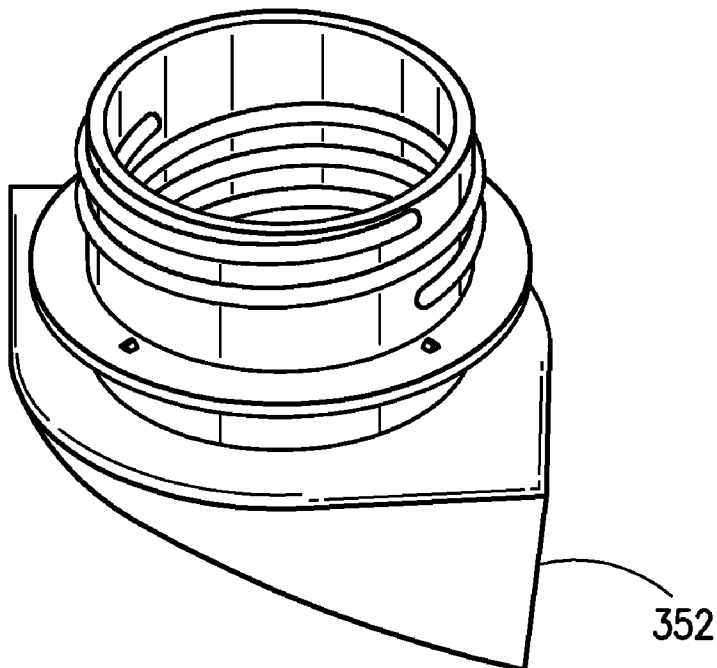


FIG. 149



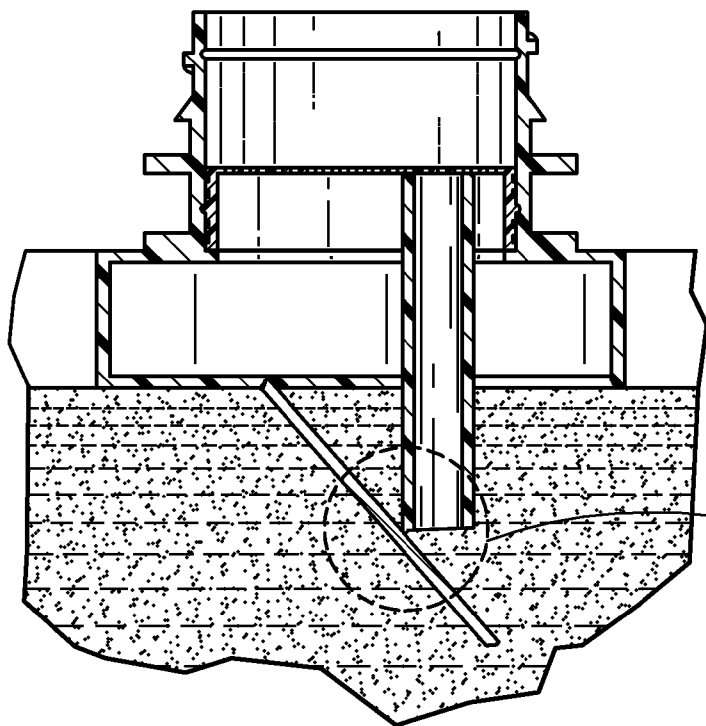
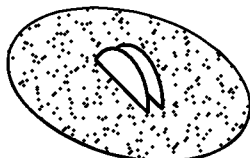
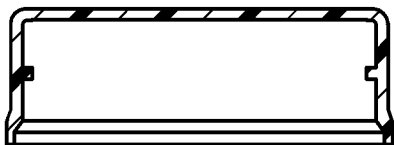


FIG. 150

Fig. 151

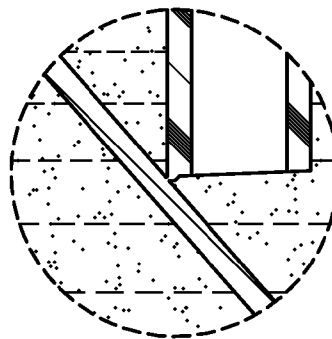


FIG. 151

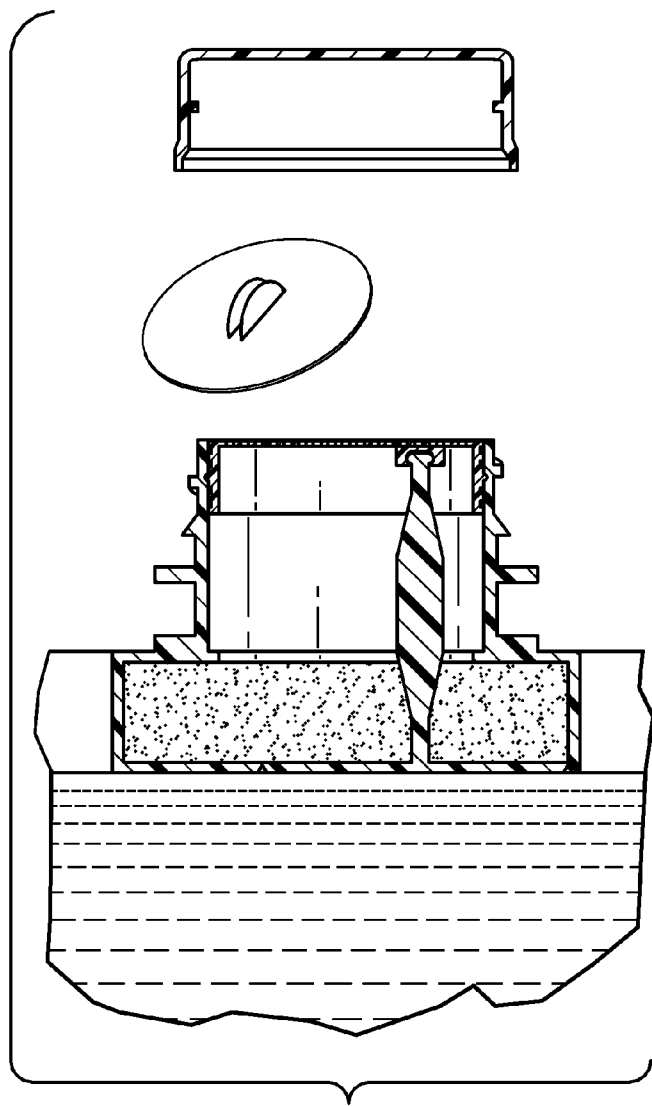


FIG. 152

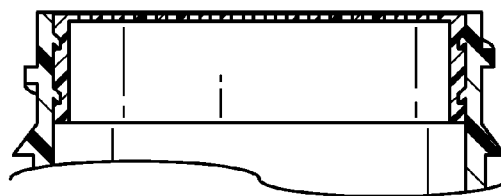


FIG. 153

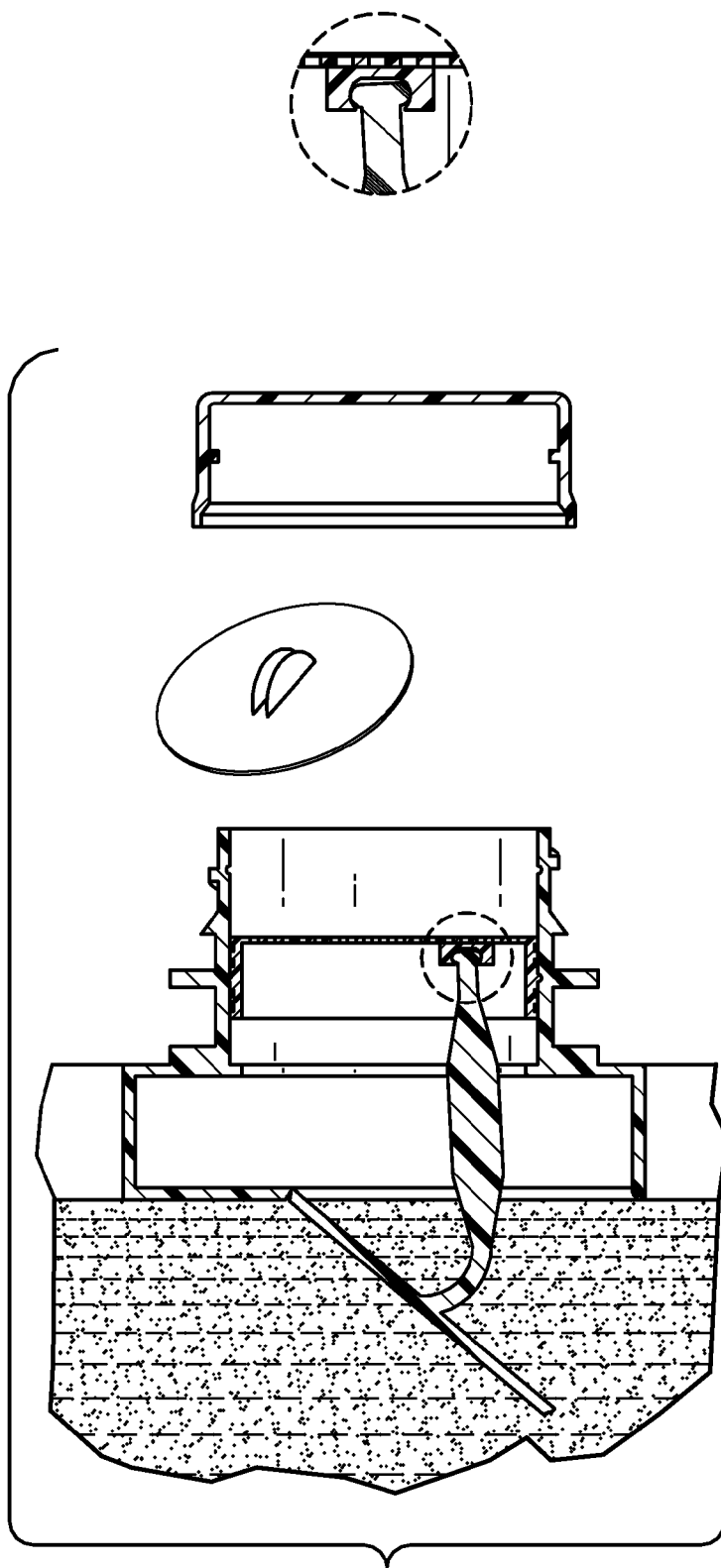


FIG. 154

**POUCH CARTON AND CONTAINER
FITMENTS FOR USE WITH ANY
INGREDIENTS**

BACKGROUND OF THE INVENTION

[0001] 1. Field of Invention

[0002] A liquid and or powder ingredient fitment cap, that can be mounted to a pouch, carton, bottle, can, drum, tube, syringe, IV, and IV instruments, or any container that can hold a substance for storing any ingredients used by a human being or animal.

[0003] 2. Description of Related Art

[0004] Many beverage, cleaning products, oil products, pharmaceuticals, and other chemicals and substances, do not retain their stability, strength, and effectiveness, for long after the ingredients have been mixed in a solution or suspension with a different liquid or substance. Most all liquids, gels, or acquiesce type solutions are formulated for shelf life rather than for quality, effectiveness, and potency of a product. In many cases, ingredients such as: stabilizers, fillers, preservatives, binders, and other types of chemicals and substances that now can be reduced or eliminated by this invention. This reduced shelf life after mixing mandates that the mixed product be utilized relatively soon after mixing to obtain full strength and effectiveness, to prevent loss of effective strength, deterioration, discoloration, interactions between ingredients and reduced effectiveness. In most cases in pouches, cartons, bottles and cans have added layers of certain types of films to better stabilize the already premixed substances such as UV films and other protection barriers that can be eliminated due to this invention because of the fitment cap storing ingredients in the cap for at time of use activation.

[0005] A fitment cap can be used for any container used to store different substances that can accept and hold different products. The fitment cap includes its own substance storage and release chamber. Any substance or substances that are stored in the fitment cap can be dispensed into any container for mixing with the container contents manually by an individual when ready for use. The shelf life of the combined substance in this invention can be extended indefinitely. The fitment cap can be used as a storage chamber for any substances or ingredients that can be admixed with any other substance that is stored in a container.

BRIEF SUMMARY OF THE INVENTION

[0006] A storage cap and fitment combined for releasing one or more ingredients into a pouch, carton, bottle, can, drum, tube, syringe, IV, and IV instruments, or any container that can hold any substance or substances for storing any ingredients used by a human being or animal. The fitment cap body includes a substance storage chamber having a line of weakening, frangible, or tearable base. The fitment cap body also includes: a threaded area, snap-in area, elongated pouch fitment or carton bottom, that be placed in, over, on top, or around openings or attached to such as: a pouch, carton, bottle neck, can, tube, or any other holding device. A sleeve shape actuator is disposed inside said fitment cap body chamber. The actuator includes a cutting edge along its bottom perimeter and can be angled to more easily start and finish the opening, when desired. The storage cap can have a seal or pad that contains an absorbent material to avoid moisture attacking the ingredients. A sealable dust cover is attached to the cap body top opening for preventing contamination and tamper

proof to the said actuator when in storage or not in use or a conventional cap that is treaded or snapable. The dust cover can be removed manually, and the actuator actuated; the fitment cap body provides a plunger with a flowable hole or holes, spill proof, push-pull, twist, or flip over cap that can be part of the actuator to be able to have a product flow through after the invention is actuated, having now the mixed ingredients.

[0007] The fitment cap body storage chamber can be filed at a factory or at home by an individual with a substance to be mixed with another ingredient that also can be filed at a factory or by an individual. The substance can be but not limited to: a liquid, a gas, a powder, a gel, effervescence, tablets, micro encapsulation, or any other dissolvable or non-dissolvable chemicals and/or ingredients. The actuator acts as a cylinder that is manually movable, downwardly, along the inside the body of the fitment cap storage chamber. The actuator is mounted on its outside surface against the inside surface of the fitment cap body chamber combined by one or more seal rings that has reverse male/female rings on the inside surface of the fitment cap body chamber. The top of the actuator body can have an actuator with one or more holes that can be sealed with an absorbent material, spill proof push-pull, and sport cap type opening for flow of a substance or substances after activation that can be part of the actuator in the molded piece or assembled in to such a configuration. The invention can be covered with a dust cover that can be attached to the upper portion of the body of the fitment cap, with safety rings located throughout the bottom of the dust cover so that, when taken off, it breaks the seal area that is attached to the body, to perform its function as a safety seal cap. The dust cover can also used to enclose the actuator and the cap body, to protect the contents of the chamber area from contamination. The substance or the substances or ingredients in the fitment cap body chamber can be dispensed into any container containing any type of product. After activation, the mixed ingredients can be used in any matter, by any individual, depending on the final product. To activate the invention, the activator is manually depressed and the cutting edge, twist reverse or double pole (one from the actuator coming downwardly and from the bottom of the fitment area coming upwardly) ripping on the bottom of the actuator penetrates the fitment cap body chamber bottom surface, ripping the bottom, downwardly, causing the contents in the fitment cap body chamber to be dispensed through the line of weakening or ripped seal chamber bottom opening, caused by the actuator, and into a container, mixing with the contents of the container. The bottom area surface that is opened can stay attached to the body of the fitment cap on the below surface rim area, by flanges/hinges/seals that are attached to the opened seal area. The sealed area can be sealed by means of: lines of weakening, that area molded in the fitment cap body, or also can be molded with an open area and seal with absorbent material added can be adhered to the bottom of the fitment cap, causing a hermetically seal bottom for holding any ingredients. The fitment cap body chamber, the actuator, and the dust cover can be made of any type of plastic materials, single or in combination of, rubber, metal, pouch material, carton or cardboard material, and any combination thereof, including any other materials. The actuator is made of a harder material than the fitment cap body to allow an easier rip opening for the dispensing of any stored materials into any container. The actuator has one or more seal rings including one or more seal rings that are angled in an outward

and/or outward position, not to allow any individual to be able to disassemble the invention. The seal rings would fit opposite into the other side of the invention and having the fitment cap body towards the bottom, having the same male inverted rings. The top surface area flanging outward around the entire surface area of the actuator acts as a stop point that fits in the upper portion of the release body top. When activated, and depressed fully, the highest point of the bottom of the angled actuator goes past the bottom rim area of the fitment cap to force the ripped bottom area to stay attached and to move out of position to allow free flow of the substances being released. The actuator mounted inside the fitment cap body has a venting channel allowing air flow to allow air to escape while assembly of the invention. At least one area of the channel portion of the actuator starting from the below angled portion, running upwardly, has an indented venting areas which allows air/gases to escape when the invention is being filed with its substance, or substances, not allowing the invention to have pressure build-up inside. These vents can be located one or more around the circumference of the actuator. The push-pull nipple that is attached to the actuator has, on the bottom portion, an upward angle barb-like style ring similar to that one-way ring on the actuator, to allow for easy assembly, to fit into position so after activation, when the nipple is pulled up after the activation of the product it can only open to the stop point of the one-way seal ring that is connected to the actuator. In an alternate embodiment, the present invention can also have on the upper portion of the actuator a twist cap, flip cap, non-spill sippy cup type embodiment, an applicator, and also a completely sealed top of the upper portion of the actuator. The invention can be made all or in part with biodegradable materials such as by products from corn or other vegetation by products for a more environmental product.

BRIEF DESCRIPTION OF THE DRAWINGS

- [0008] FIG. 1 shows an exploded front perspective view of a storage container cap.
- [0009] FIG. 2 shows a side cross sectional view of the present invention.
- [0010] FIG. 3 shows a perspective view of the present invention.
- [0011] FIG. 3A shows a side elevational view of the present invention.
- [0012] FIG. 4 shows a side elevational view of an embodiment of the present invention.
- [0013] FIG. 5 shows a side elevational view of an embodiment of the present invention.
- [0014] FIG. 5A shows a top elevational view of an embodiment of the present invention.
- [0015] FIG. 6 shows an elevational view of an embodiment of the present invention.
- [0016] FIG. 6A shows a side elevational view of an embodiment of the present invention.
- [0017] FIG. 7 shows a side elevational view of an embodiment of the present invention.
- [0018] FIG. 8 shows a side elevational view of an embodiment of the present invention.
- [0019] FIG. 9 shows a side cross-sectional view of an embodiment of the present invention. FIG. 9A shows a top cross sectional view of an embodiment of the present invention.
- [0020] FIG. 9B shows a side cross-sectional view of an embodiment of the present invention.
- [0021] FIG. 10 shows an exploded perspective view of an embodiment of the present invention.
- [0022] FIG. 11 shows a side cross-sectional view of an embodiment of the present invention.
- [0023] FIG. 12 shows a side cross-sectional view of an embodiment of the present invention.
- [0024] FIG. 13 shows an exploded front perspective view of an embodiment of the present invention.
- [0025] FIG. 14 shows an exploded front perspective view of an embodiment of the present invention.
- [0026] FIG. 15 shows a side cross-sectional view of an embodiment of the present invention.
- [0027] FIG. 16 shows a side cross-sectional view of an embodiment of the present invention.
- [0028] FIG. 17 shows an exploded front perspective view of an embodiment of the present invention.
- [0029] FIG. 18 shows a front perspective view of an embodiment of the present invention.
- [0030] FIG. 19 shows a side elevational view of an embodiment of the present invention.
- [0031] FIG. 20 shows a side elevational view of an embodiment of the present invention.
- [0032] FIG. 21 shows a side cross-sectional view of an embodiment of the present invention.
- [0033] FIG. 22 shows an exploded front perspective view of an embodiment of the present invention.
- [0034] FIG. 23 shows a side cross-sectional view of an embodiment of the present invention. FIG. 24 shows a side cross sectional view of an embodiment of the present invention.
- [0035] FIG. 25 shows an exploded front perspective view of an embodiment of the present invention.
- [0036] FIG. 26 shows a side cross-sectional view of an embodiment of the present invention.
- [0037] FIG. 27 shows a side cross-sectional view of an embodiment of the present invention.
- [0038] FIG. 28 shows a front perspective view of an embodiment of the present invention with the fitment in phantom.
- [0039] FIG. 29 shows a side cross-sectional view of an embodiment of the present invention.
- [0040] FIG. 30 shows a side cross-sectional view of an embodiment of the present invention.
- [0041] FIG. 31 shows an exploded front perspective view of an embodiment of the present invention.
- [0042] FIG. 32 shows a front perspective view of an embodiment of the present invention.
- [0043] FIG. 33 shows an exploded front perspective view of an embodiment of the present invention.
- [0044] FIG. 34 shows an exploded front perspective view of an embodiment of a fitment cap.
- [0045] FIG. 35 shows a front perspective view of an embodiment of the present invention.
- [0046] FIG. 36 shows an exploded side cross-sectional view of an embodiment of the present invention.
- [0047] FIG. 37 shows a side cross-sectional view of an embodiment of the present invention.
- [0048] FIG. 38 shows a side cross-sectional view of an embodiment of the present invention.
- [0049] FIG. 39 shows a side perspective view of the actuating member of a plunging mechanism built in accordance with the present invention.
- [0050] FIG. 40 shows an exploded front perspective view of an embodiment of the present invention.

[0051] FIG. 41 shows a front perspective view of an actuating member of a plunging mechanism built in accordance with the present invention.

[0052] FIG. 42 shows an exploded side cross-sectional view of an embodiment of the present invention.

[0053] FIG. 43 shows a side cross-sectional view of an embodiment of the present invention.

[0054] FIG. 44 shows an exploded cross-sectional view of an embodiment of the present invention.

[0055] FIG. 45 shows a side cross-sectional view of an embodiment of the present invention.

[0056] FIG. 46 shows a side cross-sectional view of an embodiment of the present invention.

[0057] FIG. 47 shows a front perspective view of an embodiment of the present invention.

[0058] FIG. 48 shows a side elevational view of an embodiment of the present invention.

[0059] FIG. 49 shows a side elevational view of an embodiment of the present invention.

[0060] FIG. 50 shows an exploded front perspective view of an embodiment of the present invention.

[0061] FIG. 51 shows a side cross-sectional view of an embodiment of the present invention.

[0062] FIG. 52 shows a side cross-sectional view of an embodiment of the present invention.

[0063] FIG. 53 shows a side cross-sectional view of an embodiment of the present invention.

[0064] FIG. 54 shows a side cross-sectional view of an embodiment of the present invention.

[0065] FIG. 55 shows a side cross-sectional view of an embodiment of the present invention.

[0066] FIG. 56 shows a front perspective view of an embodiment of the present invention.

[0067] FIG. 57 shows an exploded front perspective view of an embodiment of the present invention.

[0068] FIG. 58 shows a side cross-sectional view of an embodiment of the present invention.

[0069] FIG. 59 shows a side cross-sectional view of an embodiment of the present invention.

[0070] FIG. 60 shows an exploded front perspective view of an embodiment of the present invention.

[0071] FIG. 61 shows an exploded front perspective view of an embodiment of the present invention.

[0072] FIG. 62 shows a front perspective view of an embodiment of the present invention with the cap portion in phantom.

[0073] FIG. 63 shows an exploded front perspective view of an embodiment of the present invention.

[0074] FIG. 64 shows a front perspective view of an embodiment of the present invention with the cap portion in phantom.

[0075] FIG. 65 shows an exploded front perspective view of an embodiment of the present invention.

[0076] FIG. 66 shows an exploded front perspective view of an actuating member built in accordance with an embodiment of the present invention.

[0077] FIG. 67 shows a side cross-sectional view of an embodiment of the present invention.

[0078] FIG. 68 shows a side cross sectional view of the cap connectors built in accordance with an embodiment of the present invention.

[0079] FIG. 69 shows a top cross-sectional view of an embodiment of the present invention.

[0080] FIG. 70 shows a view of the absorbent member built in accordance with an embodiment of the present invention.

[0081] FIG. 71 shows a side cross-sectional view of an embodiment of the present invention.

[0082] FIG. 72 shows an exploded front perspective view of an embodiment of the present invention.

[0083] FIG. 73 shows a side cross-sectional view of an embodiment of the present invention.

[0084] FIG. 74 shows a side cross-sectional view of an embodiment of the present invention.

[0085] FIG. 75 shows a side cross-sectional view of an embodiment of the present invention.

[0086] FIG. 76 shows a side cross-sectional view of the fitment connector built in accordance with an embodiment of the present invention.

[0087] FIG. 77 shows a side cross-sectional view of an embodiment of the present invention.

[0088] FIG. 78 shows a side cross-sectional view of an embodiment of the present invention.

[0089] FIG. 79 shows an exploded front perspective view of the cap portion of a cap built in accordance with an embodiment of the present invention.

[0090] FIG. 80 shows a side cross-sectional view of an embodiment of the present invention.

[0091] FIG. 81 shows a side cross-sectional view of a cap portion of a cap built in accordance with an embodiment of the present invention.

[0092] FIG. 82 shows a side cross-sectional view of an embodiment of the present invention.

[0093] FIG. 83 shows a side cross-sectional view of an embodiment of the present invention.

[0094] FIG. 84 shows an exploded side cross-sectional view of an embodiment of the present invention.

[0095] FIG. 85 shows a side cross-sectional view of an embodiment of the present invention.

[0096] FIG. 86 shows an exploded front perspective view of an embodiment of the present invention.

[0097] FIG. 87 shows a side cross-sectional view of an embodiment of the present invention.

[0098] FIG. 88 shows the latch from FIG. 87 built in accordance with an embodiment of the present invention.

[0099] FIG. 89 shows an exploded front perspective view of an embodiment of the present invention.

[0100] FIG. 90 shows an exploded front perspective view of an embodiment of the present invention.

[0101] FIG. 91 shows a side cross-sectional view of an embodiment of the present invention.

[0102] FIG. 92 shows a side cross-sectional view of an embodiment of the present invention.

[0103] FIG. 93 shows a side cross-sectional view of an embodiment of the present invention.

[0104] FIG. 94 shows a side cross-sectional view of an embodiment of the present invention.

[0105] FIG. 95 shows a side cross-sectional view of an embodiment of the present invention.

[0106] FIG. 96 shows a side cross-sectional view of an embodiment of the present invention.

[0107] FIG. 97 shows an exploded front perspective view of an embodiment of the present invention.

[0108] FIG. 97A shows a side cross-sectional view of an embodiment of the present invention.

[0109] FIG. 98 shows a side cross-sectional view of an embodiment of the present invention.

[0110] FIG. 98A shows an exploded front perspective view of an embodiment of the present invention.

[0111] FIG. 99 shows an exploded front perspective view of an embodiment of the present invention.

[0112] FIG. 100 shows an exploded front perspective view of an embodiment of the present invention.

[0113] FIG. 101 shows a front perspective view of an embodiment of the present invention.

[0114] FIG. 102 shows an exploded front perspective view of the top portion of an embodiment of the present invention.

[0115] FIG. 103 shows an exploded front perspective view of the top portion of an embodiment of the present invention.

[0116] FIG. 104 shows an exploded front perspective view of the top portion of an embodiment of the present invention.

[0117] FIG. 105 shows an exploded front perspective view of the top portion of an embodiment of the present invention.

[0118] FIG. 106 shows a side cross-sectional view of an embodiment of the present invention.

[0119] FIG. 107 shows a side cross-sectional view of an embodiment of the present invention.

[0120] FIG. 108 shows a side cross-sectional view of an embodiment of the present invention.

[0121] FIG. 109 shows a side cross-sectional view of an embodiment of the present invention.

[0122] FIG. 110 shows an exploded front perspective view of an embodiment of the present invention.

[0123] FIG. 111 shows a side cross-sectional view of an embodiment of the present invention.

[0124] FIG. 112 shows a side cross-sectional view of the line of weakening of the cap portion of a cap built in accordance with the present invention.

[0125] FIG. 113 shows a side cross-sectional view of an embodiment of the present invention.

[0126] FIG. 114 shows a side cross-sectional view of an embodiment of the present invention.

[0127] FIG. 115 shows a side cross-sectional view of an embodiment of the present invention.

[0128] FIG. 116 shows a side cross-sectional view of an embodiment of the present invention.

[0129] FIG. 117 shows a side cross-sectional view of an embodiment of the present invention.

[0130] FIG. 118 shows an exploded side cross-sectional view of an embodiment of the present invention.

[0131] FIG. 119 shows the break point on a cap built in accordance with an embodiment of the present invention.

[0132] FIG. 120 shows a side cross-sectional view of an embodiment of the present invention.

[0133] FIG. 121 shows a side cross-sectional view of an embodiment of the present invention.

[0134] FIG. 122 shows an exploded front perspective view of an embodiment of the present invention.

[0135] FIG. 123 shows a side cross-sectional view of an embodiment of the present invention.

[0136] FIG. 124 shows the break point on a cap built in accordance with an embodiment of the present invention.

[0137] FIG. 125 shows an exploded front perspective view of an embodiment of the present invention.

[0138] FIG. 126 shows a side elevational view of an embodiment of the present invention.

[0139] FIG. 127 shows a side cross-sectional view of an embodiment of the present invention.

[0140] FIG. 128 shows a side cross-sectional view of an embodiment of the present invention.

[0141] FIG. 129 shows an exploded front perspective view of an embodiment of the present invention.

[0142] FIG. 130 shows a side cross-sectional view of an embodiment of the present invention.

[0143] FIG. 131 shows a side cross-sectional view of an embodiment of the present invention.

[0144] FIG. 132 shows an exploded front perspective view of an embodiment of the present invention.

[0145] FIG. 133 shows an exploded side cross-sectional view of an embodiment of the present invention.

[0146] FIG. 134 shows an exploded side cross-sectional view of an embodiment of the present invention.

[0147] FIG. 135 shows a side cross-sectional view of an embodiment of the present invention.

[0148] FIG. 136 shows an exploded front perspective view of an embodiment of the present invention.

[0149] FIG. 137 shows an exploded side cross-sectional view of an embodiment of the present invention.

[0150] FIG. 138 shows an exploded front perspective view of the top portion of a cap built in accordance with an embodiment of the present invention.

[0151] FIG. 139 shows a side cross-sectional view of an embodiment of the present invention.

[0152] FIG. 140 shows a side cross-sectional view of an embodiment of the present invention.

[0153] FIG. 141 shows a side cross-sectional view of an embodiment of the present invention.

[0154] FIG. 142 shows a side cross-sectional view of an embodiment of the present invention.

[0155] FIG. 143 shows a side cross-sectional view of an embodiment of the present invention.

[0156] FIG. 144 shows a side cross-sectional view of an embodiment of the present invention.

[0157] FIG. 145 shows a side cross-sectional view of an embodiment of the present invention.

[0158] FIG. 146 shows a front perspective view of an embodiment of the present invention.

[0159] FIG. 147 shows a front perspective view of an embodiment of the present invention.

[0160] FIG. 148 shows a side cross-sectional view of an embodiment of the present invention.

[0161] FIG. 149 shows an exploded front perspective view of an embodiment of the present invention.

[0162] FIG. 150 shows an exploded side cross-sectional view of an embodiment of the present invention.

[0163] FIG. 151 shows the actuating portion of a cap built in accordance with an embodiment of the present invention.

[0164] FIG. 152 shows a side cross-sectional view of an embodiment of the present invention.

[0165] FIG. 153 shows a side cross-sectional view of an embodiment of the present invention.

[0166] FIG. 154 shows an exploded side cross-sectional view of an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0167] Referring now to FIG. 1, a storage cap container 200 comprised of a rigid, molded body, with an angled bottom actuator 201 having an rigid angled bottom 202 for easy opening of a sealed bottom storage cap body 204, with air venting systems in the actuator 203 to allow air to escape during assembly and activation, and when positioned after sealed a seal ring barb-like angle 205 and one or more seal rings 206 allows a hermetic type seal for not allowing moisture build-up. The upper rim area of the angled bottom actua-

tor 201 has a line of weakening 207 so that, when activated, the rim will break and the rim area 208 will stay attached in the storage cap body 210 resting area. On the top portion of the angled bottom actuator 202, there are one or more holes 209 throughout the top so that, when a safety seal 211 with absorbent material is pulled off and the angled bottom actuator 201 is activated, liquid can flow through the holes. The storage cap receiving body 212 is shaped to fit on the primary container that the storage cap container is attached to, and can be elongated, canoe shaped, on one or more sides to allow a flexible material or non-flexible material to be attached. It can also have a treaded cap area to be attached to any container. The angled bottom actuator 202 has the reverse areas of click-in positions, shown in 205, 206, and 207 throughout its body. The top area of the angled bottom actuator 201 can also be manufactured having a wide variety of openings such as a push-pull, a twist mechanism, a flip lid, or a spill proof sippy Cup style.

[0168] A top lid 214 is used as a rigid cover for the storage cap container 200. The top lid 214 prevents the angled bottom actuator 201 from activating the invention accidentally. In addition the top lid is fitted with an RFID (or nano chip) 215 which can be used to store information concerning the storage cap container 200 and its contents and for tracking the cap.

[0169] The invention is activated by pressing downwardly on the angled bottom actuator 201, causing the rigid angled bottom 202 to exert downward pressure on the sealed bottom 213 of the storage cap body 204, to allow the line of weakening or seal to fully open, releasing the contents of the storage cap container 200 into the primary container that the storage cap container 200 is attached to. The invention can have a line of weakening with a pull like device that, when depressed, rips the bottom open to release substances. The surface area can have one or more edge areas for a more secure seal.

[0170] Referring now to FIG. 2, the storage cap container 200 is shown after it has been activated into a primary container and the contents have released the ingredients with the angled area. FIGS. 3 and 3A show the angled bottom actuator 201 and the storage cap body 204. The angled bottom actuator 201 is shown with the area containing the holes 209 slightly raised and with several seal rings 206 on its exterior.

[0171] Referring now to FIG. 4, an alternate embodiment of the current invention is shown. This embodiment contains an elongated member 218 that is used to actuate the release of the substances inside the cap body 217. A threaded cap 216 is used to cover the cap body 217, primarily for protective purposes and to prevent accidental actuation.

[0172] Referring now to FIGS. 5 and 6, an alternate embodiment of the current invention is shown, shows a version of a line of weakening that, when depressed, from the top. One purpose of this embodiment is to allow the storage different substances in separate compartments until the users is ready to release a substance or substances that are stored in the invention into a container by manually depressing the actuator. FIG. 5 shows a cap container 219 as it is manufactured, complete with a flip top protective top portion 223. The top of the top actuating portion 220 is raised above the top of the body portion 221. FIG. 5A shows the top view of the cap shown in FIG. 5. FIG. 6 shows the cap container 219 after it has been actuated by the user. The cap container is actuated when the user exerts downward force 222 on the top of the top actuating portion 219. In FIG. 6, the top of the top actuating

portion 220 is even with the top of the body portion 221. FIG. 6A shows an embodiment of the present invention with a threaded top portion 224.

[0173] The different substance or substances can include: beverage ingredients, pharmaceutical ingredients, cosmetic ingredients, hair care ingredients, pet care ingredients, cleaning ingredients, automotive ingredients, and any types of chemicals, substances, or a substance that can be kept in a separate area until time of use. The advantage of being able to combine one or more substances or ingredients, such as a powder, liquid, effervescence, or any other material to be separate until time of use is to preserve the shelf life, efficiency, and effectiveness for ingredients for a more value quality product.

[0174] Referring now to FIGS. 7, 8, and 9, an attaching mechanism for threaded top type of container is shown. The embodiment shown is a threaded screw on attaching mechanism. However, the storage cap container 225 can be manufactured to have any attaching mechanism desired in order to be attachable to a particular primary container, including a flexible or non-flexible material, snap-on mechanism, or an adhesive that can be attached on a flat surface.

[0175] Referring now to FIGS. 9A and 9B, the attaching mechanism for threaded top type of container is shown. The storage cap container 225 has a threaded or pull position on the inside of the storage body cap area 226 that when the cap portion 227, which acts a holding chamber for one or more substances, is unscrewed, the reverse screw mechanism 228 is started for opening the bottom that can be a line of weakening or of any other kind of seal 229 to release the stored product. An absorbent pad or seal 230 can be attached at any location inside the invention or on the invention.

[0176] Referring now to FIG. 10, the bottom portion storage cap container 231 can have a bottom flat surface area that can be attached to any container and, if desired, a secure seal ring 232 can be attached between a container.

[0177] Referring now to FIG. 11, a watertight and airtight snap-in bottom 233 can connect to the storage cap body bottom area to hold a substance or substances separate until an individual activates the invention.

[0178] Referring now to FIG. 12, a hinge area 234 can stay attached to a portion of the body, not allowing the plug to fall by itself into a container.

[0179] Referring now to FIG. 13, a type of dispensing cap 235 that goes into or onto a container that can be placed into a cup like device 236, similar to a single serve half & half container, prevents any type of moisture going into the dispensing mechanism.

[0180] Referring now to FIG. 14, a sealed container 237 can be placed into or onto a container at any location with an absorbent pad 238 that can be placed in any location on the inside of a dosing cap, including a seal. A top portion seal 239 can be attached to a dosing cap with pull-off tabs.

[0181] Referring now to FIGS. 15 and 16, shows a one piece storage cap 240 that has a line of weakening 241 that can be opened by depressing the inner cap portion 242 while an elongated member 243 is forcing the bottom line of weakening open that stays attached to the invention. The top cap 245 must be removed prior to actuating the device. On the side, one way click barbs 246 allow the actuating portion to be moved downward and stop the actuating portion from being moved upward. On top of the plunging device 244 in the middle portion has one or more holes to allow liquid flow.

[0182] Referring now to FIGS. 17 and 18, shows an open area of a liquid flow mesh 247 with slightly raised surface areas 248 to attach a seal 249 that can have an absorbent material for absorbing moisture. Also, another plunging type device 250 can be inserted into the invention can have small holes or a flexible material with one or more slits to allow liquid flow and prevent spillage.

[0183] Referring now to FIGS. 19 and 20, shows different attachment mechanisms, such as those described in FIGS. 7, 8, 9A, and 9B. These attachment mechanisms can be used to attached the storage cap container 251 to flexible or nonflexible material that is elongated canoe shaped on one end 252 or more and also a screw or snap type 253 that can be attached to any container.

[0184] Referring now to FIG. 21, shows a plunger device with the bottom area having an angle 254 for an easier opening on the bottom of the invention so that, when activated, the higher portion of the angle goes past the bottom of the holding chamber to allow the bottom seal to completely open. A drinking hole 255 is included to allow the user to access the mixed contents of the primary container once the substance stored in the storage cap container 256 is released. A pouch fitment 257 is also shown as it is employed by the present invention.

[0185] Referring now to FIG. 22, shows another embodiment of the invention. A dust cover 258 is used to prevent contamination and accidental actuation. A push pull nipple (or a twist nipple) 259 is used to allow the user to consume the substance mixed when the invention is actuated without removing the invention. One way ridges 259 and click in ridges 261 are used to keep prevent accidental actuation and keep the components of the invention secure. The bottom of the actuator 262 is angled to better facilitate actuation. The body of the invention is angled for better attachment to pouches or cartons. The seal 264 ensures the integrity of the cap bottom and can include a line of weakening or a snap opening.

[0186] Referring now to FIGS. 23 and 24, the push pull nipple embodiment is shown prior to actuation and post actuation.

[0187] Referring now to FIGS. 25, 26, and 27, an embodiment of the present invention is shown with a sippy cup style of top 265.

[0188] Referring now to FIG. 28, shows a sports pouch fitment embodiment of the invention. A canoe like shape on the storage cap on one or more areas on the bottom can be attached to a container 266. The flip over lid also can be on the top portion 267 of the plunger area.

[0189] Referring now to FIGS. 29 and 30, shows an area whereby an RFID device, nano device 267, or any other transmitting device can be placed on any location of the invention. Also an absorbent seal 268 can be placed on any area in or one the invention.

[0190] Referring now to FIG. 31, shows a plunger device that can have any form of opening for liquid flow with a bottom portion having an angle 269 that can start the opening of the storage cap under 270; and shows the upper cap portion with a tracking device. An RFID device, nano device 271, or any other transmitting device is also shown.

[0191] Referring now to FIGS. 32 and 33, shows a embodiment of the invention with another version on the upper area of the plunger 272 whereby liquid can flow through the upper plunger area with a variety of holes or a thin membrane as shown in FIG. 273 with a slit area.

[0192] Referring now to FIGS. 34 and 35, shows a canoe like shape fitment 274 to attach to a container that can be of any shape including a snap or a screw that has a micro mesh type filter 275 that when the flexible material 276 is pulled apart by 277. A heat sealed area 278 and a zip lock type seal 279, when opened, allows the powder and/or liquid 280 to mix together ready for an injection or to be inserted into an area of use for an IV pouch.

[0193] Referring now to FIGS. 36, 37, 38, and 39, an embodiment is shown with the plunger area ring 281 that clicks into position with a one-way barb like area that cannot be taken out by an individual, better shown in FIGS. 43 and 44 after activated.

[0194] Referring now to FIG. 40, an embodiment is shown with another type of plunger mechanism whereby many holes or a screened area 282 on the upper portion of the plunger has liquid flow with the top seal 283 that has absorbent materials for the invention to withstand moisture and whereby the bottom area of the plunger that is attached to the body has one or more click in and seal areas to prevent any moisture entering into the invention until activated by an individual.

[0195] Referring now to FIGS. 41, 42, and 43, an embodiment is shown with a plug like device can be attached to the bottom of the plunger 284 and having an absorbent seal or pad to ensure freshness of the ingredient stored inside; and when unscrewed by an individual the chamber area that is attached to a screw cap like mechanism allows the bottom plug to fall into a container, the outside circumference area of the plug can be larger than the opening of the bottom of the storage cap area so that the plug cannot come out of the container once activated.

[0196] Referring now to FIG. 44, an embodiment is shown with an angled bottom.

[0197] Referring now to FIGS. 45 and 46, an embodiment is shown with a bottom that releases when the invention is actuated. This embodiment is actuated by exerting a pull force while twisting 286 on the cap, which causes the bottom portion 287 to break off and release the substance in the cap into the primary container.

[0198] Referring now to FIGS. 47, 48, 49, 50, 51, 52, 53, and 54 shows another embodiment of the invention along with different heights of the chamber storage area.

[0199] Referring now to FIG. 55, the upper area of a plunger mechanism 288 whereby flexible in nature when depressing to allow the bottom to open to release the ingredients stored inside into a container.

[0200] Referring now to FIGS. 56, 57, 58, 59, and 60, another embodiment of the invention whereby a threaded cap 289 can have an open area on top so that a domed area with a sealed bottom 290 that stores any substance or substances can be depressed by an individual to release the ingredients inside is shown. This invention also can have a flip style lid 291 that can be attached to the cap area.

[0201] Referring now to FIGS. 61, 62, 63, and 64, a container 292 that can be attached to a molded bottom 293 that could have a chamber area built into such molds 294 that can have any type of upside-down opening 295, including a line of weakening or any kind of seal. This embodiment stores the separate substance in and is actuated from the bottom. Referring now to FIG. 81, shows another embodiment of the invention that the holding chamber area can be attached 80 to any screw or snap-in or other wise type of device.

[0202] Referring now to FIGS. 65, 66, 67, and 68, another embodiment of the storage cap container is shown. FIG. 68 shows an exploded view of a slip and interference slip.

[0203] Referring now to FIGS. 69, 70, 71, 72, 73 and 74, several embodiments of the storage cap bottom and attachments are shown. An absorbent pad or seal 296 allows moisture absorbent as well as a click-in top portion if desired to snap into position.

[0204] Referring now to FIGS. 75, 76, 77, and 78, another embodiment of the invention is shown, with an absorbent seal 297 and a click-in top 298 with a multi-secured bottom plug seal 299. The multi-secured bottom plug seal 299 is shown in greater detail FIG. 76.

[0205] Referring now to FIGS. 79, 80, 81, 82, and 83 another embodiment of an invention is shown. The storage cap 300 having the outer screw-on or snap-on cap portion having a flexible type top 301 that when depressed 303 opens the bottom area of a container or 302 with an absorbent seal, and when depressed 303 breaks the bottom 302 seal area 304 and goes back into position 305,

[0206] Referring now to FIGS. 84 and 85, the container area 306 whereby the invention is attached 307 to a container is shown.

[0207] Referring now to FIGS. 86, 87, 88, 89, and 90, a pull off safety cap 308 with a plunging mechanism 309 that has a cross, a cross with mesh, or a hole to allow liquid flow when depressed to activate the ingredients piercing and opening the bottom portion of 310 which also can have an additional seal ring for extra security and stability 311 with an absorbent seal 312 is shown. FIG. 87 shows the invention prior to activation with an exploded view in FIG. 88 of the upper area where the body and plunger meet.

[0208] Referring now to FIGS. 91 and 92, an area for attaching to a container that can be flat or utilized in a snap or screw mechanism 313 that the storage ingredient area that is attached to the cap 314 with an absorbent pad or seal 315 attached inside the invention, can release the product when unscrewed and a hinge 316 stays attached to the invention not allowing the bottom to fall into a container is shown. The seal plug mechanism 317 can have one or more areas of sealing that hermetically snaps into place when filled with ingredients.

[0209] Referring now to FIGS. 93 and 94, the same type of invention and mechanism as in FIGS. 91 and 92 is shown except that there is no hinge area, allowing the bottom in FIG. 318 to fall into the container and release ingredients stored.

[0210] Referring now to FIGS. 95 and 96, the invention after activated after it has been.

[0211] Referring now to FIGS. 97 and 97A, yet another invention on the bottom mechanism 319 how it stays attached 320 to the bottom of the invention so when unscrewed by an individual the ingredients stored in 321 falls into a container.

[0212] Referring now to FIGS. 98 and 98A, a mechanism as is shown with a larger domed area (or raised area) 323 on the cap portion to be able to store more ingredients, to be released when unscrewed and the bottom is opened by 322 rupturing the seal to allow ingredients to be dispersed. The bottom seal plug mechanism that when unscrewed the bottom 324 falls into a container.

[0213] Referring now to FIG. 99, the storage cap 325 that can be filled with ingredients through the upper area 326 or below 327 and after filling with ingredients the top portion

328 and bottom portion 329 can click into position with an absorbent seal 330. A barcode and chip seat 331 is kept for information purposes.

[0214] Referring now to FIG. 100, a storage cap with a pull-off 332 safety seal that when unscrewed rips the bottom open is shown that allows product to be dispersed into a container. When the product is filled with one or more ingredients through the upper cap it is sealed with a top cap 333 that has a one-way click-in position.

[0215] Referring now to FIGS. 101, 102, 103, 104, 105, 106, and 107, an embodiment of the invention on a carton is shown. A pull-off safety seal 334 with a line of weakening that, when taken off, a mesh like, or one or more holes, surface area can be plunged manually by an individual, allowing the stored ingredients 335 that is attached with click-in position rings 336 and can be ultrasonically welded or attached by any other means to store product. FIGS. 103 and 104 show a several ways the invention can be attached to a flexible or semi-flexible material.

[0216] Referring now to FIGS. 108, 109, and 110, an embodiment of the invention can be assembled with the piercing chamber portion on the bottom 337 that can be one or more angles and in any areas of holding products as shown in any variety of chambers, and also shows another flat surface area 338 where it can easily be attached to the upper area of the threaded top. Other embodiments showing ways of having the bottom opened when depressed are shown in FIGS. 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, and 131.

[0217] Referring now to FIG. 132, the invention can also be made of into any shape 339 other than round.

[0218] Referring now to FIGS. 133, 134, and 135, the invention is shown with a threaded 340 and snap in seal area 341 designed for a one-way click-in or barb like areas so that the cap area cannot be removed once attached to a container.

[0219] Referring now to FIG. 136, a cap is shown with a holding chamber 342 for product that, when screwed into position, acts as a holding ring 343 for the bottom seal area.

[0220] Referring now to FIG. 137, 138, 139, a sectional view of the storage cap 344 is shown. The bottom area 345 acts as a stop area for the bottom plug mechanism 346 so that, when unscrewed manually by an individual, the bottom plug falls into a container and release the product stored inside as shown in FIGS. 140 and 141. The invention can be of any size or shape for any container which is shown in FIGS. 142, 143, 144, and 145. An absorbent seal 347 can have a prize or lotto 348 that is attached to the plug area 349 so that when the product is consumed after activation of the invention, an individual can see the information through a container.

[0221] Referring now to FIGS. 146, 147, and 148, a cap is shown with a storage area 350 with a seal 351 that can be manually pulled off and placed into an opening of a container and the product inside released.

[0222] Referring now to FIG. 149, a fitment attachment area 352 is shown with one or more seal areas for attaching to a flexible container and with an inside reverse threaded mechanism that opens the bottom when unscrewed.

[0223] Referring now to FIGS. 150, 151, 152, 153, and 154, other embodiments of the invention that can be attached to a flexible or non-flexible material are shown.

[0224] The instant invention has been shown and described herein in what is considered to be the most practical and preferred embodiment. It is recognized, however, that depart-

tures may be made therefrom within the scope of the invention and that obvious modifications will occur to a person skilled in the art.

What is claimed is:

1. An apparatus for containing, mixing, and dispensing a substance comprising:

a liquid or powder holding target container having one or more flexible walls;

a storage and release fitment cap of an elliptical shape removably attached to said target container, said cap capable of containing at least one substance to be dispensed into the container;

said cap having a cap bottom portion and an actuating portion movably positioned inside the cap bottom portion;

said actuation portion having a top portion capable of an air tight seal;

said cap bottom portion having a sealed bottom closure with at least one line of weakening;

wherein the cap is manually activated when the seal of said sealed bottom closure is broken and the substance in the cap is released into said target container;

wherein the cap is manually activated by downward manual force being applied to the actuating mechanism; and

where the cap being manually activated results in the actuating mechanism causing said actuating portion to extend vertically downward, engaging and displacing the sealed bottom closure of said cap bottom into a position that causes a substance or substances stored within said chamber to be released into the container below.

2. The apparatus of claim **1**, further comprising a rigid cover portion removably positioned on top of and sized to completely cover the actuating portion.

3. The apparatus of claim **1**, wherein downward manual force is exerted by manually depressing the actuating portion vertically.

4. The apparatus of claim **1**, wherein downward manual force is exerted by twisting the actuating portion in an engaging direction with the cap bottom portion.

5. The apparatus of claim **1**, wherein the target container comprises a pouch, said pouch made of a flexible material that is impervious to liquid or gas.

6. The apparatus of claim **1**, wherein the target container comprises a carton.

7. The apparatus of claim **1**, wherein said cap bottom portion additionally includes a threaded area on the exterior wall of said cap bottom portion to allow the cap to be screwed onto the target container.

8. The apparatus of claim **1**, wherein said cap bottom portion additionally includes one or more ridges on the exterior wall of said cap bottom portion to allow the cap to be locked onto the target container.

9. The apparatus of claim **1**, additionally comprising a plunger mechanism having an elongated portion that is between the bottom portion and the top portion, creating a sealed interior chamber, wherein said elongated portion is sized to slidably fit within the hollow body of said bottom portion and said top portion is sized to fit around the rim of the top receiving end, wherein

said plunger mechanism located within said bottom portion;

the cap is manually activated when downward manual force is applied to the plunger mechanism; and

where downward manual force on the plunger mechanism engages and displaces the seated bottom closure of the plunger mechanism and causes said elongated portion to extend vertically downward, engaging and displacing the sealed bottom closure of said release cap into a position that causes a substance or substances stored within said chamber to be released into the container below.

10. An apparatus for containing, mixing, and dispensing a substance comprising:

a liquid or powder holding target container having one or more flexible walls;

a storage and release fitment cap of an elliptical shape removably attached to said target container, said cap capable of containing at least one substance to be dispensed into the container;

said cap having a cap bottom portion and an actuating portion movably positioned inside the cap bottom portion;

said actuation portion having a top portion capable of an air tight seal;

said cap bottom portion having a sealed bottom closure with at least one line of weakening;

wherein the cap is manually activated when the seat of said sealed bottom closure is broken and the substance in the cap is released into said target container;

wherein the cap is manually activated by upward manual force being applied to the actuating mechanism; and

where the cap being manually activated results in the actuating mechanism causing said actuating portion to extend vertically downward, engaging and displacing the sealed bottom closure of said cap bottom into a position that causes a substance or substances stored within said chamber to be released into the container below.

11. The apparatus of claim **10**, further comprising a rigid cover portion removably positioned on top of and sized to completely cover the actuating portion.

12. The apparatus of claim **10**, wherein up manual force is exerted by manually pulling the actuating portion upwards vertically.

13. The apparatus of claim **10**, wherein downward manual force is exerted by twisting the actuating portion in an engaging direction with the cap bottom portion.

14. The apparatus of claim **10**, wherein the target container comprises a pouch, said pouch made of a flexible material that is impervious to liquid or gas.

15. The apparatus of claim **10**, wherein the target container comprises a carton.

16. The apparatus of claim **10**, wherein said cap bottom portion additionally includes a threaded area on the exterior wall of said cap bottom portion to allow the cap to be screwed onto the target container.

17. The apparatus of claim **10**, wherein said cap bottom portion additionally includes one or more ridges on the exterior wall of said cap bottom portion to allow the cap to be locked onto the target container.

18. The apparatus of claim **10**, additionally comprising a plunger mechanism having an elongated portion that is between the bottom portion and the top portion, creating a sealed interior chamber, wherein said elongated portion is

sized to slidably fit within the hollow body of said bottom portion and said top portion is sized to fit around the rim of the top receiving end, wherein

said plunger mechanism located within said bottom portion;

the cap is manually activated when upward manual force is applied to the plunger mechanism; and

where upward manual force on the plunger mechanism engages and displaces the sealed bottom closure of the plunger mechanism and causes said elongated portion to extend vertically downward, engaging and displacing the sealed bottom closure of said release cap into a position that causes a substance or substances stored within said chamber to be released into the container below.

19. An apparatus for containing, mixing, and dispensing a substance comprising:

a liquid or powder holding target container having one or more flexible walls and a receiving portion on its base with a line of weakening;

a storage and release cap removably attached to the bottom of said target container, said cap capable of containing at least one substance to be dispensed into the container;

said cap having an actuating portion movably positioned inside the base of cap;

said actuation portion having a sealed bottom closure portion capable of an air tight seal;

said actuating portion having a top portion with at least one line of weakening;

wherein the cap is manually activated when the actuating portion is engaged with the receiving portion, causing the seal of said actuating portion and the receiving portion to break and the substance in the cap is released into said target container; and

wherein the cap is manually activated by upward manual force being applied to the cap.

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