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# DESCRIPTION

## Cross-Reference to Related Applications

**[0001]** This application claims the benefit of, and priority to, U.S. Provisional Patent Application No. 62/409242, filed 17 Oct. 2016, and U.S. Provisional Patent Application No. 62/508793, filed 19 May 2017.

## Field

**[0002]** The present disclosure herein relates broadly to containers, and more specifically to drinkware containers used for drinkable beverages or foods.

## Background

**[0003]** A container may be configured to store a volume of liquid. Containers can be filled with hot or cold drinkable liquids, such as water, coffee, tea, a soft drink, or an alcoholic beverage, such as beer. These containers can be formed of a double-wall vacuumed formed construction to provide insulative properties to help maintain the temperature of the liquid within the container.

## BRIEF SUMMARY

**[0004]** This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. The Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter.

**[0005]** In certain examples, an insulating container can be configured to retain a volume of liquid. The insulating container can include a canister with a first inner wall having a first end with an opening extending into an internal reservoir for receiving liquid, along with a second outer wall and a bottom portion forming an outer shell of the canister. The bottom portion may form a second end configured to support the canister on a surface.

**[0006]** The insulating container may include a spout adapter configured to seal the opening of the canister, and provide a re-sealable spout opening that is narrower than the opening of the canister, to facilitate more controlled pouring of the contents of the internal reservoir of the canister into another container. In one example, the other container may be a cup formed for a

lid that is removably coupled to a top of the spout adapter.

**[0007]** US 2007/251956 A1 is the prior art closest to the invention and discloses the preamble of claim 1.

**[0008]** An insulating container according to the invention comprises the features of claim 1.

**BRIEF DESCRIPTION OF THE DRAWINGS**

**[0009]** The present disclosure is illustrated by way of example and not limited in the accompanying figures in which like reference numerals indicate similar elements and in which:

FIG. 1 depicts an isometric view of an insulating container, according to one or more aspects described herein.

FIG. 2 depicts another isometric view of the insulating container from FIG. 1, according to one or more aspects described herein.

FIG. 3 depicts yet another isometric view of the insulating container from FIG. 1, according to one or more aspects described herein.

FIG. 4 depicts an exploded isometric view of the container from FIG. 1, according to one or more aspects described herein.

FIG. 5 depicts a more detailed isometric view of a top of a spout adapter, according to one or more aspects described herein.

FIG. 6 depicts a more detailed isometric view of a bottom of the spout adapter, according to one or more aspects described herein.

FIG. 7 schematically depicts a cross-sectional isometric view of the spout adapter, according to one or more aspects described herein.

FIG. 8 depicts an isometric view of cap, according to one or more aspects described herein.

FIG. 9 schematically depicts a cross-sectional view of the insulating container of FIG. 1, according to one or more aspects described herein.

FIGS. 10A-10F depict steps of a molding process of the spout adapter 104, according to one or more aspects described herein.

**[0010]** Further, it is to be understood that the drawings may represent the scale of different components of various examples; however, the disclosed examples are not limited to that particular scale.

## DETAILED DESCRIPTION

**[0011]** In the following description of the various examples, reference is made to the accompanying drawings, which form a part hereof, and in which is shown by way of illustration various examples in which aspects of the disclosure may be practiced.

**[0012]** FIG. 1 depicts an isometric view of an insulating container 100, according to one or more aspects described herein. In one example, the container 100 may be configured to store a volume of liquid. The container 100 comprises a canister 102 that is removably coupled to a spout adapter 104 and a lid 106. The lid 106, when removed from the spout adapter 104, may be configured to function as a cup into which, for example, a portion of the liquid stored in the canister 102 can be poured. In one example, the canister 102 may be substantially cylindrical in shape, however, it is contemplated that the canister 102 may be embodied with any shape, such as a cuboidal shape, without departing from the scope of these disclosures. Further, in various examples, the canister 102 may be referred to as a bottom portion, base, or insulated base structure having a substantially cylindrical shape.

**[0013]** FIG. 2 depicts another isometric view of the insulating container 100 from FIG. 1, according to one or more aspects described herein. As depicted in FIG. 2, the lid 106 is removed from the spout adapter 104 to reveal a cap 108 that is removably coupled to a top surface 110 of the spout adapter 104. The cap 108, when removed from the spout adapter 104, as depicted in FIG. 3, reveals a spout opening 112 that extends through the spout adapter 104 into a cavity of the canister 102. Accordingly, the cap 108 is configured to removably couple to, and seal (i.e. resealably seal), the spout opening 112. Accordingly, in one example, the spout opening 112 provides a narrower opening than an opening 158 (see, e.g. FIG. 9) of the canister 102, and as such, provides for more controlled/ better targeted manual pouring of the contents of the canister 102 into another container, such as the lid 106, when removed from the spout adapter 104. In one example, the spout opening 112 of the spout adapter 104 is off-center on the top surface 110 of the spout adapter 104. It is contemplated that the spout opening 112 may be positioned at any point on the top surface 110, and may be off-center, as depicted, or may be centered. In another example, the spout opening 112 may have a central axis (parallel to the axis of rotation of the cylindrical shape of the spout opening 112) that is parallel to a longitudinal axis of the container 100 (i.e. longitudinal axis parallel to the axis of rotation of the cylindrical shape of the canister 102) and/or perpendicular to the plane of top surface 110 of the spout adapter 104. In an alternative example, the central axis of the spout opening 112 may be angled relative to the top surface 110 at an angle that is not 90 degrees. In this regard, it is contemplated that the any angle may be utilized, without departing from the scope of these disclosures.

**[0014]** According to the invention, the cap 108 includes a magnetic top surface 111. The magnetic top surface 111 may include a polymeric outer layer covering a ferromagnetic structure (e.g. a metal plate/ other structural shape may be positioned below the magnetic top

surface 111). In another implementation, all or a portion of the outer surfaces of the cap 108 may be constructed from one or metals and/or alloys. Accordingly, the magnetic top surface 111 may include an outer material that is ferromagnetic, or itself magnetized. In another implementation, the magnetic top surface 111 may comprise one or more polymers overmolded over a magnet structure (i.e. a magnetized metal/ alloy may be positioned within the cap 108 as it is being molded).

**[0015]** The term "magnetic," as utilized herein, may refer to a material (e.g. a ferromagnetic material) that may be temporarily or "permanently" magnetized. As such, the term "magnetic" may refer to a material (i.e. a surface, or object, and the like) that may be magnetically attracted to a magnet (i.e. a temporary or permanent magnet) that has a magnetic field associated therewith. In one example, a magnetic material may be magnetized (i.e. may form a permanent magnet). Additionally, various examples of magnetic materials may be utilized with the disclosures described herein, including nickel, iron, and cobalt, and alloys thereof, among others.

**[0016]** The cap 108, when removed from the spout opening 112, as depicted in FIG. 3, may be magnetically coupled to a docking surface 114 of the spout adapter 104. Similar to the top surface 111 of the cap 108, the docking surface 114 of the spout adapter 104 may include a magnetic material. In one example, the docking surface 114 may include one or more polymers that are overmolded over a magnetic element (e.g. a metal plate, foil, or wire, among others). In another example, the docking surface 114 may include a metallic and magnetic outer surface.

**[0017]** It is contemplated that in one example, the canister 102 and the lid 106 may be primarily constructed from an alloy, such as steel, or an alloy of titanium, and the spout adapter 104 and cap 108 may be primarily constructed from one or more polymers (with the exception of the magnetic top surface 111, and the docking surface 114, among others). However, it is further contemplated that each element described herein can be constructed from one or more metals, alloys, polymers, ceramics, or fiber-reinforced materials, among others. In particular, the container 100 may utilize one or more of steel, titanium, iron, nickel, cobalt, high impact polystyrene, acrylonitrile butadiene styrene, nylon, polyvinylchloride, polyethylene, and/or polypropylene, among others.

**[0018]** FIG. 4 depicts an exploded isometric view of the container 100, according to one or more aspects described herein. In particular, FIG. 4 depicts the spout adapter 104 removed from the canister 102, and the lid 106 and cap 108 removed from the spout adapter 104. In one implementation, the spout adapter 104 may include a bottom threaded surface 116 that is configured to removably couple to a threaded inner surface 118 of the canister 102. Additionally, the spout adapter 104 may include a top threaded surface 120 that is configured to removably couple to a threaded inner surface of the lid 106. Further a threaded outer spout surface 122 is configured to removably couple to a threaded inner surface 124 of the cap 108.

**[0019]** It is contemplated, however, that in an alternative implementation, the threaded

surfaces previously described may be reversed, without departing from the scope of these disclosures. In this alternative implementation, the spout adapter 104 may include a bottom threaded surface that is configured to removably couple to a threaded outer surface of the canister 102, and the spout adapter 104 may include a top threaded surface that is configured to removably couple to a threaded outer surface of the lid 106. Further a threaded inner spout surface of the spout opening 112 may be configured to removably couple to a threaded outer surface of the cap 108.

**[0020]** It is contemplated that a threaded surface discussed herein may include any thread geometry, including any thread pitch, angle, or length, among others, without departing from the scope of these disclosures. As such, any of the bottom threaded surface 116, threaded inner surface 118, top threaded surface 120, threaded inner surface of the lid 106, threaded outer spout surface 122, and/or threaded inner surface 124 may be fully engaged with corresponding mating elements by rotating the elements relative to one another by any number of rotations, without departing from the scope of these disclosures. For example, two mating threaded elements, from elements 116, 118, 120, 122, and/or 124, may be fully engaged by rotating by approximately ¼ of one full revolution, approximately 1/3 of one full revolution, approximately ½ of one full revolution, approximately 1 full revolution, approximately 2 full revolutions, approximately 3 full revolutions, at least 1 revolution, or at least five revolutions, among many others.

**[0021]** It is further contemplated that the removable couplings between one or more of the canister 102, the spout adapter 104, the lid 106 and the cap 108 may include additional or alternative coupling mechanisms, such as clamp elements, tabs, ties, or an interference fitting, among others, without departing from the scope of these disclosures.

**[0022]** FIG. 5 depicts a more detailed isometric view of the top of the spout adapter 104, according to one or more aspects described herein. The spout adapter 104 includes the bottom threaded surface 116 separated from the top threaded surface 120 by a grip ring 126. In one implementation, the docking surface 114 is formed from a portion of a handle 128 extending from the grip ring 126. In one implementation, the grip ring 126 is configured to be grasped by a user in order to couple and uncouple the spout adapter 104 from the canister 102 and/or lid 106. Accordingly, in one example, the handle 128 prevents or reduces a user's hand slipping around the grip ring 126 as a user exerts a manual torque on the spout adapter 104 to couple or decouple it from the canister 102 and/or lid 106. It is further contemplated that the grip ring 126 may comprise multiple handle structures in addition to the single handle 128 depicted in FIG. 5, without departing from the scope of these disclosures. Additionally, the grip ring 126 may include one or more tacky or rubberized materials, or a surface texture such as a knurling, configured to prevent or reduce slippage of a user's hand as it rotates the spout adapter 104 relative to the canister 102 and/or the lid 106.

**[0023]** In one example, the spout opening 112 of the spout adapter 104 provides access to a spout channel 130 that extends through a height (approximately parallel to direction 132) of the spout adapter 104 and through to a bottom surface 134 of the spout adapter 104, as

depicted in FIG. 6. FIG. 7 schematically depicts a cross-sectional isometric view of the spout adapter 104, according to one or more aspects described herein. As depicted in FIG. 7, the spout channel 130 may extend from the spout opening 112 through to the bottom surface 134. In the depicted implementation, the spout channel 130 may have a diameter 136 approximately uniform through the length of the spout channel 130. However, it is contemplated that the spout channel may have different diameters and sizes through the length of the channel extending between the spout opening 112 and the bottom surface 134.

**[0024]** In one implementation, the spout adapter 104 may include an internal cavity 138 that extends around the spout channel 130. This internal cavity 138 may be sealed by one or more manufacturing processes utilized to construct the spout adapter 104. Accordingly, in one example, the internal cavity 138 may contain a vacuum cavity to reduce heat transfer between the bottom surface 134 and top surface 111, or vice versa. Additionally or alternatively, it is contemplated that the internal cavity 138 may be partially or wholly filled with one or more foam or polymer materials to increase thermal resistance. In yet another example, one or more surfaces of the internal cavity 138 may be coated with a reflective material to reduce heat transfer by radiation.

**[0025]** In one example, a magnet, or magnetic material, may be positioned behind the docking surface 114. Accordingly, in one implementation, the magnet or magnetic material may be positioned within a cavity 140 within the handle 128. It is contemplated that any coupling mechanism may be utilized to position the magnet or magnetic material within the cavity 140, including gluing, an interference fitting, clamping, screwing, or riveting, among others. In another example, the magnet or magnetic material may be overmolded within the handle 128, and such that the cavity 140 represents a volume that the overmolded magnet or magnetic material occupies.

**[0026]** In one example, the spout adapter 104 may be integrally formed. In another example, the spout adapter 104 may be formed from two or more elements that are coupled together by another molding process, welding, gluing, interference fitting, or one or more fasteners (rivets, tabs, screws, among others). In one implementation, the spout adapter 104 may be constructed from one or more polymers. It is contemplated, however, that the spout adapter 104 may, additionally or alternatively, be constructed from one or more metals, alloys, ceramics, or fiber-reinforced materials, among others. The spout adapter 104 may be constructed by one or more injection molding processes. In one specific example, a multi-shot injection molding process (e.g. a two-shot, or a three-shot, among others) may be utilized to construct the spout adapter 104. It is further contemplated that additional or alternative processes may be utilized to construct the spout adapter 104, including rotational molding, blow molding, compression molding, gas assist molding, and/or casting, among others.

**[0027]** FIG. 8 depicts an isometric view of cap 108, according to one or more aspects described herein. As previously described, the cap 108 may include a magnetic top surface 111. Accordingly, the cap 108 may be constructed from one or more polymer materials, and such that the magnetic top surface 111 includes one or more polymers that are overmolded

over a magnetic material.

**[0028]** In the depicted example, cap 108 has a substantially cylindrical shape. However, it is contemplated that additional or alternative shapes may be utilized, without departing from the scope of these disclosures. For example, cap 108 may be cuboidal in shape, among others. The cap 108 includes grip depressions 142a-c, which are configured to reduce or prevent a user's fingers from slipping upon application of a manual torque to the cap 108 to couple or uncouple the cap 108 to or from the threaded outer spout surface 122 of the spout opening 112. It is contemplated that any number of the grip depressions 142a-c may be utilized around a circumference of the cylindrical cap 108, without departing from the scope of these disclosures. Further, the cap 108 may include additional or alternative structural elements configured to increase a user's grip of the cap 108. For example, an outer cylindrical surface 144 of the cap 108 may include a tacky/ rubberized material configured to increase a user's grip. Further, the outer cylindrical surface 144 may include a series of corrugations, or a knurling.

**[0029]** FIG. 9 schematically depicts a cross-sectional view of the insulating container 100 with the cap 108 coupled to the threaded outer spout surface 122, the lid 106 coupled to the top threaded surface 120 of the spout adapter 104, and the bottom threaded surface 116 of the spout adapter 104 coupled to the threaded inner surface 118 of the canister 102.

**[0030]** The canister 102 may include a first inner wall 146 and a second outer wall 148. A sealed vacuum cavity 150 may be formed between the first inner wall 146 and the second outer wall 148. This construction may be utilized to reduce heat transfer through the first inner wall 146 and the second outer wall 148 between a reservoir 152, which is configured to receive a mass of liquid, and an external environment 154. As such, the sealed vacuum cavity 150 between the first inner wall 146 and the second outer wall 148 may be referred to as an insulated double-wall structure. Additionally, the first inner wall 146 may have a first end 156 that defines an opening 158 extending into the internal reservoir 152 for receiving a mass of liquid. The second outer wall 148 may form an outer shell of the canister 102. The second outer wall 148 may be formed of a side wall 160 and a bottom portion 162, which forms a second end 164 to support the canister 102 on a surface. A seam 163 can be formed between the second outer wall 148 and the bottom portion 162. In one example, the bottom portion 162 can be press-fitted onto the second outer wall 148. Additionally the bottom portion 162 can be welded to the second outer wall 148. The weld may also be polished such that the seam does not appear on the bottom of the canister 102.

**[0031]** The bottom portion 162 may include a dimple 166 that is used during a vacuum formation process. As depicted in FIG. 9, the bottom portion 162 may cover the dimple 166 such that the dimple 166 is not visible to the user. The dimple 166 may generally resemble a dome shape. However, other suitable shapes are contemplated for receiving a resin material during the manufacturing process, such as a cone, or frustoconical shape. The dimple 166 may include a circular base 168 converging to an opening 170 extending into the second outer wall 148. As discussed below, the opening 170 may be sealed by a resin (not shown). During

the formation of the vacuum between the first inner wall 146 and the second outer wall 148, the resin may seal the opening 170 to provide the sealed vacuum cavity 150 between the first inner wall 146 and the second outer wall 148 in formation of the insulated double-wall structure.

**[0032]** In alternative examples, the dimple 166 may be covered by a correspondingly shaped disc (not shown) such that the dimple 166 is not visible to the user. The circular base 168 may be covered by a disc, which can be formed of the same material as the second outer wall 148 and the first inner wall 146. For example, the first inner wall 146, the second outer wall 148, and the disc may be formed of titanium, stainless steel, aluminum, or other metals or alloys. However, other suitable materials and methods for covering the dimple 166 are contemplated, as discussed herein and as discussed in U.S. Appl. No. 62/237,419.

**[0033]** The canister 102 may be constructed from one or more metals, alloys, polymers, ceramics, or fiber-reinforced materials. Additionally, canister 102 may be constructed using one or more hot or cold working processes (e.g. stamping, casting, molding, drilling, grinding, forging, among others). In one implementation, the canister 102 may be constructed using a stainless steel. In specific examples, the canister 102 may be formed substantially of 304 stainless steel or a titanium alloy. Additionally, one or more cold working processes utilized to form the geometry of the canister 102 may result in the canister 102 being magnetic (may be attracted to a magnet).

**[0034]** In one example, the reservoir 152 of the canister 102 may have an internal volume of 532 ml (18 fl. oz.). In another example, the reservoir 152 may have an internal volume ranging between 500 and 550 ml (16.9 and 18.6 fl. oz.) or between 1000 ml and 1900 ml (33.8 fl. oz. and 64.2 fl. oz). In yet another example, the reservoir 152 may have an internal volume of at least 100 ml (3.4 fl. oz.), at least 150 ml (5.1 fl. oz.), at least 200 ml (6.8 fl. oz.), at least 400 ml (13.5 fl. oz.), at least 500 ml (16.9 fl. oz.), or at least 1000 ml (33.8 fl. oz.). The opening 158 in the canister 102 may have an opening diameter of 64.8 mm. In another implementation, the opening 158 may have an opening diameter at or between 60 and/or 70 mm. The reservoir 152 may have an internal diameter 153 and a height 155 configured to receive a standard-size 355 ml (12 fl. oz.) beverage (aluminum) can (standard 355 ml beverage can with an external diameter of approximately 66 mm and a height of approximately 122.7 mm). Accordingly, the internal diameter 153 may measure at least 66 mm, or between 50 mm and 80 mm. The height 155 may measure at least 122.7 mm, or between 110 mm and 140 mm.

**[0035]** Additional or alternative methods of insulating the container 100 are also contemplated. For example, the cavity 150 between the first inner wall 146 and the outer walls 148 may be filled with various insulating materials that exhibit low thermal conductivity. As such, the cavity 150 may, in certain examples, be filled, or partially filled, with air to form air pockets for insulation, or a mass of material such as a polymer material, or a polymer foam material. In one specific example, the cavity 150 may be filled, or partially filled, with an insulating foam, such as polystyrene. However, additional or alternative insulating materials may be utilized to fill, or partially fill, cavity 150, without departing from the scope of these disclosures.

**[0036]** Moreover, a thickness of the cavity 150 may be embodied with any dimensional value, without departing from the scope of these disclosures. Also, an inner surface of one or more of the first inner wall 146 or the second outer wall 148 of the container 100 may comprise a silvered surface, copper plated, or covered with thin aluminum foil configured to reduce heat transfer by radiation.

**[0037]** In one example, the lid 106 may be formed of one or more metals, alloys, polymers, ceramics, or fiber-reinforced materials, among others. Further, the lid 106 may be formed using one or more injection molding or other manufacturing processes described herein among others. The lid 106 may comprise a solid structure, or may include a double-wall structure similar to the canister 102, having an inner wall 172, an outer wall 174, and a cavity 176 therebetween. It is also contemplated that the lid 106 may be insulated such that the cavity 176 is a vacuum cavity constructed using the techniques described herein.

**[0038]** In one example, the canister 102 includes a shoulder region 182. As such, the canister 102 may have an outer diameter 184 that is greater than an outer diameter 186 of the spout adapter 104. Accordingly, an outer wall 148 of the canister 102 may taper between points 188 and 190 along a shoulder region 182. In one example, the shoulder region 182 may improve heat transfer performance of the canister 102 (reduce a rate of heat transfer). In particular, the shoulder region 182 may comprise insulation having lower thermal conductivity (higher thermal resistance/ insulation) than the lid spout adapter 104 that seals the opening 158.

**[0039]** It is contemplated that the spout adapter 104 may include a lower gasket 178 configured to seal the opening 158 of the canister 102 when the spout adapter 104 is removably coupled thereto. Additionally, the spout adapter 180 may include an upper gasket configured to resealably seal the lid 106 against the spout adapter 104, when coupled thereto.

**[0040]** FIGS. 10A-10F depict steps of a molding process of the spout adapter 104, according to one or more aspects described herein. As previously described, the spout adapter may be constructed from one or more polymers, and molded using a multi-shot injection molding process, among others. Accordingly, in one example, FIG. 10A depicts an intermediate spout adapter structure 1002 of following a first injection molding shot of polymer. The intermediate spout adapter structure 1002 includes a top threaded section 1004 and a bottom threaded section 1006 that will form the top threaded surface 120 and the bottom threaded surface 116, respectively, when the molding processes of the spout adapter 104 are complete. In one implementation, the intermediate spout adapter structure 1002 includes a complete top surface 110 and spout opening 112 having threaded outer spout surface 122 and spout channel 130.

**[0041]** FIG. 10B depicts a second intermediate spout adapter structure 1010 following a second injection molding shot. The second intermediate spout adapter structure 1010 includes a grip ring base structure 1112 that extends around a circumference of the second intermediate spout adapter structure 1010 and forms an underlying structural support surface for an overmolded third shot that forms the grip ring 126, as described with reference to FIG.

10C. Additionally, the second intermediate spout adapter structure 1010 includes a handle base structure 1114, which forms an underlying structural support surface for an overmolded third shot that forms the handle 128. Further, the handle base structure 1114 includes a plate bracket 1116, which, in one implementation, is configured to hold a magnetic plate 1118 in a fixed position on surface 1120 prior to overmolding to form the docking surface 114. Further, the plate bracket 1116 may include clamping elements configured to hold the magnetic plate 1118 in an interference fit prior to overmolding with a third injection molding shot. However, it is contemplated that the plate bracket 1116 may utilize additional or alternative elements for holding the magnetic plate 1118, including gluing, or using one or more fasteners, among others.

**[0042]** FIG. 10C depicts a third intermediate spout adapter structure 1020 following a third injection molding shot of polymer. In particular, a third injection molding shot of polymer is configured to overmold the grip ring base structure 1112 and handle base structure 1114 to form the grip ring 126 and handle 128 with docking surface 114, as previously described. It is also contemplated, however, that the grip ring base structure 1112 could be formed separately with threads and threaded and glued into place on the spout adapter structure 1010.

**[0043]** FIG. 10D depicts a bottom view of the third intermediate spout adapter structure 1020 of FIG. 10C. In particular, FIG. 10D depicts an opening 1022 into a cavity (i.e. cavity 138 described in FIG. 7) prior to forming the bottom surface 134 of the spout adapter 104. Accordingly, a foam 1024 may be injected into the cavity, as depicted in FIG. 10D to partially or wholly fill the cavity, and thereby increase thermal resistivity of the spout adapter 104, once complete. It is contemplated that the foam 1024 may comprise any polymer foam material, without departing from the scope of these disclosures.

**[0044]** FIG. 10E depicts a fourth intermediate spout adapter structure 1030 having a lower cap 1032 positioned to cover the opening 1022, as previously described in relation to FIG. 10E. In one example, the lower cap 1032 may be formed by a fourth shot of a polymer injection molding process (otherwise referred to as a first shot of a process to mold the bottom surface 134).

**[0045]** FIG. 10F depicts the complete spout adapter 104 following a fifth shot of an injection molding process (otherwise referred to as a second shot of a process to mold the bottom surface 134). As depicted, a fifth injection molding shot may be utilized to mold a sealing element 1042, which seals the opening 102, as previously described in relation to FIG. 10E, and forms the bottom surface 134 of the complete spout adapter 104.

**[0046]** In accordance with the invention, an insulating container formed of a material includes a canister that has a first inner wall that has a first end with a threaded sidewall and an opening extending into an internal reservoir for receiving liquid, and a second outer wall forming an outer shell of the canister. The second outer wall includes a second end configured to support the canister on a surface. The canister also includes a sealed vacuum cavity forming an insulated double wall structure between the first inner wall and the second outer wall. The

insulating container also includes a spout adapter having a spout channel extending through a height of the spout adapter between a bottom surface and a spout opening on a top surface of the spout adapter. The spout opening is sealed with a cap having a magnetic top surface configured to magnetically couple to a docking surface on a grip ring extending around a circumference of the spout adapter between a top threaded surface and a bottom threaded surface. The bottom threaded surface configured to resealably seal the spout adapter to the opening of the canister, and the top threaded surface configured to removably couple the spout adapter to a lid.

**[0047]** The present disclosure is disclosed above and in the accompanying drawings with reference to a variety of examples. The purpose served by the disclosure, however, is to provide examples of the various features and concepts related to the disclosure, not to limit the scope of the disclosure.

# REFERENCES CITED IN THE DESCRIPTION

Cited references

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

**Patent documents cited in the description**


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- US62508793 **[0001]**
- US2007251956A1 **[0007]**
- US62237419 **[0032]**

**PATENTKRAV**

1. Isolerende beholder (100), der omfatter:

en cylinder (102), der omfatter:

en første indervæg (146), der har en første ende med en gevindsidevæg og en åbning, der strækker sig ind i et indre reservoir til modtagelse af væske,

en anden ydervæg (148), der danner en ydre skal af cylinderen, hvilken anden ydervæg har en anden ende, der er konfigureret til at understøtte cylinderen på en overflade,

et forseglet vakuumhulrum (150), der danner en isoleret dobbeltvægstruktur mellem den første indervæg og den anden ydervæg,

en tudadapter (104), der omfatter:

en nedre gevindoverflade (116), der er konfigureret til aftageligt at kobles til og forsegle cylinderens åbning,

en øvre gevindoverflade (120) og

et låg (106), der er konfigureret til aftageligt at kobles til tudadapterens (104) øvre gevindoverflade (120),

kendetegnet ved, at den yderligere omfatter:

en gribering (126), der er anbragt med afstand mellem den nedre gevindoverflade (116) og den øvre gevindoverflade (120), strækker sig rundt om en omkreds af tudadapteren (104) og har mindst ét håndtag (128), der strækker sig derfra, hvor det mindst ene håndtag (128) er konfigureret til at blive grebet for at rotere tudadapteren (104) i forhold til cylinderen (102),

en hætte (108), der er konfigureret til aftageligt at kobles til og forsegle en tudåbning (112) på en topflade (110) af tudadapteren (104), hvor hætten (108) har en magnetisk topflade (111) og er konfigureret til magnetisk at kobles til en koblingsflade (114) på håndtaget (128), når den fjernes fra tuden (112).

2. Isolerende beholder ifølge krav 1, hvor tudadapteren (104) yderligere omfatter en tudkanal (130), der strækker sig mellem tudåbningen (112) og en bundflade (134) af tudadapteren (104).

3. Isolerende beholder ifølge krav 2, hvor tudkanalen (130) har en ensartet diameter mellem tudåbningen (112) og tudadapterens (104) bundflade (134).

4. Isolerende beholder ifølge krav 2, hvor tudadapteren (104) yderligere omfatter et forseglet indre hulrum (138), der strækker sig rundt om tudkanalen (130).

5. Isolerende beholder ifølge krav 4, hvor det forseglede indre hulrum (138) er delvist eller helt fyldt med et isolerende materiale.

6. Isolerende beholder ifølge krav 5, hvor det isolerende materiale er et skum.

7. Isolerende beholder ifølge krav 4, hvor det forseglede indre hulrum (138) indeholder et vakuumhulrum.

8. Isolerende beholder ifølge krav 1, hvor det mindst ene håndtag (128) yderligere omfatter et hulrum, i hvilket et magnetisk materiale anbringes.

# DRAWINGS

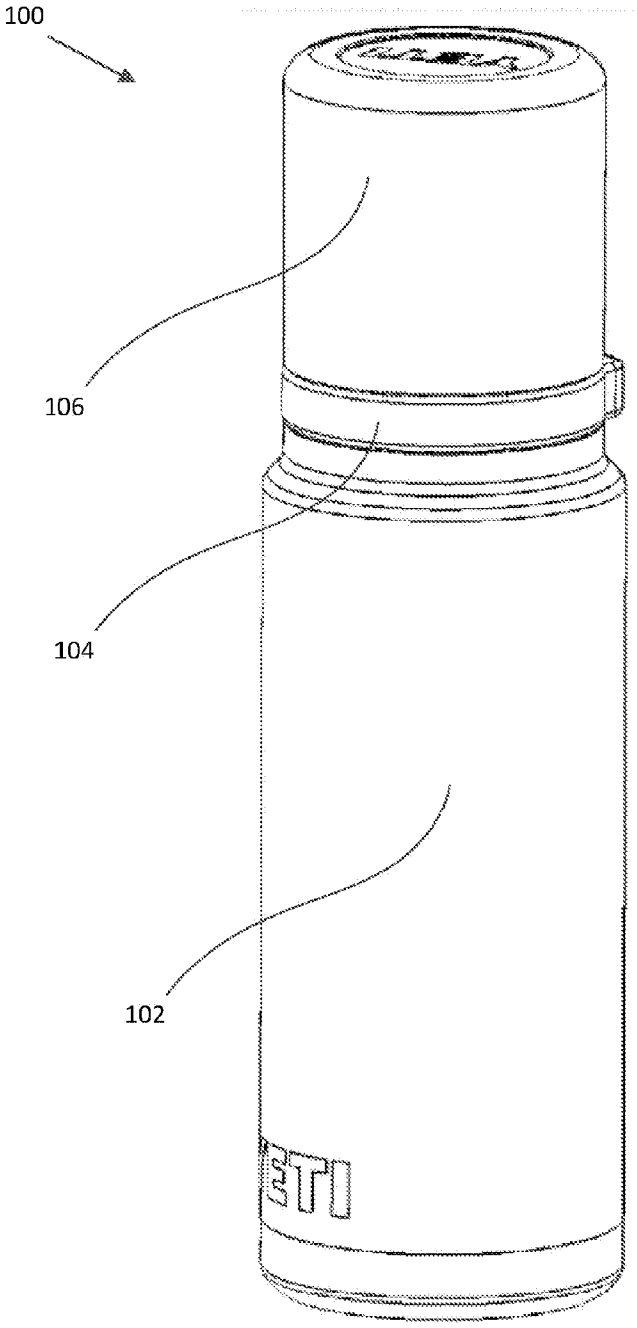



FIG. 1

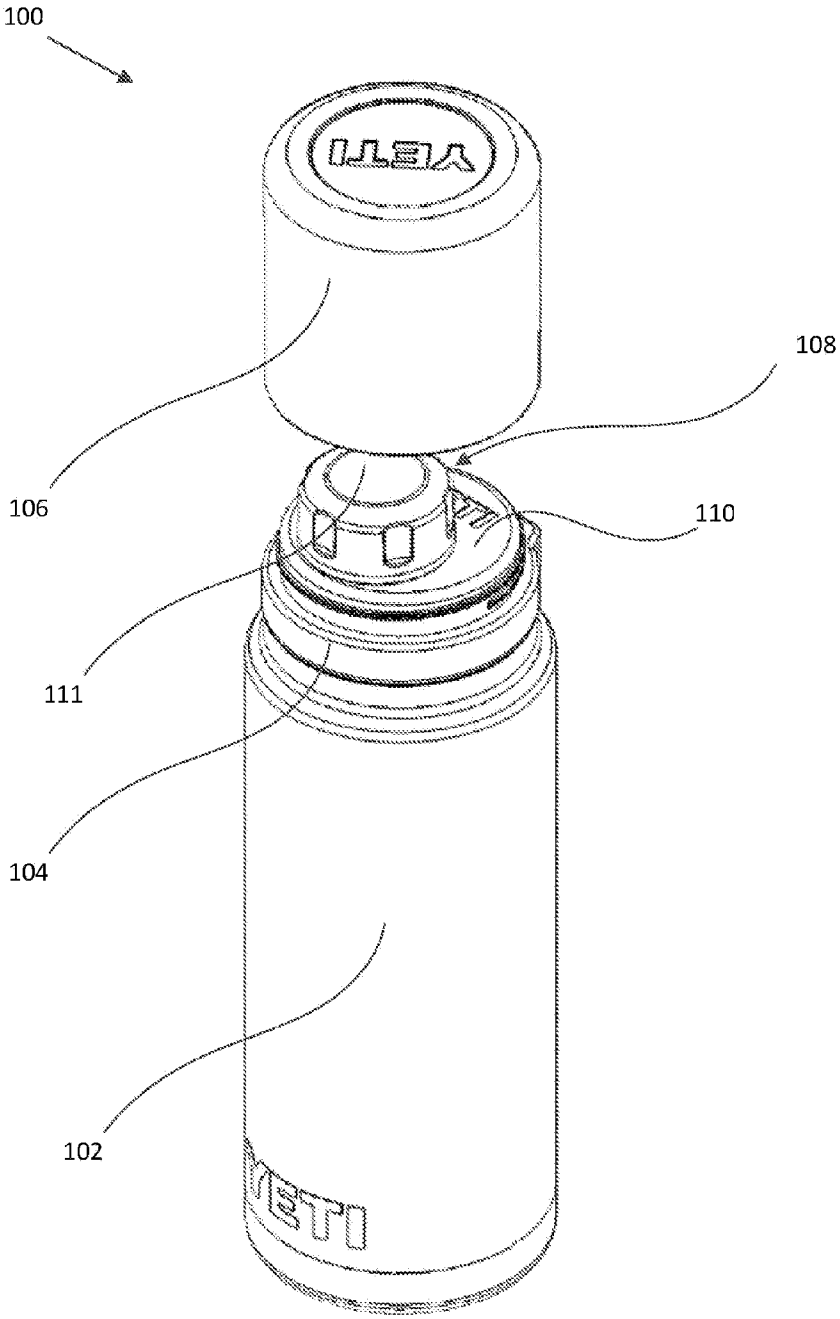



FIG. 2

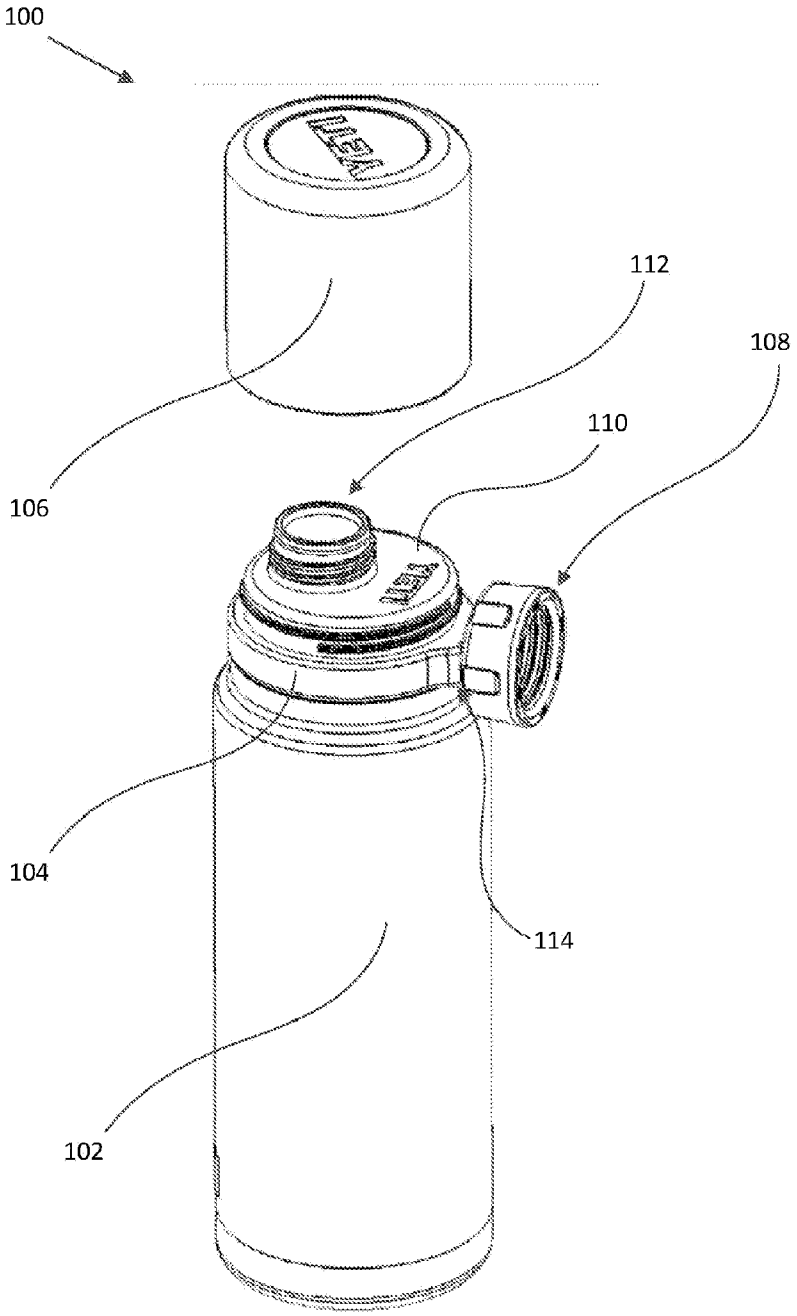



FIG. 3

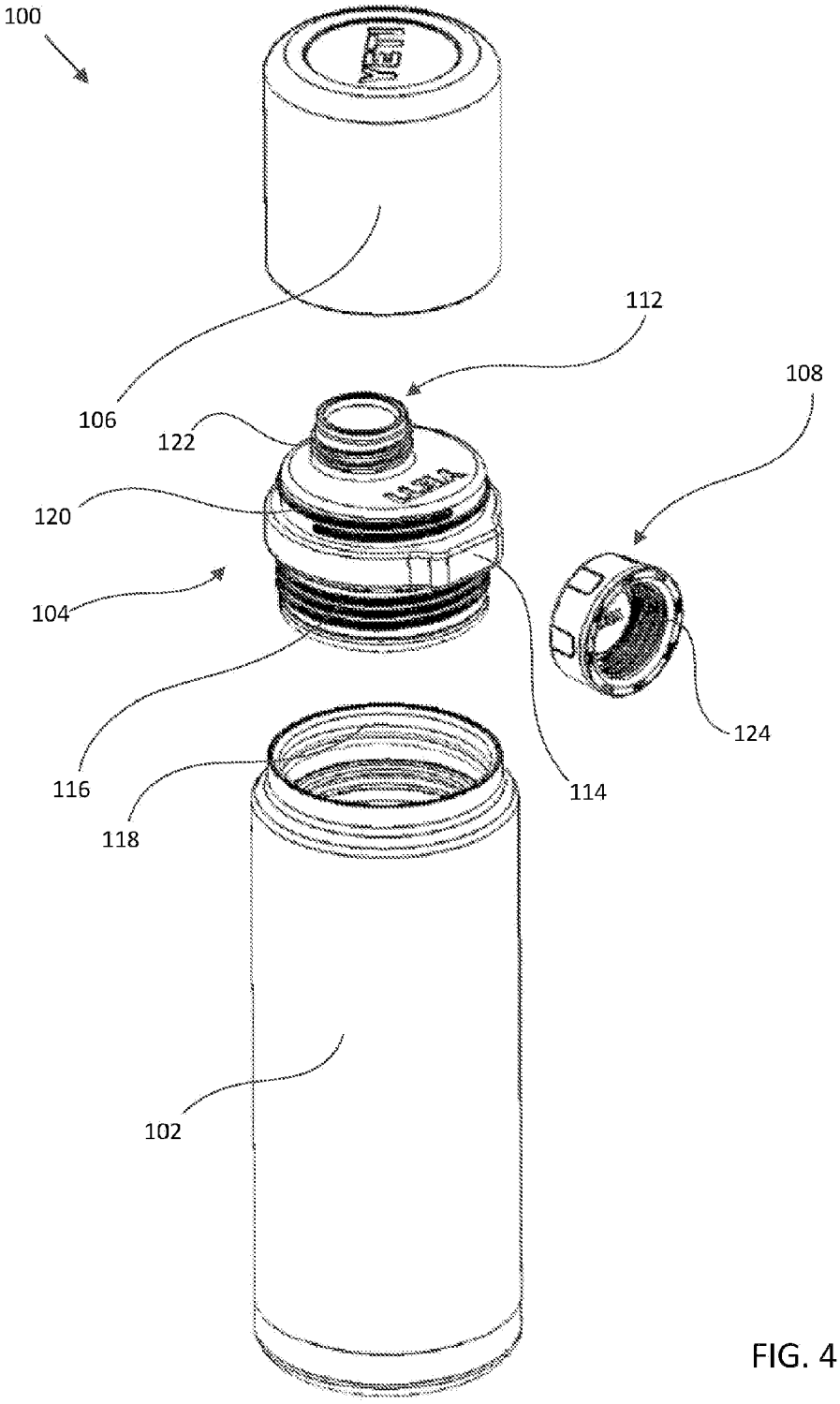



FIG. 4

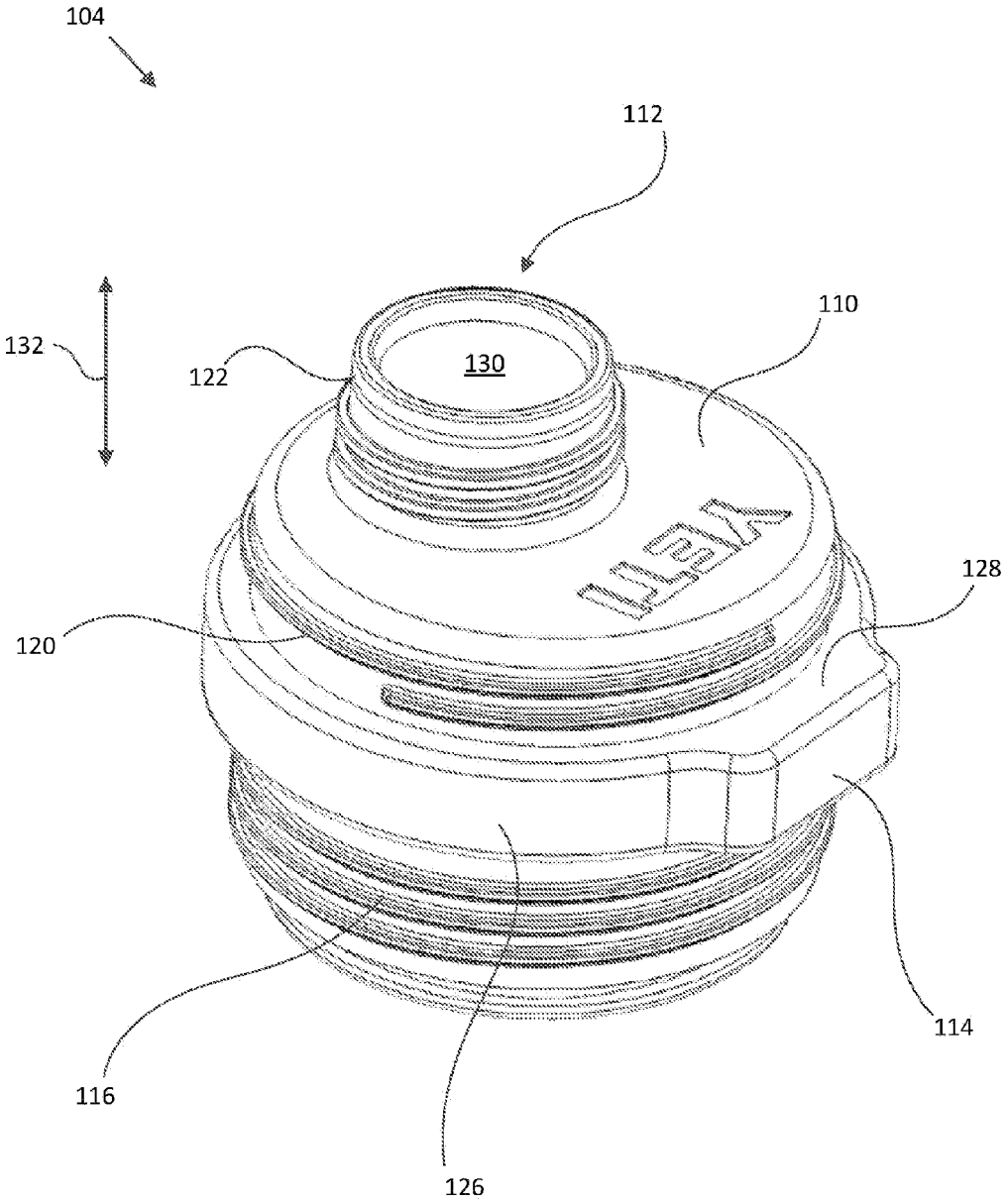



FIG. 5

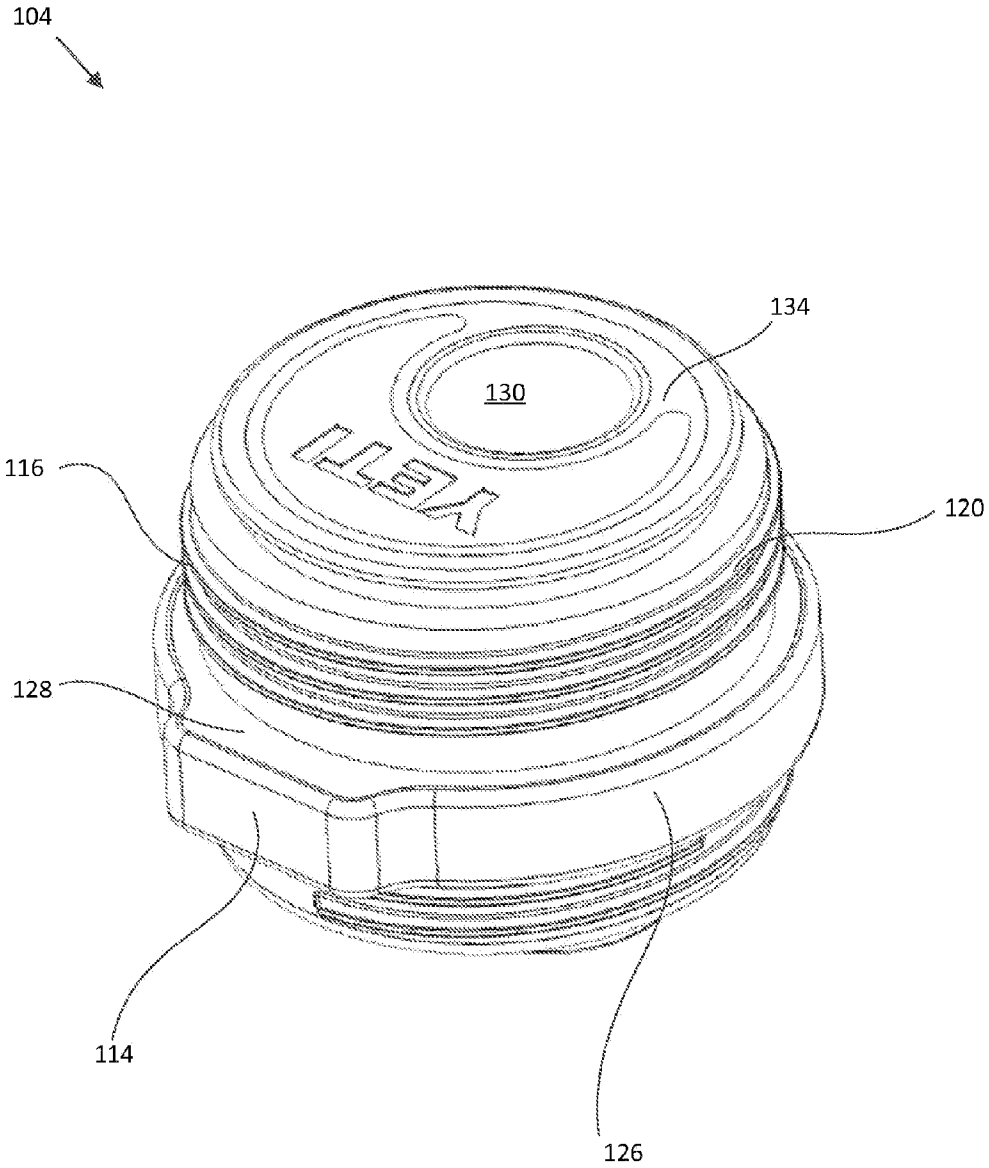



FIG. 6

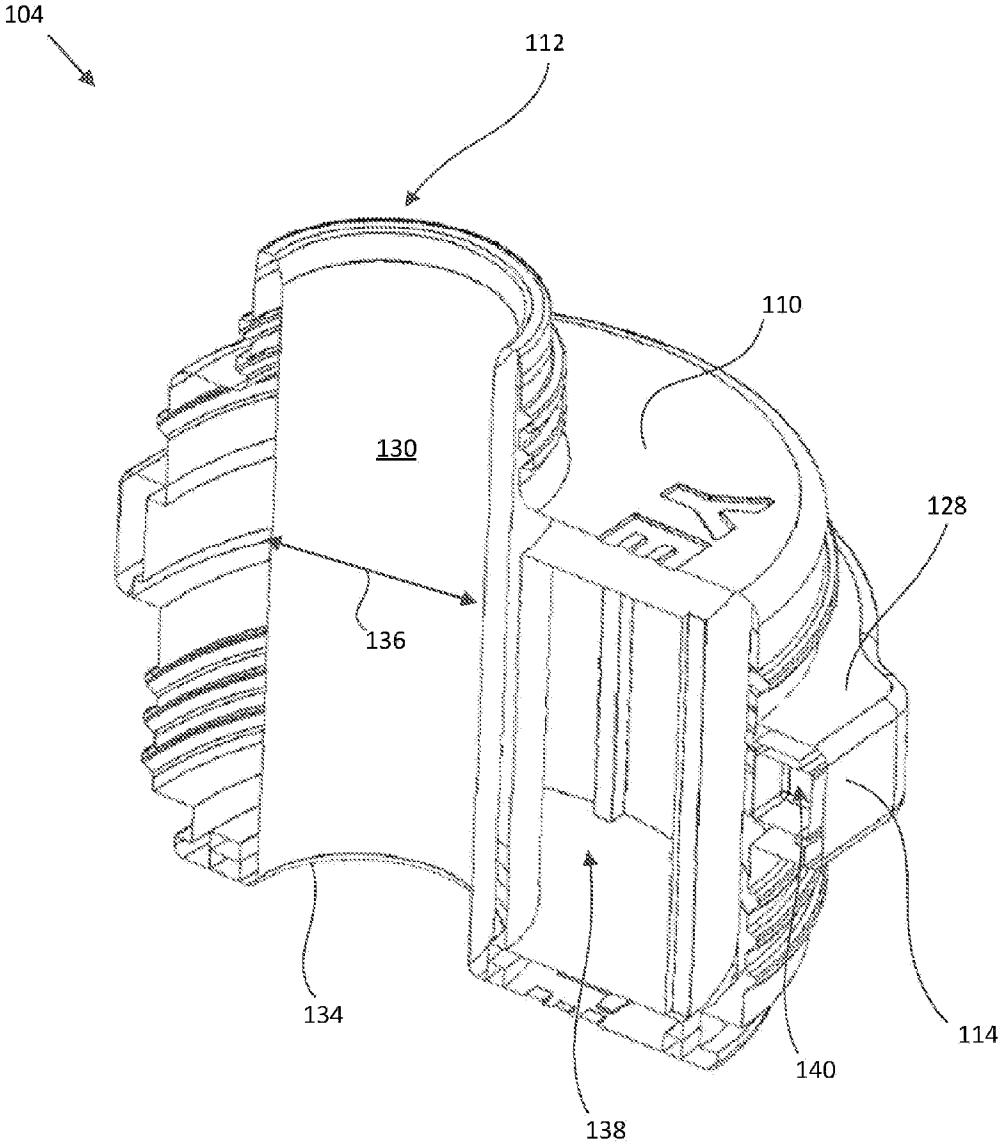



FIG. 7

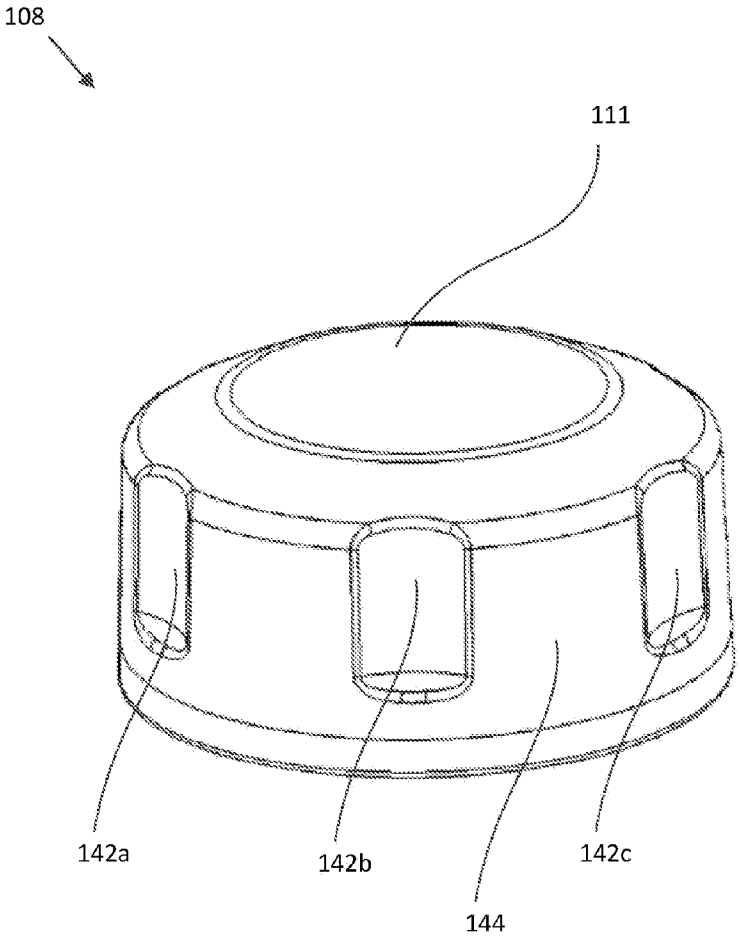
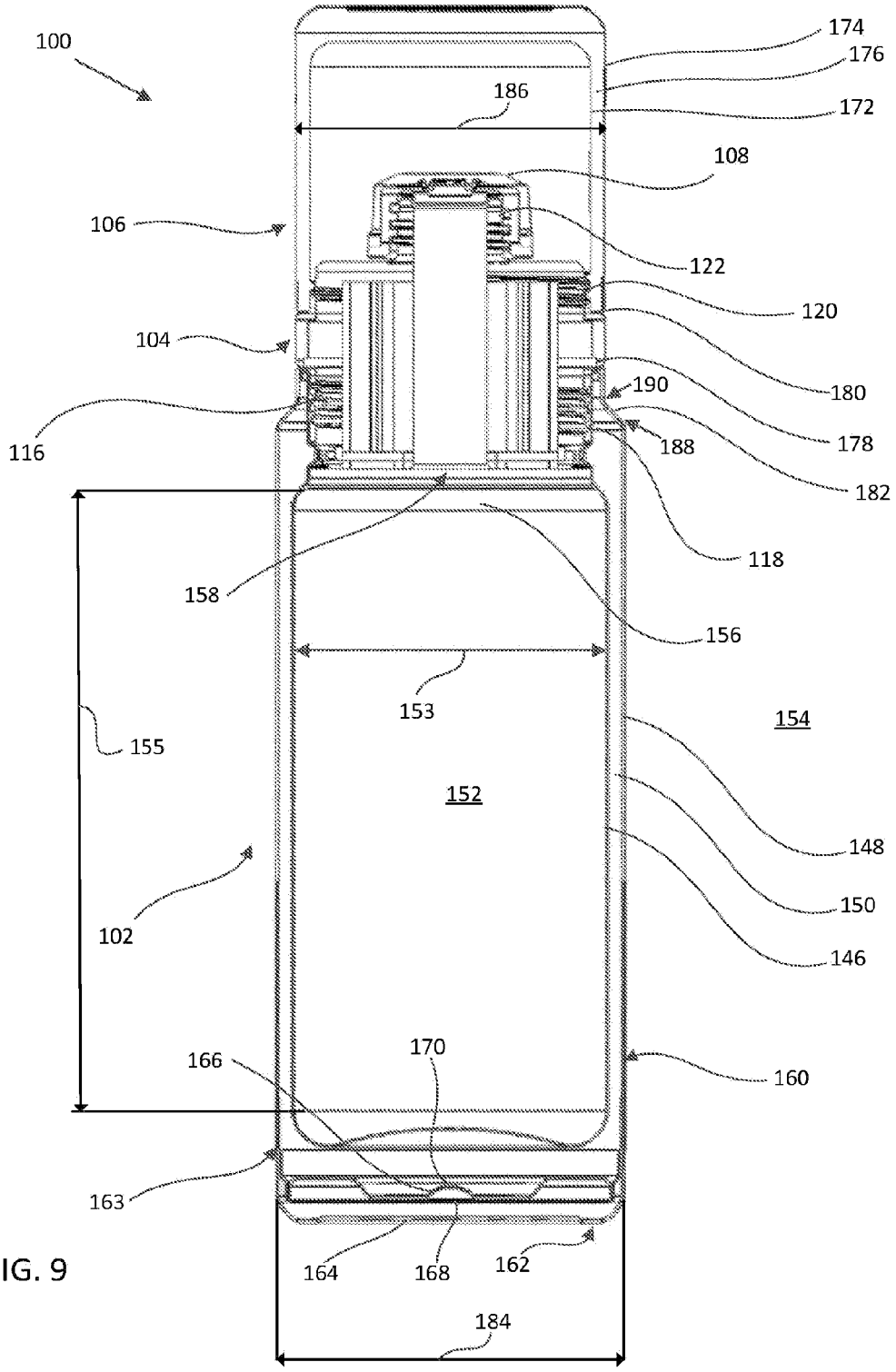



FIG. 8


100
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172
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188
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FIG. 9

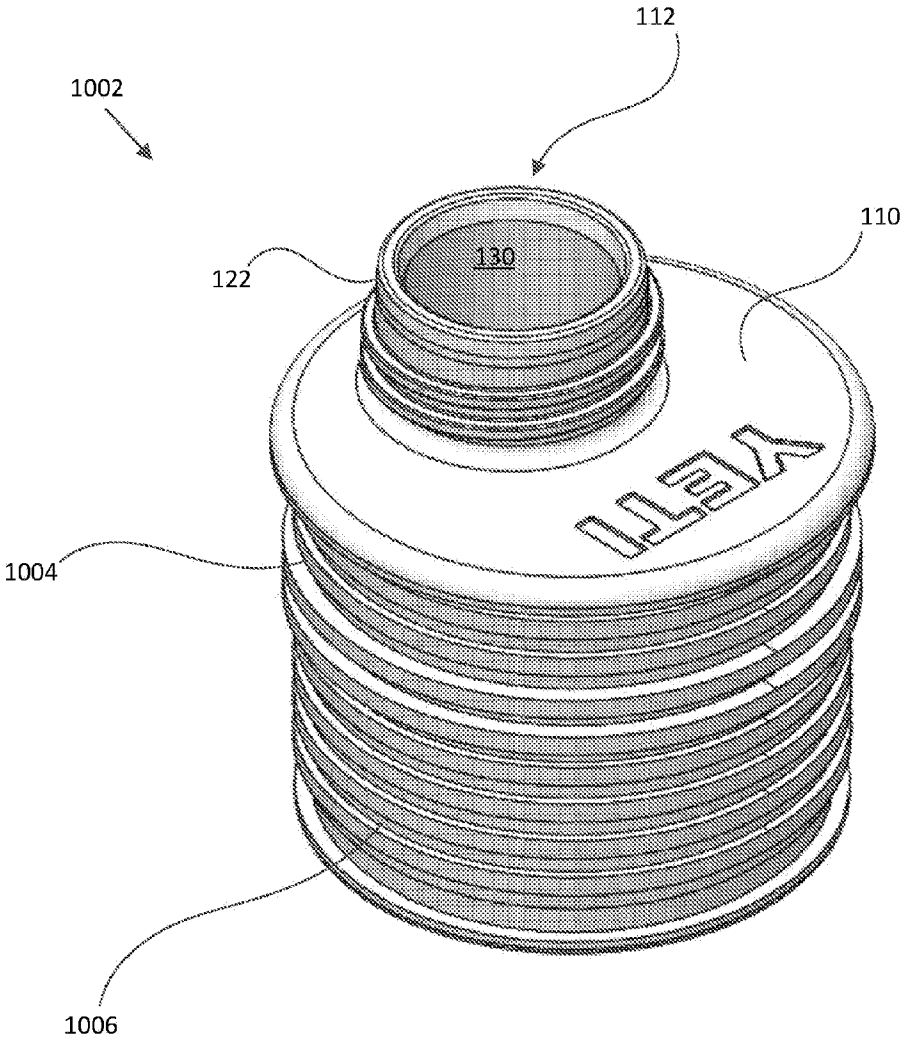


FIG. 10A

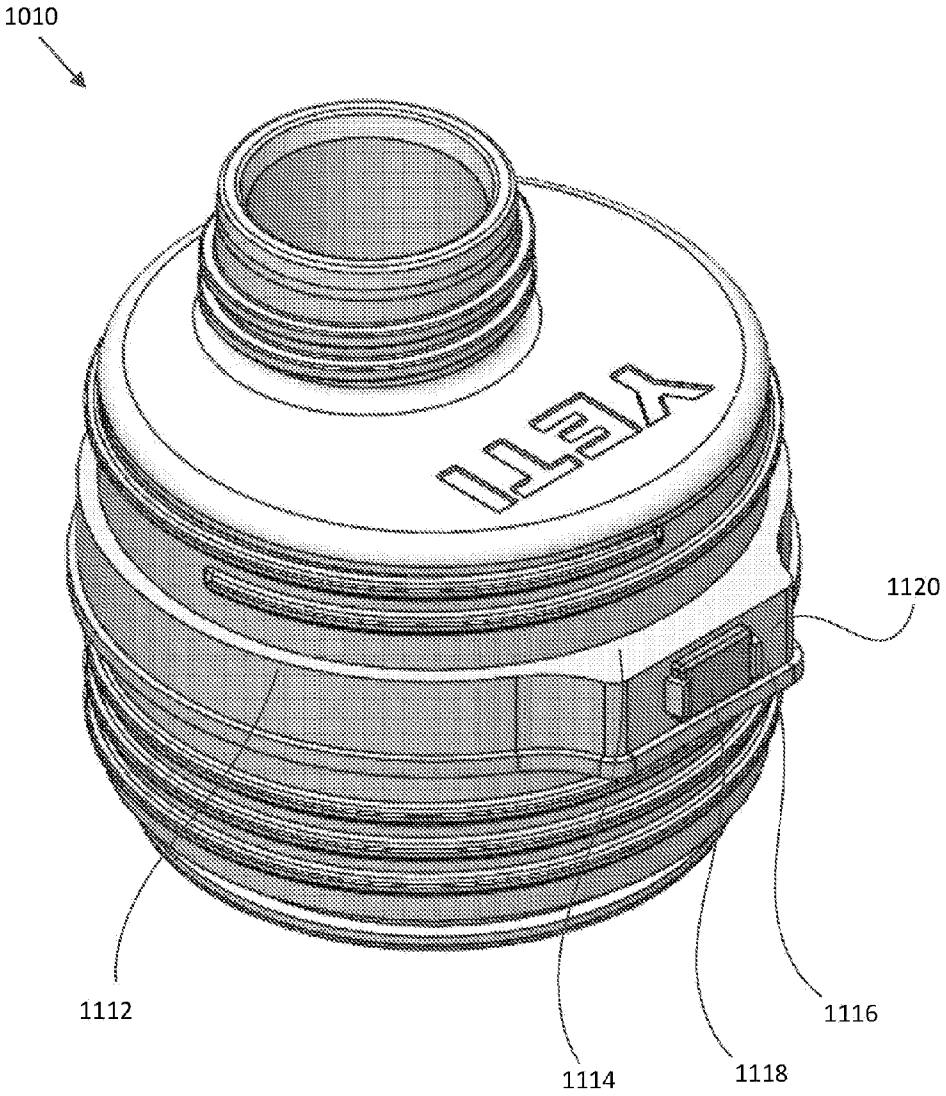


FIG. 10B

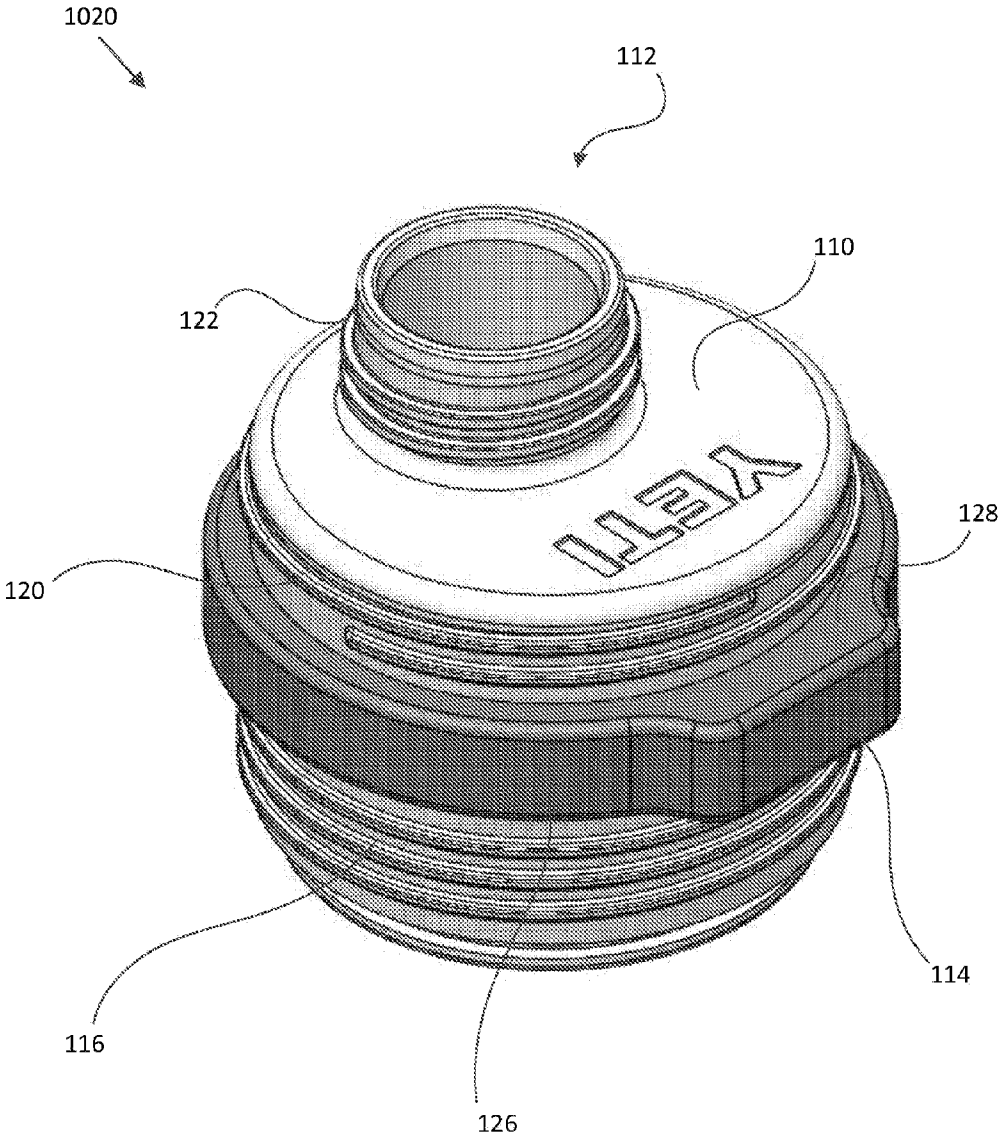


FIG. 10C

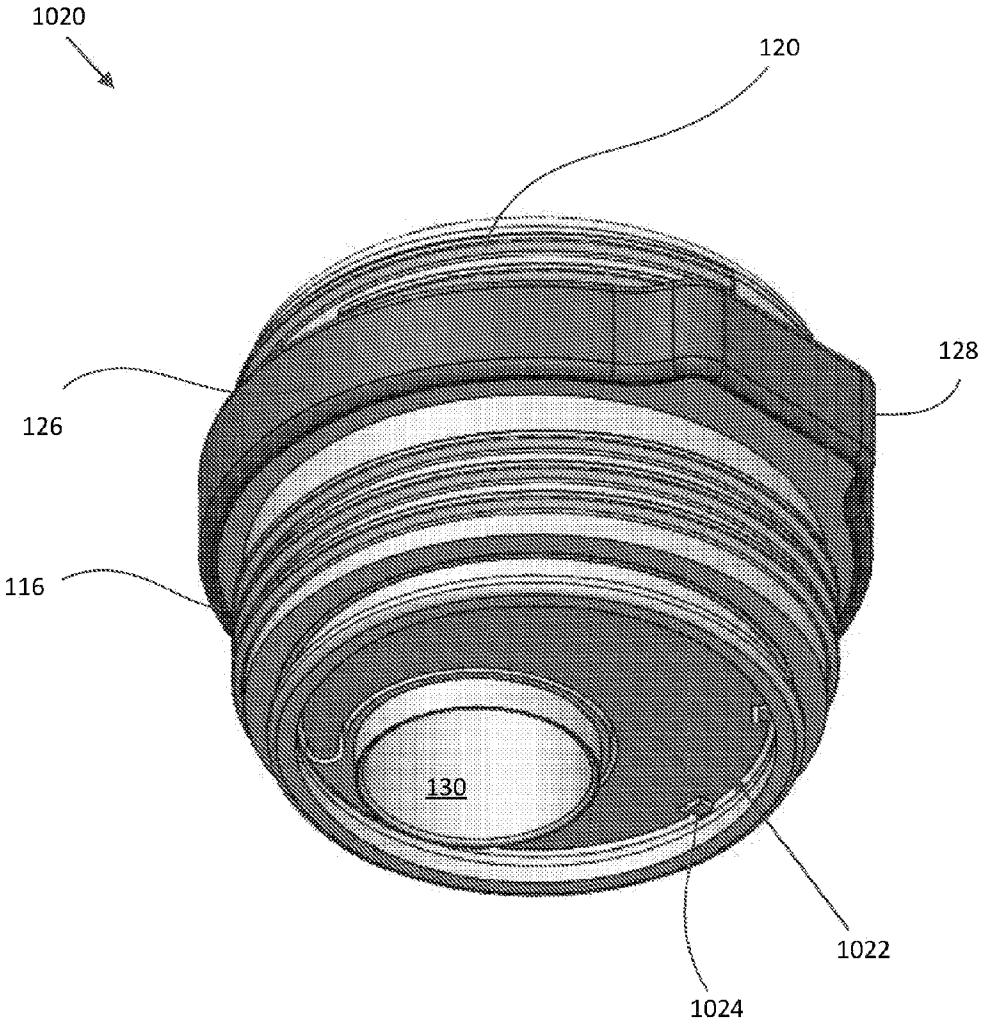


FIG. 10D

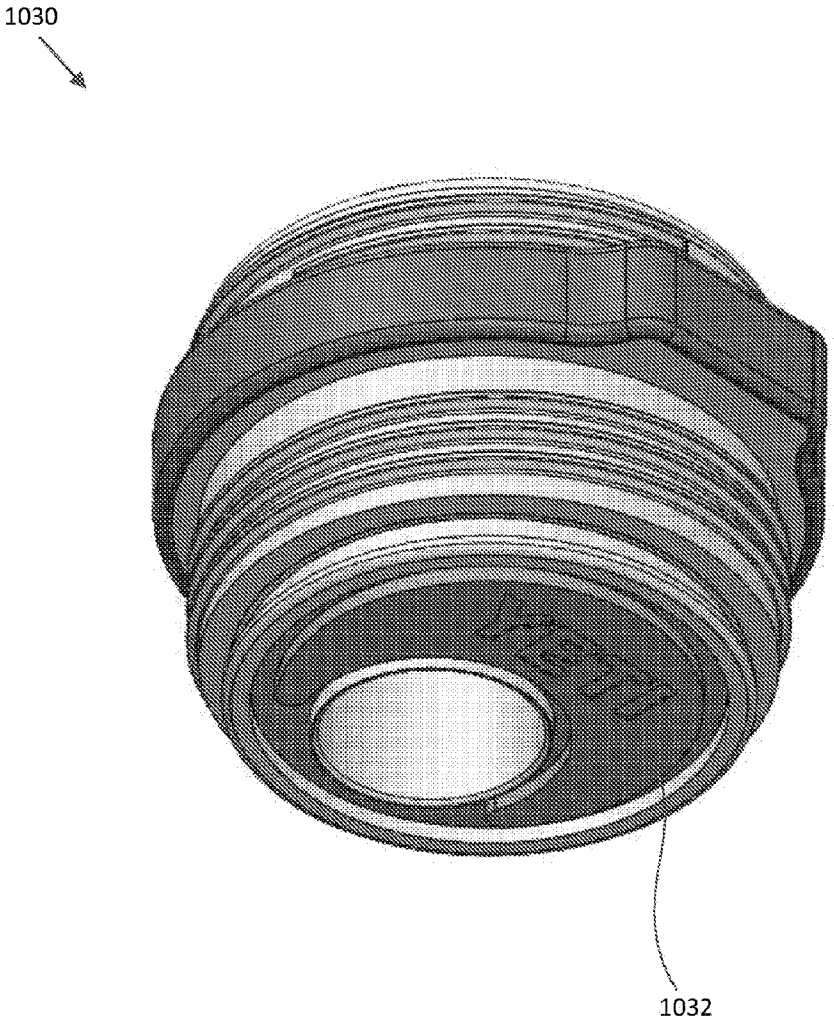


FIG. 10E

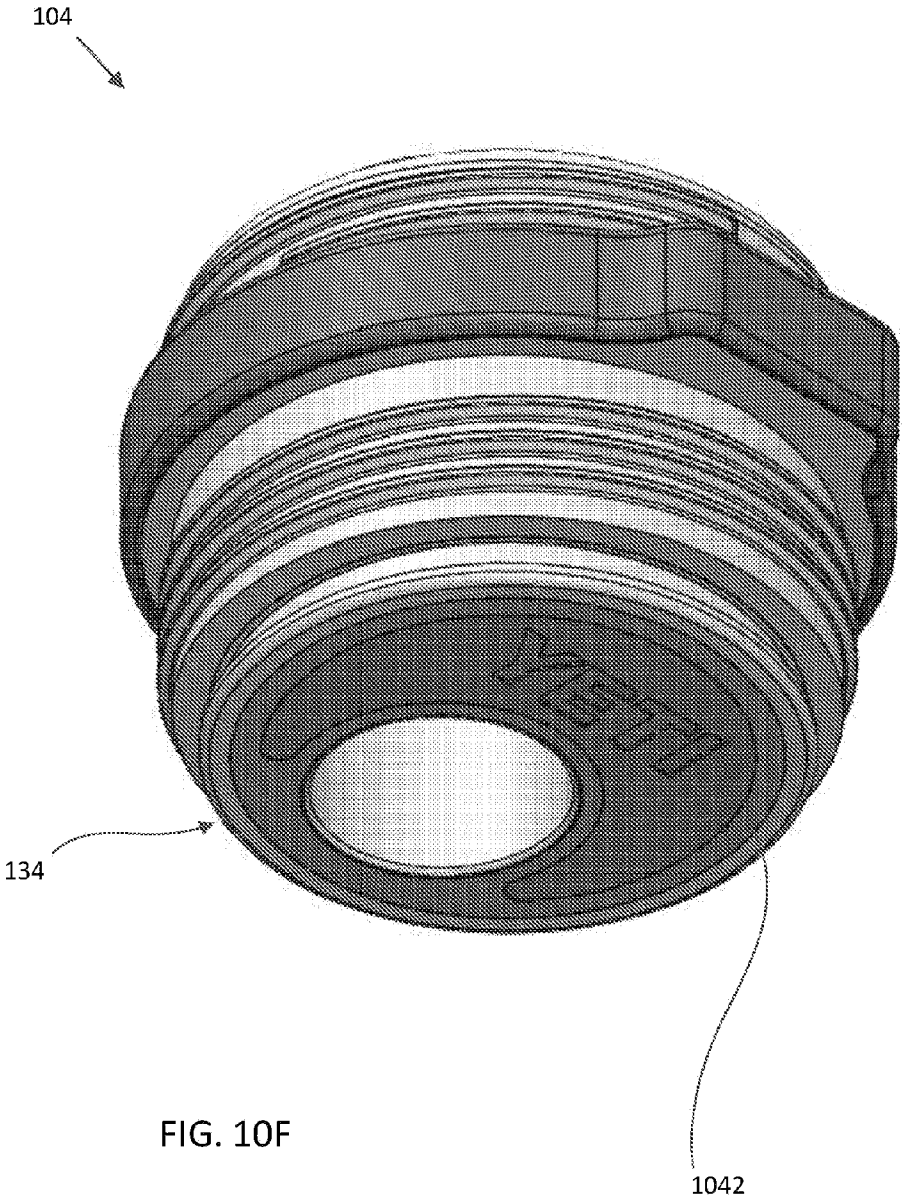


FIG. 10F