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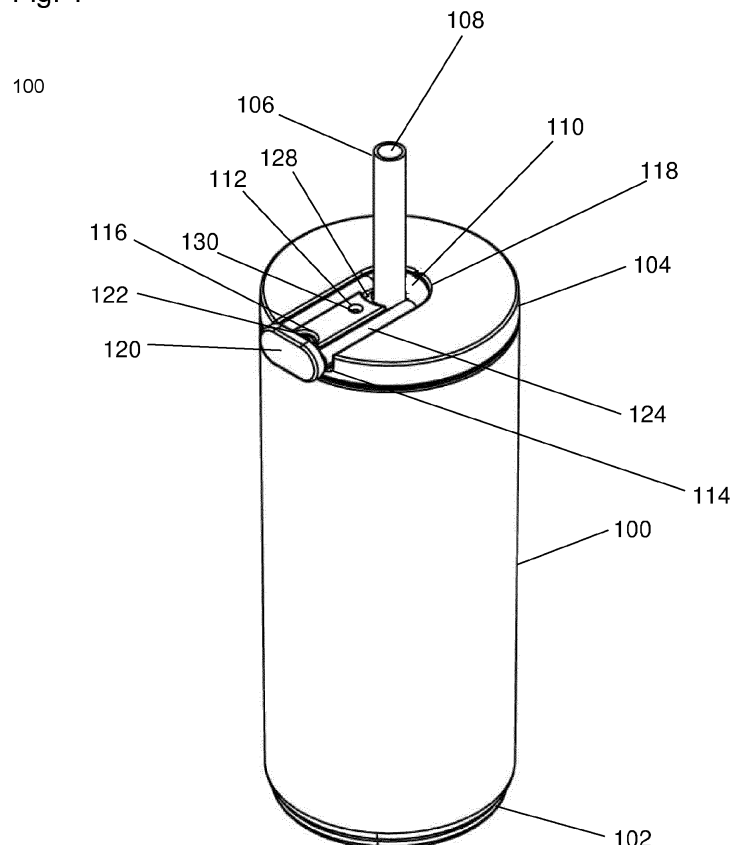
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(54) **A CONTAINER WITH A STRAW AND STOPPER TO PREVENT LIQUID LEAKING**

(57) A container 100 with a straw 106 with a stopper 110 to store in a bag, a holder, a shelf or other types of luggage without leakage where the container 100 is to prevent liquids such as water, fruit juice, oils, alcohol and liquid dairy products from leaking, and to protect contain-

er 100 from outside contamination. The stopper 110 seals around the straw 106 for best closure. The container stopper 110 has a valve 132 to equalize the pressure when sucking the straw 106.

Fig. 1



Description**BACKGROUND OF THE INVENTION**

Field of the Invention.

[0001] The present disclosure relates to the field of container of liquids, more particularly, the present disclosure relates to a container with a drinking straw and a stopper to prevent liquids from leaking.

Description of Prior Art

[0002] When it comes to the containers of liquids like water or juice including a drinking opening like straw, we will see it is difficult to store them in the bags or any type of luggage as it will leak the liquid because it is not easy to have a good stopper to prevent the liquid leaking.

[0003] In the art of the present disclosure, there is no practical solution to overcome this problem, all the solutions are related to only a stopper that can not be installed or sealed on the drinking opening in a good manner to prevent liquid leaking.

[0004] In light of the foregoing discussion, and to overcome the above cited drawbacks of conventionally known, the present disclosure is a container with a stopper for the drinking straw to prevent liquid leaking.

SUMMARY OF THE INVENTION

[0005] An object of the present disclosure is to prevent liquid such as water, fruit juice, oils, alcohol and liquid dairy products from leaking.

[0006] Another object of the present disclosure is to make it easy to store the container in bags and luggage without leaking liquids.

[0007] Another object of the present disclosure is to allow the container to equalize pressure by a valve when sucking in the suction straw.

[0008] Another yet object of the present disclosure is the stopper will seal around the straw to close and seal the opening of the straw.

BRIEF DESCRIPTION OF DRAWING

[0009] In order to best describe the manner in which the above-described embodiments are implemented, as well as define other advantages and features of the disclosure, a more particular description is provided below and is illustrated in the appended drawings. Understanding that these drawings depict only exemplary embodiments of the invention and are not therefore to be considered to be limiting in scope, the examples will be described and explained with additional specificity and detail through the use of the accompanying drawings in which:

FIG. 1 is the top perspective view of the container.

FIG. 2 is the bottom view of the container.

FIG. 3 is the top view of the container.

FIG. 4 is the front view of the container.

FIG. 5 is the inside view of the container.

5 FIG. 6 is the top perspective view of the container.

FIG. 7 is the top perspective view of the container.

FIG. 8 is the top rear perspective view of the stopper.

FIG. 9 is the top front perspective view of the stopper.

10 FIG. 10 is the bottom rear perspective view of the stopper.

[0010] It should be noted that the accompanying figures are intended to present illustrations of few exemplary embodiments of the present disclosure. These figures are not intended to limit the scope of the present disclosure. It should also be noted that accompanying figures are not necessarily drawn to scale.

REFERENCE NUMERALS IN THE DRAWINGS

[0011] For a more complete understanding of the present invention parts, reference is now made to the following descriptions:

- 25 100. Container.
- 102. Container base.
- 104. Container cover.
- 106. Straw.
- 30 108. Straw opening.
- 110. Stopper.
- 112. Upper hole.
- 114. Big cavity.
- 116. Small cavity.
- 35 118. Deep part of the big cavity.
- 120. The stopper top.
- 122. The main stopper part.
- 124. The stopper loop.
- 126. The stopper base.
- 40 128. The stopper cavity.
- 130. The valve air inlet.
- 132. The valve.
- 134. The valve cut.

DETAILED DESCRIPTION OF THE INVENTION

[0012] The following detailed description is of the best currently contemplated modes of carrying out exemplary embodiments of the invention. The description is not to be taken in a limiting sense, but is made merely for the purpose of illustrating the general principles of the invention.

[0013] Reference in this specification to "one embodiment" or "an embodiment" means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present technology. The appearance of the phrase "in one embodiment" in various places in the

specification are not necessarily all referring to the same embodiment, nor are separate or alternative embodiments mutually exclusive of other embodiments. Moreover, various features are described which may be exhibited by some embodiments and not by others. Similarly, various requirements are described which may be requirements for some embodiments but not other embodiments.

[0014] Reference will now be made in detail to selected embodiments of the present disclosure in conjunction with accompanying figures. The embodiments described herein are not intended to limit the scope of the disclosure, and the present disclosure should not be construed as limited to the embodiments described. This disclosure may be embodied in different forms without departing from the scope and spirit of the disclosure. It should be understood that the accompanying figures are intended and provided to illustrate embodiments of the disclosure described below and are not necessarily drawn to scale. In the drawings, like numbers refer to like elements throughout, and thicknesses and dimensions of some components may be exaggerated for providing better clarity and ease of understanding.

[0015] Moreover, although the following description contains many specifics for the purposes of illustration, anyone skilled in the art will appreciate that many variations and/or alterations to said details are within the scope of the present technology. Similarly, although many of the features of the present technology are described in terms of each other, or in conjunction with each other, one skilled in the art will appreciate that many of these features can be provided independently of other features. Accordingly, this description of the present technology is set forth without any loss of generality to, and without imposing limitations upon, the present technology.

[0016] It should be noted that the terms "first", "second", and the like, herein do not denote any order, ranking, quantity, or importance, but rather are used to distinguish one element from another. Further, the terms "a" and "an" herein do not denote a limitation of quantity, but rather denote the presence of at least one of the referenced item.

[0017] Referring to FIG. 1, these are all the container 100 parts, the container mainly consists of a container base 102, container cover 104, straw 106, straw opening 108, a stopper 110 with a valve 132. The container cover 104 consists of upper hole 112, big cavity 114, small cavity 116, deep part of the big cavity 118. On the container cover 104, the stopper 110 installed, the stopper 110 consists of the stopper top 120, the main stopper part 122, the stopper loop 124, the stopper base 126, the stopper cavity 128 and the valve 132.

[0018] Referring to FIG. 2, this is the bottom of the container 100 where we can see, the container base 102, stopper 110 and the stopper top 120.

[0019] Referring to FIG. 3, this is the top view of the container 100 where it explains the parts of the container 100 from the top, container cover 104, straw 106, straw

opening 108, stopper 110, upper hole 112, small cavity 116, deep part of the big cavity 118, the stopper top 120, the main stopper part 122, the stopper loop 124, the stopper base 126, the stopper cavity 128 and the valve air inlet 130.

[0020] Referring to FIG. 4, this is the front view of the container 100 where it explains the parts of the container 100 from the front, container base 102, container cover 104, straw 106, straw opening 108, stopper 110 and the stopper top 120.

[0021] Referring to FIG. 8, this is the top rear perspective view of the stopper 110 that consists of the stopper top 120, the main stopper part 122, the stopper loop 124, the stopper base 126, the stopper cavity 128 and the valve air inlet 130.

[0022] Referring to FIG. 9, this is the top front perspective view of the stopper 110 explaining the stopper top 120, the main stopper part 122, the stopper loop 124, the stopper base 126, the stopper cavity 128 and the valve air inlet 130.

[0023] Referring to FIG. 10, this is the bottom rear perspective view of the stopper 110 explaining the stopper top 120, the main stopper part 122, the stopper loop 124, the stopper base 126, the stopper cavity 128, the valve 132 and the valve cut 134.

[0024] Referring to FIG. 5, this is to show the container from inside to explain how we can install the stopper 110 on the container cover 104 to be ready to use to cover the straw 106. As shown in FIG. 10, the stopper consists of the stopper top 120, the main stopper part 122, the stopper loop 124, the stopper base 126, the stopper cavity 128, the valve air inlet 130, the valve 132 and the valve cut 134. To install the stopper 110 on the container cover 104 we put the stopper base 126 inside the deep part of the big cavity 118 where the valve 132 and valve cut 134 will go inside the container 100, then the valve air inlet 130 will be under the upper hole 112 directly, then the stopper loop 124 will be installed in the big cavity 114, then we insert the straw 106 inside the stopper cavity 128 then we hold the stopper top 120 to put the main stopper part 122 inside the small cavity 116 as shown in FIG. 6. If we want to close the straw 106, we hold the stopper top 120 then take the stopper loop 124 from the big cavity 114 then put the main stopper part 122 inside the straw opening 108 as shown in FIG. 7.

[0025] As shown in FIG. 5, the valve 132 is to allow the container 100 to equalize pressure when sucking in the straw 106, where the air will go inside the upper hole 112 then inside the valve air inlet 130 then inside the valve 132 then inside the valve cut 134 then inside the container 100.

[0026] Referring to FIG. 6, this is a top perspective view of the container 100 showing the stopper 110 after installed on the container cover 104 but has not used to close the straw 106.

[0027] Referring to FIG. 7, this is a top perspective view of the container 100 showing the stopper 110 after installed on the container cover 104, and after putting the

main stopper part 122 inside the straw opening 108 to close it.

[0028] The foregoing descriptions of specific embodiments of the present technology have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the present technology to the precise forms disclosed, and obviously many modifications and variations are possible in light of the above teaching.

[0029] The embodiments were chosen and described in order to best explain the principles of the present technology and its practical application, to thereby enable others skilled in the art to best utilize the present technology and various embodiments with various modifications as are suited to the particular use contemplated. It is understood that various omissions and substitutions of equivalents are contemplated as circumstance may suggest or render expedient, but such are intended to cover the application or implementation without departing from the spirit or scope of the claims of the present technology.

[0030] Although the present disclosure has been explained in relation to its preferred embodiment(s) as mentioned above, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of the inventive aspects of the present invention. It is, therefore, contemplated that the appended claim or claims will cover such modifications and variations that fall within the true scope of the invention.

Claims

1. A container 100 with a straw 106 and stopper 110 to prevent liquid leaking, comprising:

container base 102;
 container cover 104;
 straw 106;
 straw opening 108;
 stopper 110;
 upper hole 112;
 big cavity 114;
 small cavity 116;
 deep part of the big cavity 118;
 stopper top 120;
 main stopper part 122;
 stopper loop 124;
 stopper base 126;
 stopper cavity 128;
 valve air inlet 130;
 valve 132; and,
 valve cut 134.

2. The container 100 of claim 1 mainly consists of the container base 102, container cover 104, straw 106, straw opening 108, upper hole 112, big cavity 114,

small cavity 116, deep part of the big cavity 118, stopper 110 and the valve 132.

3. The stopper 110 of claim 1 consists of the stopper top 120, the main stopper part 122, the stopper loop 124, the stopper base 126, the stopper cavity 128, the valve air inlet 130, the valve 132 and the valve cut 134.
4. The container 100 of claim 1 wherein to install the stopper 110 on the container 100 to be ready to use to close the straw 106, we put the stopper base 126 inside the deep part of the big cavity 118 where the valve 132 and valve cut 134 will go inside the container 100, then the valve air inlet 130 will be under the upper hole 112 directly, then the stopper loop 124 will be installed in the big cavity 114, then we insert the straw 106 inside the stopper cavity 128 then we hold the stopper top 120 to put the main stopper part 122 inside the small cavity 116.
5. The container of claim 1 wherein to close the straw 106, we hold the stopper top 120 then take the stopper loop 124 from the big cavity 114 then put the main stopper part 122 inside the straw opening 108.
6. The valve of claim 1 consists of valve air inlet 130 and valve cut 134.
7. The valve of claim 1 is to equalize the pressure when sucking the straw 106 wherein the air will go inside the upper hole 112 then inside the valve air inlet 130 then inside the valve 132 then inside the valve cut 134 then inside the container 100.
8. The stopper 110 of claim 1 is to store the container 100 in a bag, a holder, a shelf or other types of luggage without leakage where the stopper 110 is to prevent liquids such as water, fruit juice, oils, alcohol and liquid dairy products from leaking, and the stopper 110 is to protect container 100 from outside contamination.
9. A method to prevent liquids leaking using a container 100 includes a container base 102, a container cover 104, a straw 106 with a stopper 110 and a valve 132, comprising:

putting the cover that consists of big cavity 114, small cavity 116, deep part of the big cavity 118 and upper hole 112 on the container;
 Installing the stopper 110 that consists of a stopper top 120, a main stopper part 122, a stopper loop 124, a stopper base 126, a stopper cavity 128, a valve air inlet 130, a valve 132 and a valve cut 134, on the container cover 104 by putting the stopper base 126 inside the deep part of the big cavity 118 where the valve 132 and valve

cut 134 will go inside the container 100, then the valve air inlet 130 will be under the upper hole 112 directly, then the stopper loop 124 will be installed in the big cavity 114, then we insert the straw 106 inside the stopper cavity 128 then we hold the stopper top 120 to put the main stopper part 122 inside the small cavity 116; the valve 132 that consists of valve air inlet 130 and valve cut 134 is to equalize the pressure when sucking the straw 106 wherein the air will go inside the upper hole 112 then inside the valve air inlet 130 then inside the valve 132 then inside the valve cut 134 then inside the container 100; to close the straw 106, we hold the stopper top 120 then take the stopper loop 124 from the big cavity 114 then put the main stopper part 122 inside the straw opening 108.

10. The method of claim 9 wherein the stopper 110 is to store the container 100 in a bag, a holder, a shelf or other types of luggage without leakage where the stopper 110 is to prevent liquids such as water, fruit juice, oils, alcohol and liquid dairy products from leaking, and the stopper 110 is to protect container 100 from outside contamination.

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Fig. 1

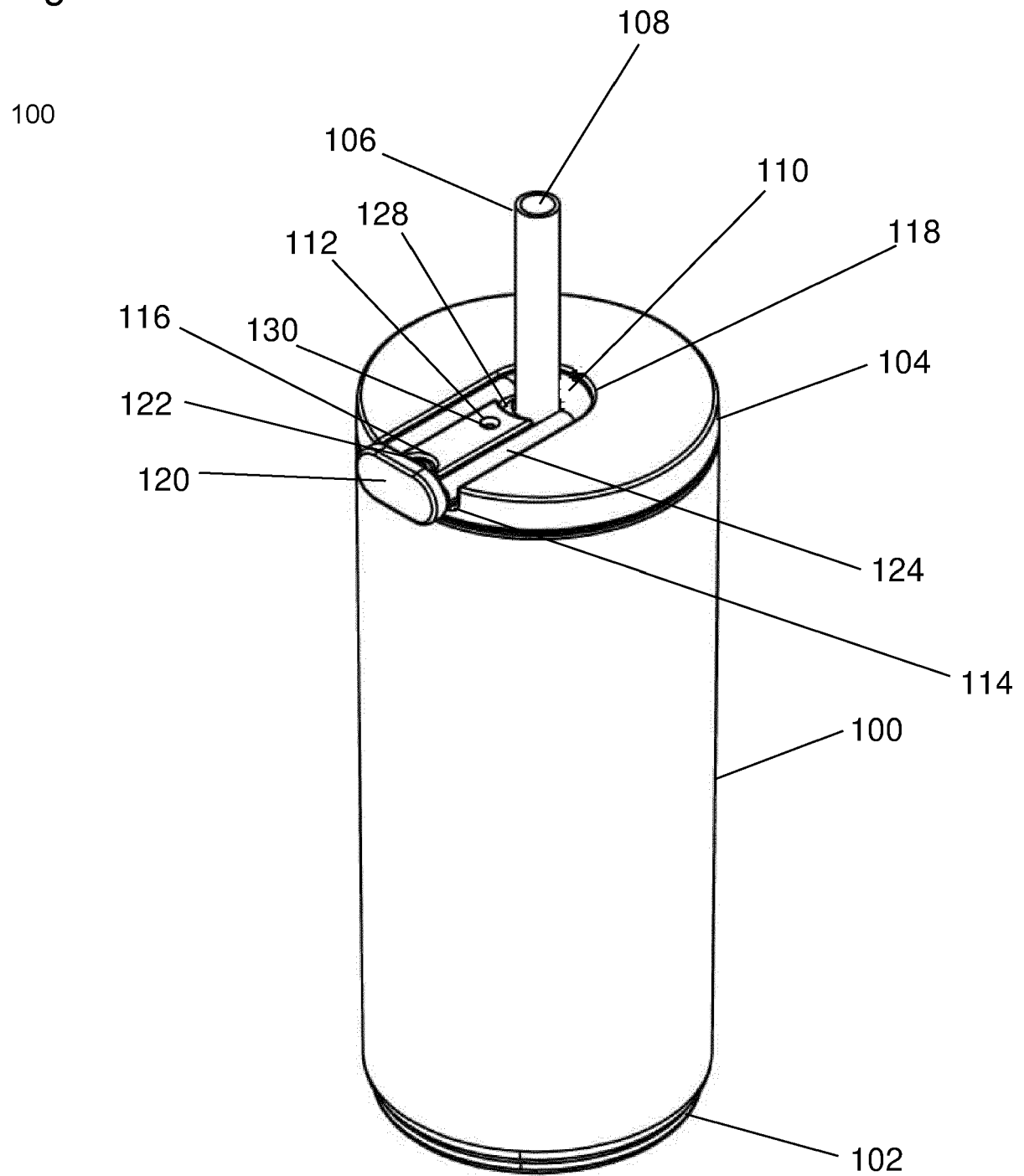


Fig. 2

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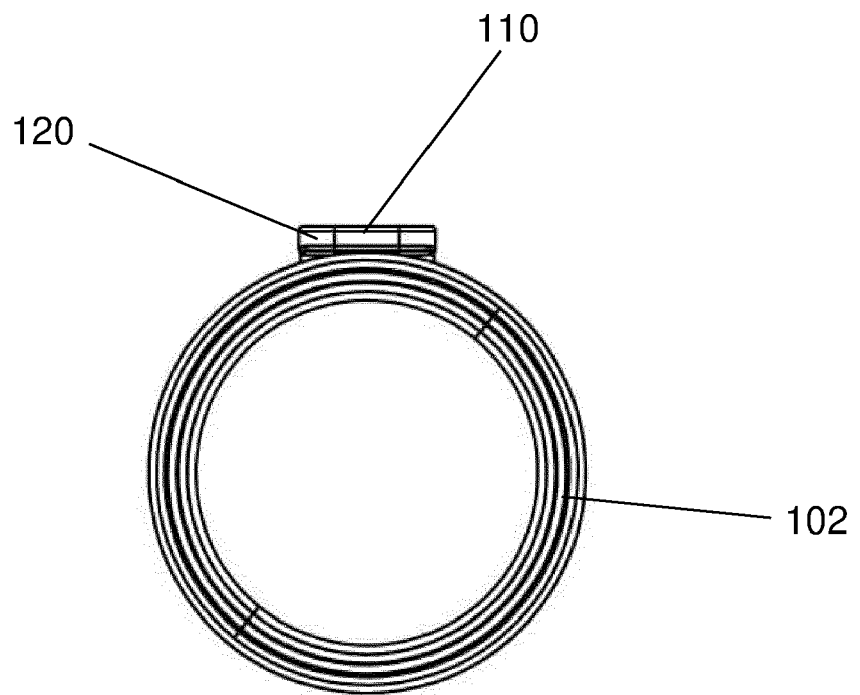


Fig. 3

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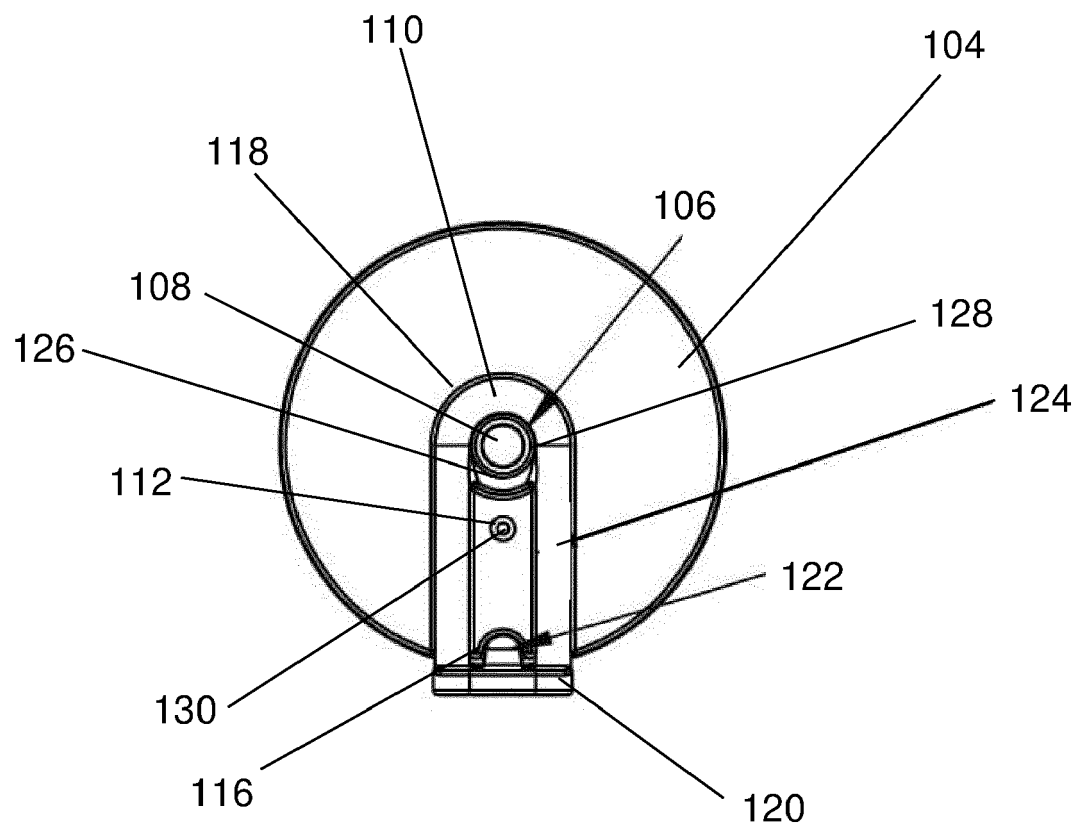


Fig. 4

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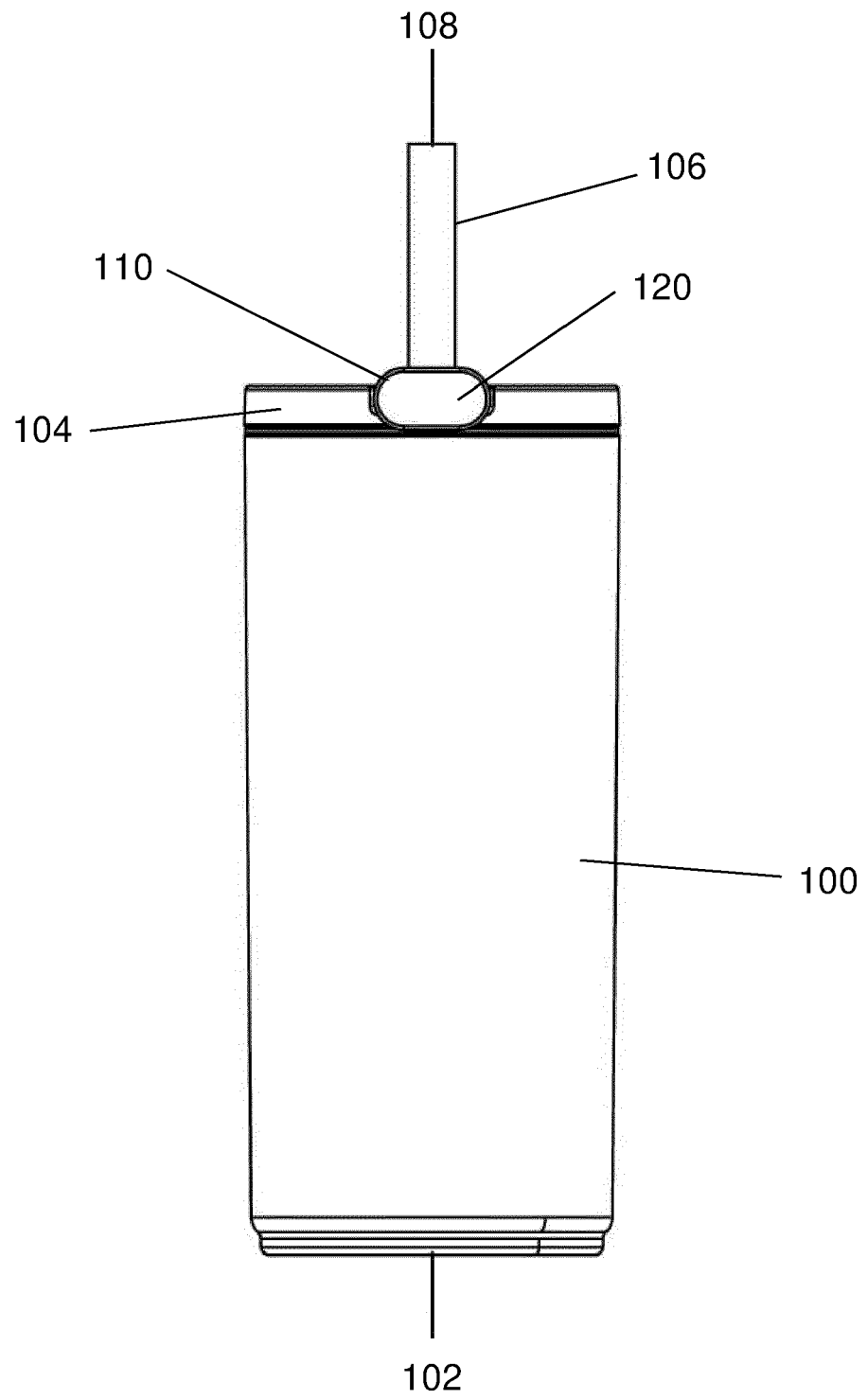


Fig. 5

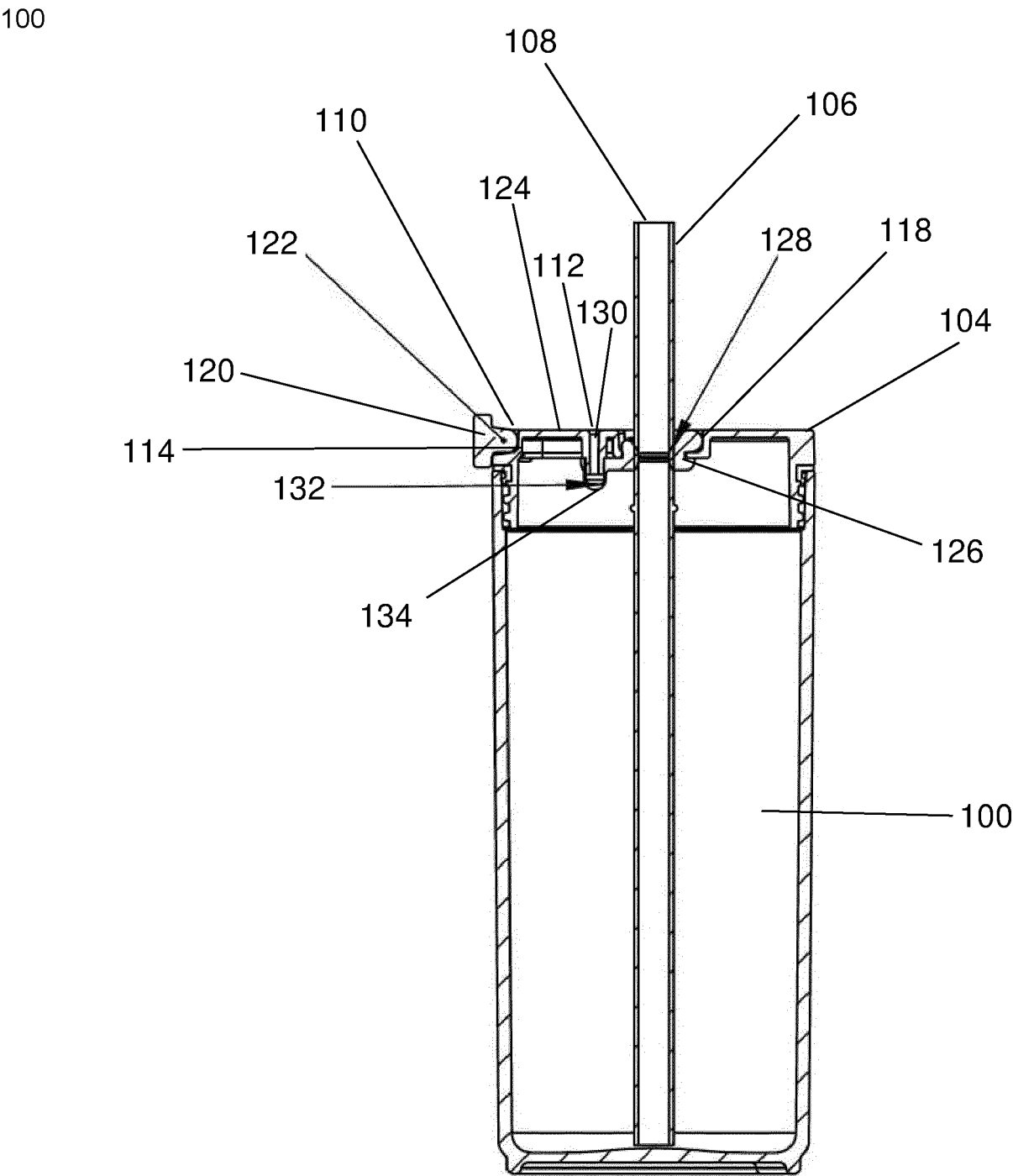


Fig. 6

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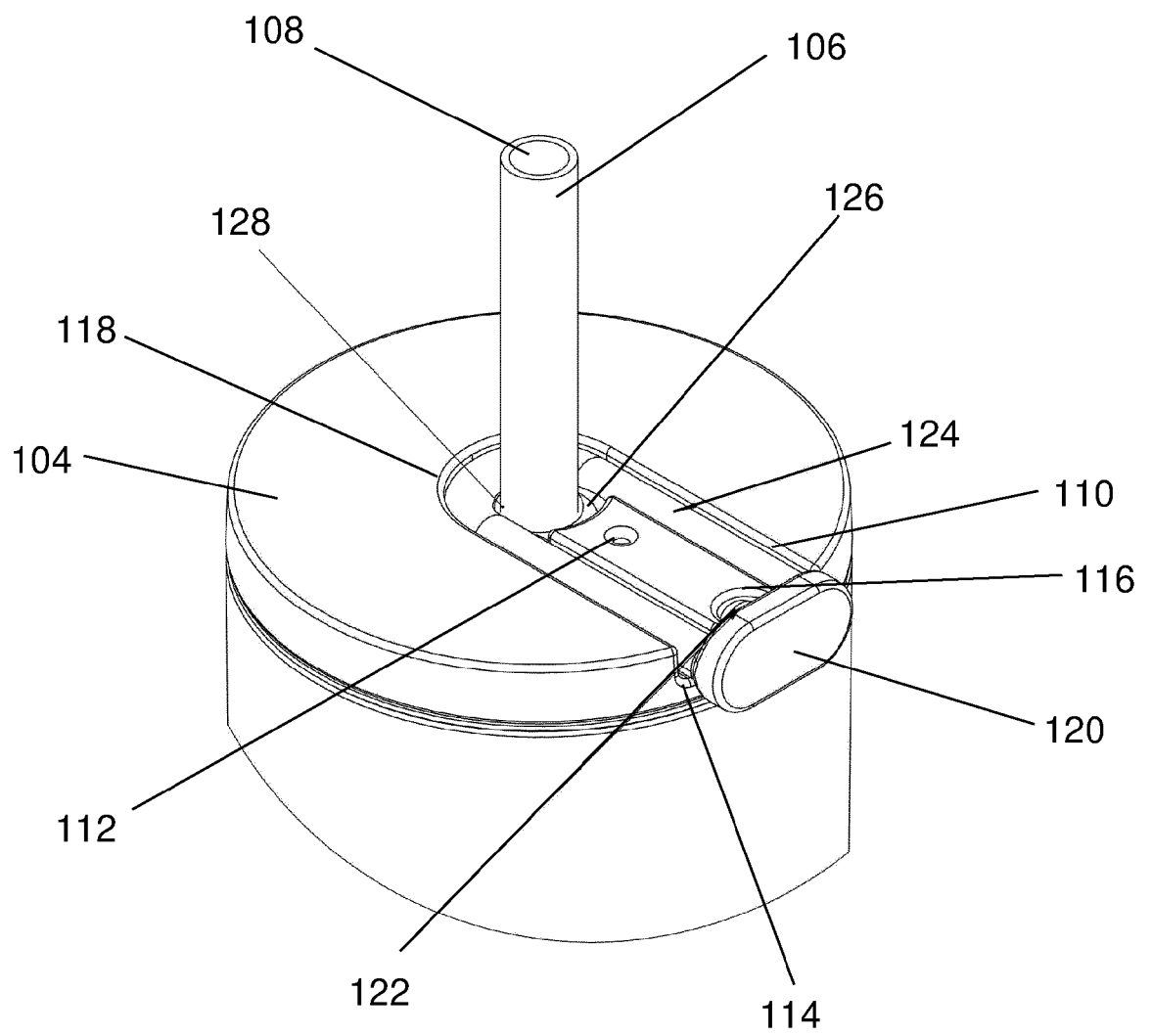


Fig. 7

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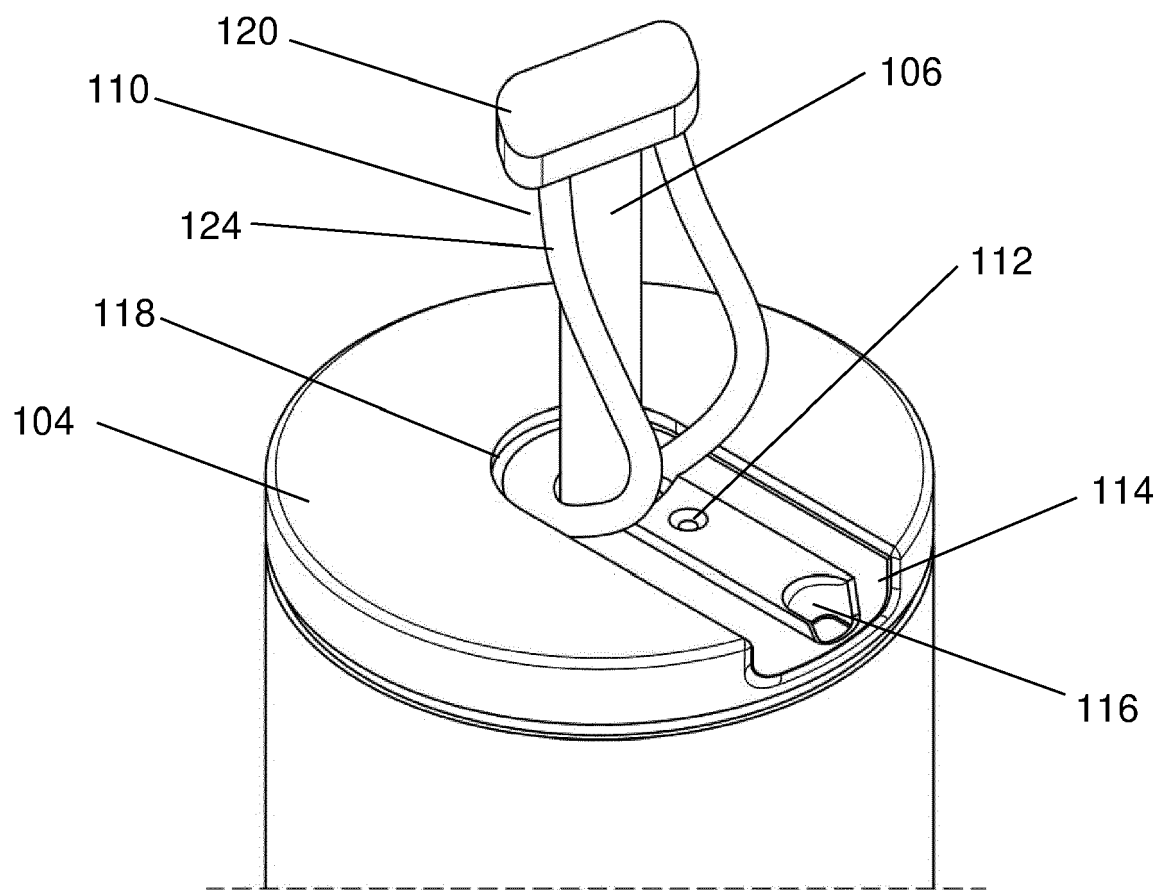


Fig. 8

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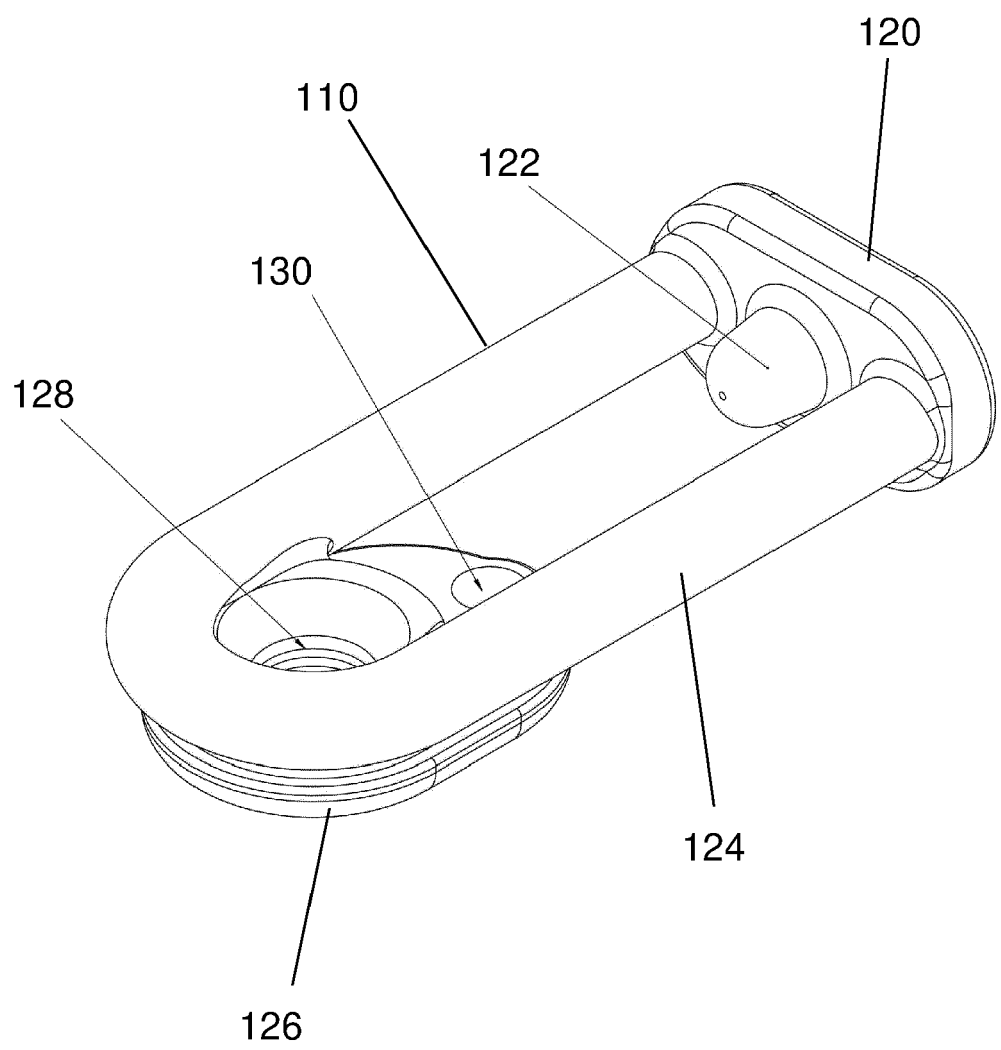


Fig. 9

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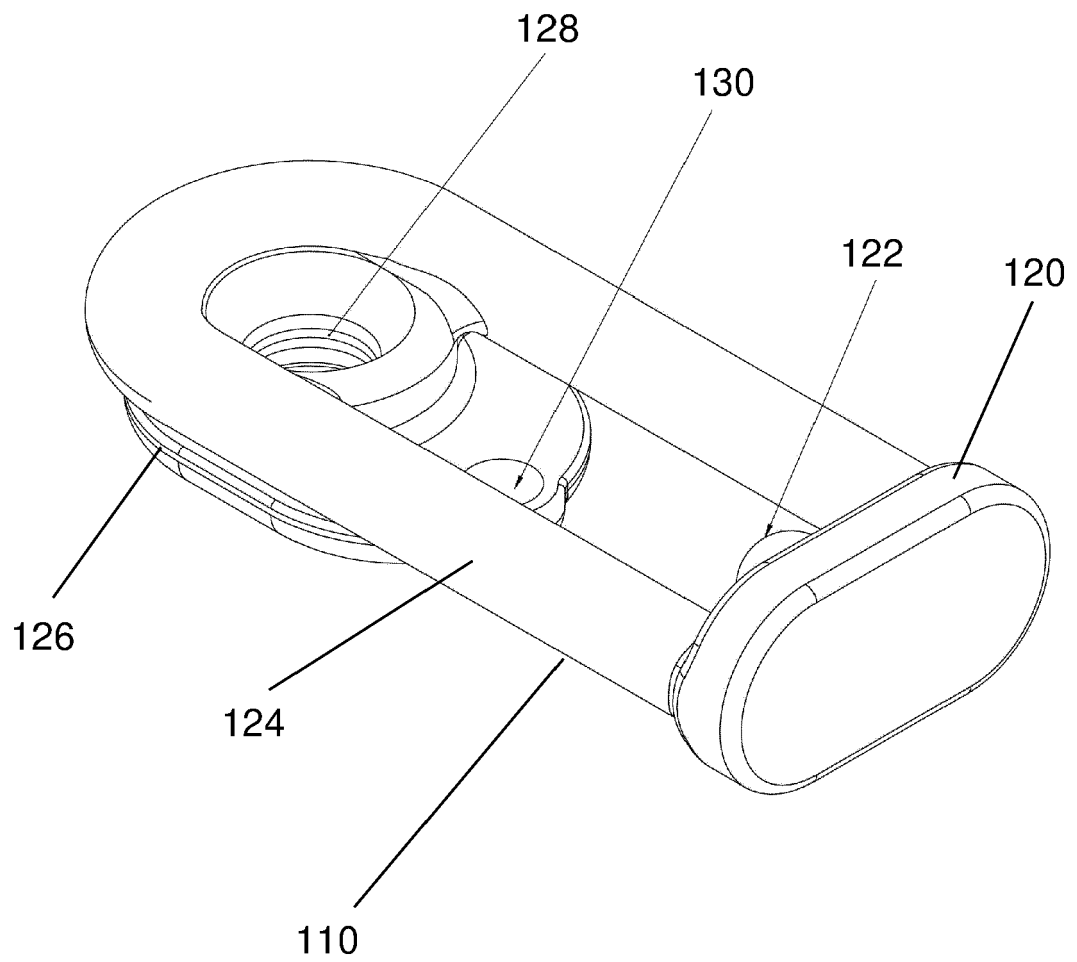
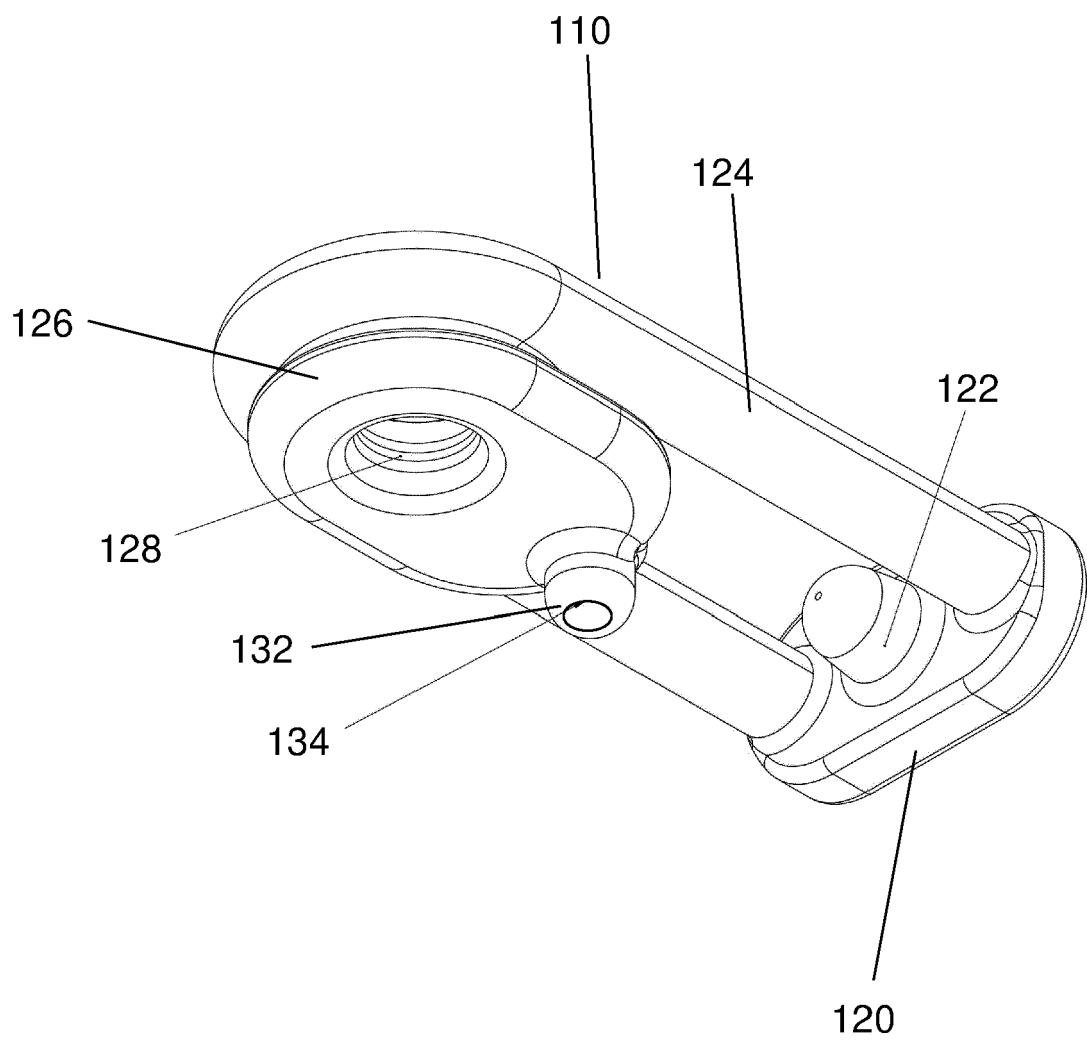


Fig. 10

100





PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of
subsequent proceedings, as the European search report

EP 21 02 0454

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 029 719 A (SOLOMON STANLEY B [US]) 9 July 1991 (1991-07-09) * column 3, line 14 - column 6, line 45; figures *	1-10	INV. A47G19/22 B65D47/14
X	DE 297 05 178 U1 (ALFI ZITZMANN GMBH ISOLIERGEFA [DE]) 26 June 1997 (1997-06-26) * page 3, line 16 - page 4, line 24; figures *	1-10	
X	WO 03/066463 A1 (REYES AVENDANO SERGIO EDUARDO [CO]) 14 August 2003 (2003-08-14) * the whole document *	1-10	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47G A45F B65D

INCOMPLETE SEARCH

The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.

Claims searched completely :

Claims searched incompletely :

Claims not searched :

Reason for the limitation of the search:

see sheet C

3

Place of search	Date of completion of the search	Examiner
The Hague	20 June 2022	Vistisen, Lars
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document		

EPO FORM 1503 03.82 (P04E07)

INCOMPLETE SEARCH
SHEET C

Application Number

EP 21 02 0454

Claim(s) searched incompletely:
1-10

Reason for the limitation of the search:

As the applicant did not file a statement indicating the subject-matter to be searched within the time limit indicated in the previous communication (Rule

63(1) EPC) the European Patent Office has carried out a meaningful search regarding the state of the art on the basis of part of the subject-matter claimed

and, as far as is practicable, drawn up a partial search report. The basis for this meaningful search has been the current claim 1 with the structural relation

between the features as they can be inferred from the description (in particular [0017] and [0024]) and the embodiment illustrated in the figures.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 21 02 0454

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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20-06-2022

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5029719 A	09-07-1991	NONE	
DE 29705178 U1	26-06-1997	DE 29705178 U1	26-06-1997
		EP 0881155 A1	02-12-1998
WO 03066463 A1	14-08-2003	AU 2002356385 A1	02-09-2003
		CO 5310573 A1	29-08-2003
		WO 03066463 A1	14-08-2003