



(11)

EP 3 569 111 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
20.11.2019 Bulletin 2019/47

(51) Int Cl.:
A47G 19/22 (2006.01) **B65D 47/32 (2006.01)**
B65D 49/04 (2006.01)

(21) Application number: **18173360.1**

(22) Date of filing: **18.05.2018**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(72) Inventors:
• **WANG, Hong Jen**
80052 Kaohsiung (TW)
• **WANG, Yu Ming**
80052 Kaohsiung (TW)
• **WANG, Kai I**
80052 Kaohsiung (TW)

(71) Applicant: **Wiswong Technology Corporation**
Kaohsiung 80052 (TW)

(74) Representative: **Beck & Rössig**
European Patent Attorneys
Cuvilliesstraße 14
81679 München (DE)

(54) **DRINKING VESSEL COVER AND DRINKING VESSEL**

(57) A drinking vessel includes a bottle having a chamber for receiving a liquid, and a mouth communicating with the chamber of the bottle, a cover device includes a cover member for detachably attaching to the mouth, the cover member includes a port having a passage formed in the port and communicating with the chamber of the bottle, a plug is attached to a lower portion of the port and includes an orifice communicating with the passage of the port and the chamber of the bottle, a valve member is engaged in the passage of the port, and the port includes a rib for anchoring the valve member in the passage of the port and for preventing the valve member from being disengaged from the cover member.

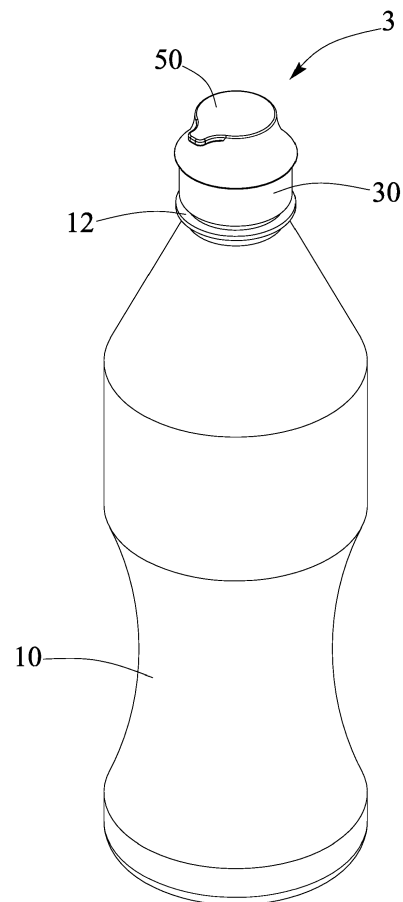


FIG. 1

EP 3 569 111 A1

Description

[0001] The invention relates to a drinking vessel cover including an air check valve for covering the drinking vessel and for preventing the dirt or saliva or contaminant from entering into the drinking vessel after use.

[0002] Typical drinking vessels or bottles comprise a cover attached onto the open mouth for covering the drinking vessel, and the cover may be disengaged from the drinking vessel for allowing the liquid or water or beverage contained in the drinking vessel to be drunk by the user, and the cover may then be attached onto the open mouth of the drinking vessel again for covering the drinking vessel after use.

[0003] However, the typical drinking vessel covers include a complicated structure that may not be easily made and that may include a greatly increased manufacturing cost.

[0004] The invention is to provide a drinking vessel cover including an air check valve for covering the drinking vessel and for preventing the dirt or saliva or contaminant from entering into the drinking vessel after use.

[0005] The invention provides a drinking vessel cover as defined in claim 1. Advantageous embodiments are indicated in further claims.

FIGS. 1, 2 are perspective views of a drinking vessel cover;

FIGS. 3, 4 are partial exploded views of the drinking vessel cover, as seen from the upper portion and the bottom portion of the drinking vessel cover; and

FIGS. 5, 6, 7 are cross sectional views of the drinking vessel cover.

[0006] Referring to FIGS. 1-6, a drinking vessel comprises a vessel body or bottle 10 including a chamber 11 for containing liquid or beverage, an open mouth 12 communicating with the chamber 11 of the bottle 10 for allowing the liquid to be introduced into the chamber 11 of the bottle 10 and/or to be drunk by the user, and arranged for attaching a cover device 3 to the mouth 12 and for covering or sealing the chamber 11 of the bottle 10.

[0007] The cover device 3 includes a cylindrical cover body or member 30 having an inner thread 31 for engaging with the mouth 12 and for detachably attaching to the mouth 12.

[0008] The cover member 30 includes a mouth or port 32 having a passage 33 communicating with the chamber 11 of the bottle 10.

[0009] The cover device 3 includes a plug 34 attached to the port 32 of the cover member 30 at the lower portion of the port 32 for covering the lower portion of the passage 33 of the port 32, and an orifice 35 formed in the plug 34 and communicating with the passage 33 of the port 32 and the chamber 11 of the bottle 10, and a tilted or inclined inner peripheral surface or valve seat 36 formed in the plug 34 for engaging with a valve piece or member 40 and for covering the passage 33 of the port 32 (FIGS. 2,

and 5-6).

[0010] The cover device 3 further includes a spider or rib 37 attached to the port 32 of the cover member 30 at the upper portion of the port 32 and/or one or more pathways 38 formed in the upper portion of the port 32 and/or beside the rib 37 and communicating with the passage 33 of the port 32, for anchoring the valve member 40 within the passage 33 of the port 32 and for preventing the valve member 40 from being disengaged from the cover member 30, and a projection 39 extended from the rib 37 for engaging with the valve member 40 and for preventing the valve member 40 from blocking the pathways 38 of the port 32 or of the cover member 30 (FIG. 7).

[0011] The cover device 3 may include a cap 50 detachably attached to the port 32 and/or the cover member 30 for covering the passage 33 of the port 32 of the cover member 30. The cap 50 may be detachably attached to the port 32 of the cover member 30 with such as a force-fitted engagement for allowing the cap 50 to be detachably attached to the port 32 and/or the cover member 30.

[0012] In operation, when the cap 50 is disengaged from the cover member 30 (FIG. 7) and when the bottle 10 is disposed upside down, the user may drink the liquid from the port 32 of the cover member 30. At this moment, the projection 39 and/or the rib 37 of the cover member 30 may be engaged with the valve member 40 for preventing the valve member 40 from blocking the pathways 38 of the port 32 and/or of the cover member 30 and for allowing the liquid to be suitably drunk by the user.

[0013] After use, the valve member 40 may be engaged with the valve seat 36 (FIGS. 2, 5-6) that is formed in the plug 34, due to gravity force, for blocking the passage 33 of the port 32 and for preventing the dirt or saliva or contaminant from entering into the chamber 11 of the bottle 10 after use.

Claims

1. Drinking vessel cover for a drinking vessel, comprising a cover device (3) including a cover member (30) for engaging with a mouth (12) of the drinking vessel and for detachably attaching to said mouth (12), **characterized in that** the cover member (30) includes a port (32) having a passage (33) formed in the port and communicating with a chamber (11) of the drinking vessel, a plug (34) is attached to a lower portion of the port (32), the plug (34) includes an orifice communicating with the passage (33) of the port (32) and the chamber (11) of drinking vessel (10), a valve member (40) is engaged in the passage (33) of the port (32); and the cover device (3) includes a rib (37) provided at an upper portion of the port (32) for retaining the valve member (40) in the passage (33) of the port.

2. Drinking vessel cover as claimed in claim 1, wherein

the cover member (3) includes an inner thread for engaging with said mouth (12).

3. Drinking vessel cover as claimed in claim 1 or 2, wherein the plug (34) includes a valve seat (36) for engaging with the valve member (40). 5
4. Drinking vessel cover as claimed in one of claims 1 to 3, wherein the cover member (30) includes at least one pathway (38) formed in the upper portion of the port (32). 10
5. Drinking vessel cover as claimed in one of claims 1 to 4, wherein the cover member (30) includes a projection (39) extended from the rib (37) for engaging with the valve member (40). 15
6. Drinking vessel cover as claimed in one of claims 1 to 5, wherein the cover device (3) includes a cap (50) detachably attached to the port (32) and/or the cover member (30) for covering the passage (33) of the port (32) of the cover member (30). 20
7. Drinking vessel comprising including a chamber (11) for receiving a liquid, a mouth (12) communicating with the chamber (11), and drinking vessel cover according to one of claims 1 to 6, wherein the cover device (3) including the cover member (30) is engaged with the mouth (12) and detachably attached to the mouth (12). 25 30
8. Drinking vessel according to claim 8, further comprising a bottle (10) including said chamber (11) for receiving a liquid and said mouth (12) communicating with the chamber (11) of the bottle (10). 35

40

45

50

55

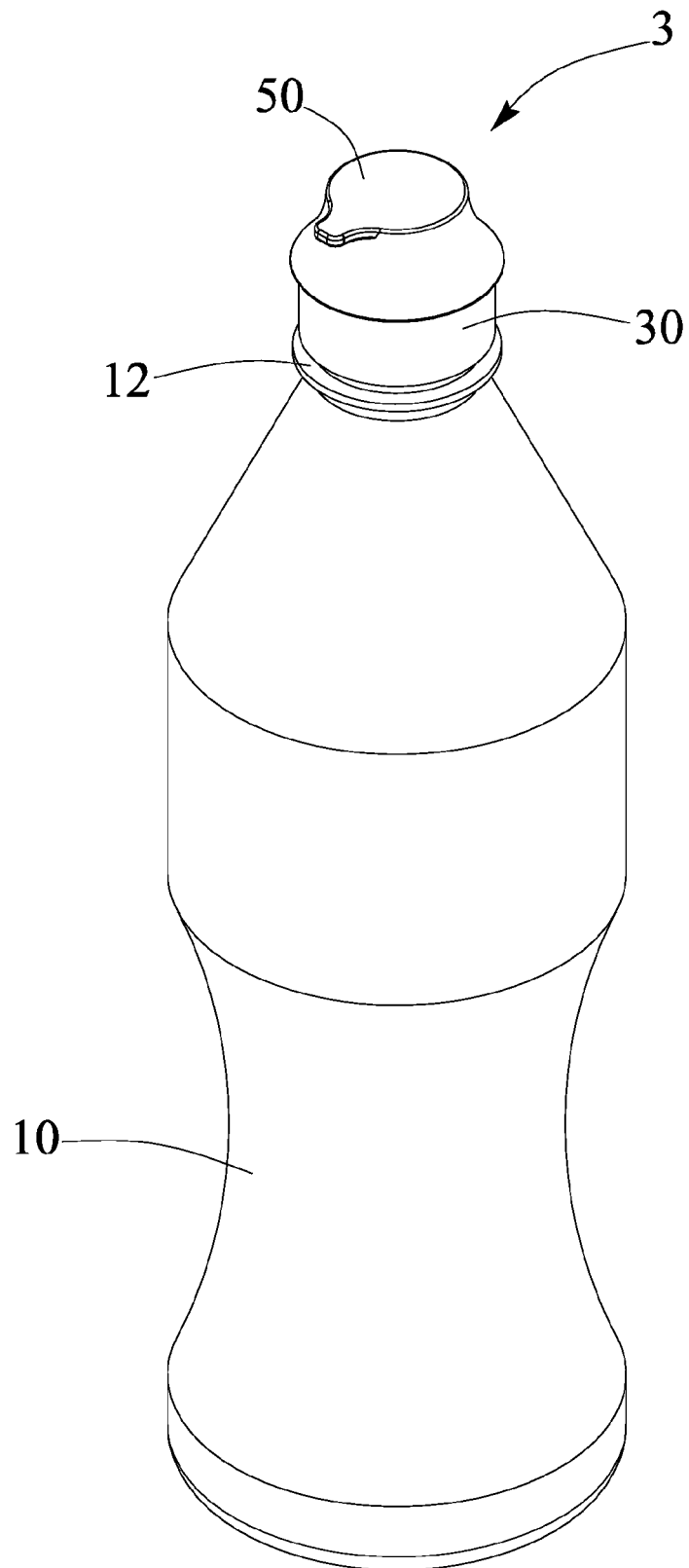


FIG. 1

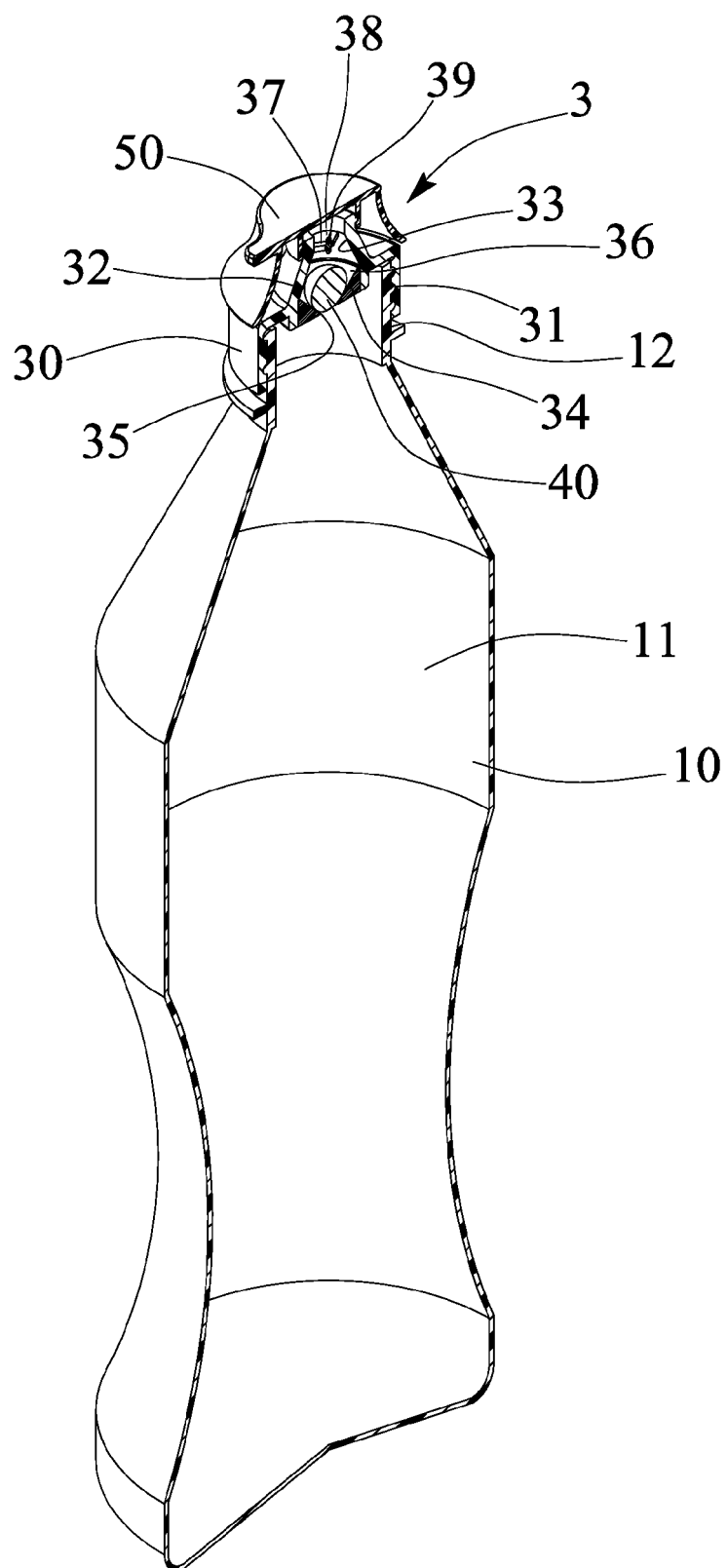


FIG. 2

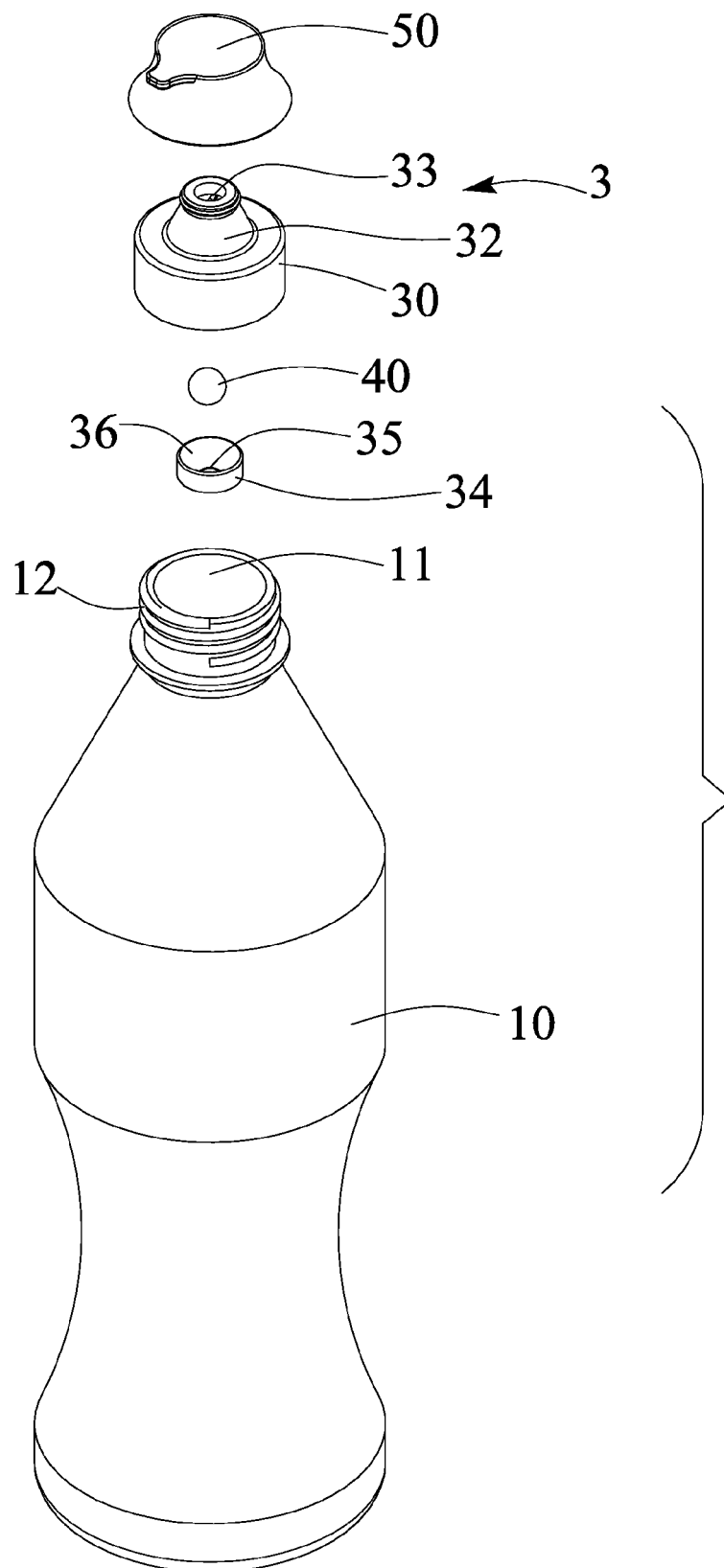


FIG. 3

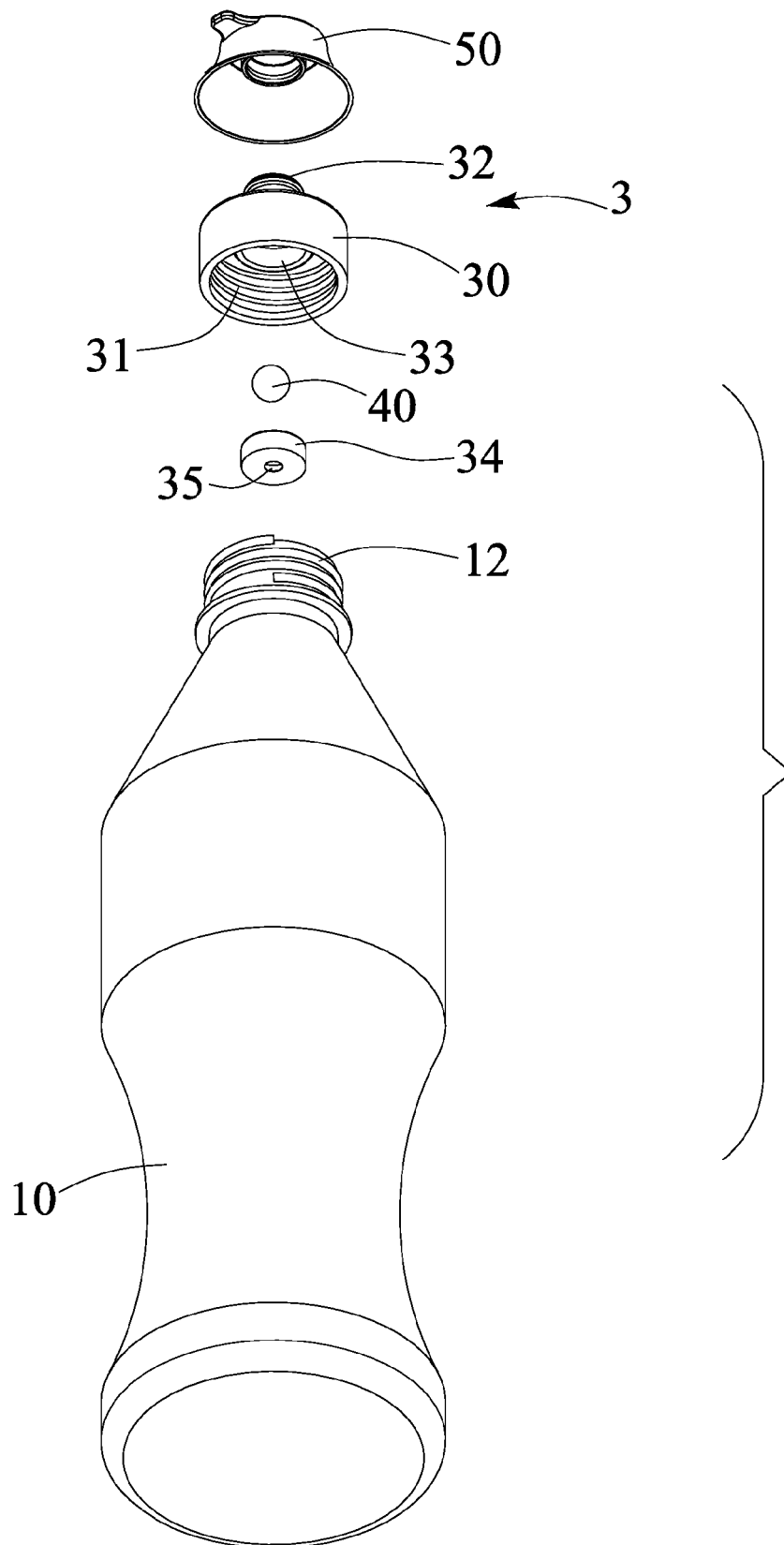


FIG. 4

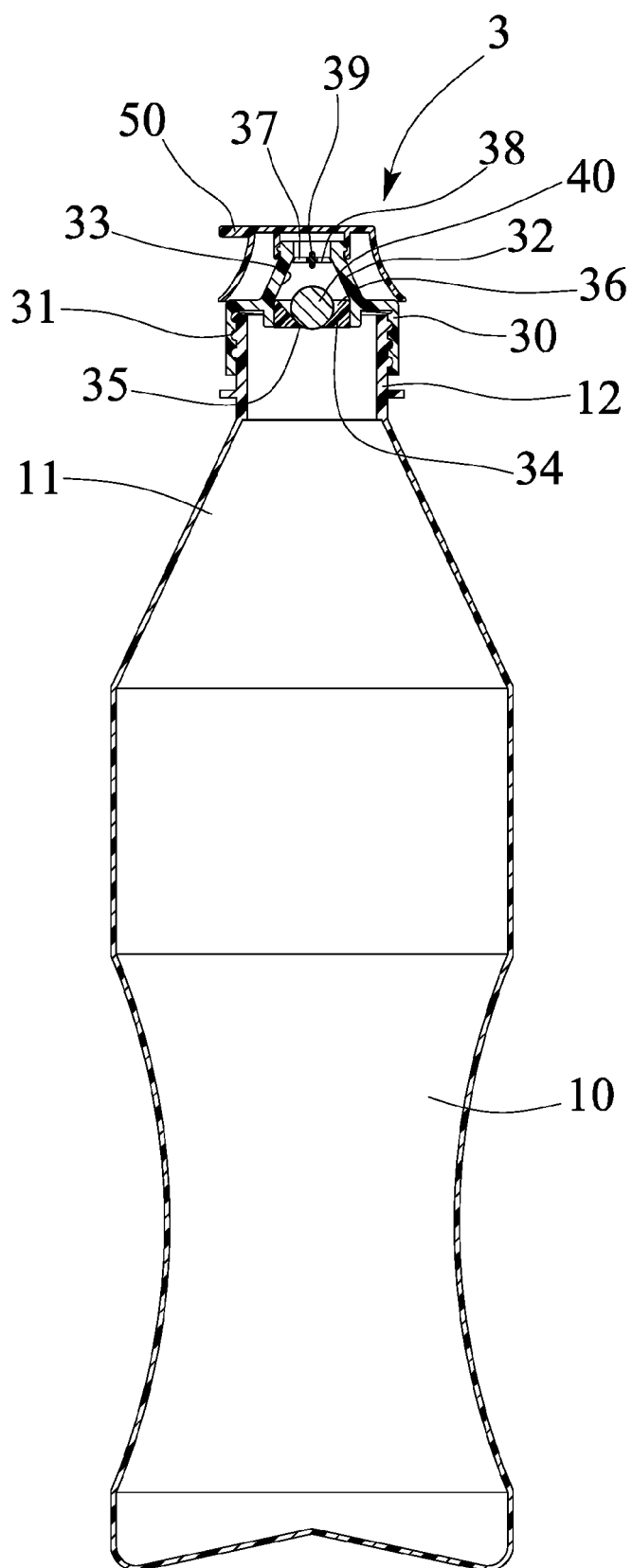


FIG. 5

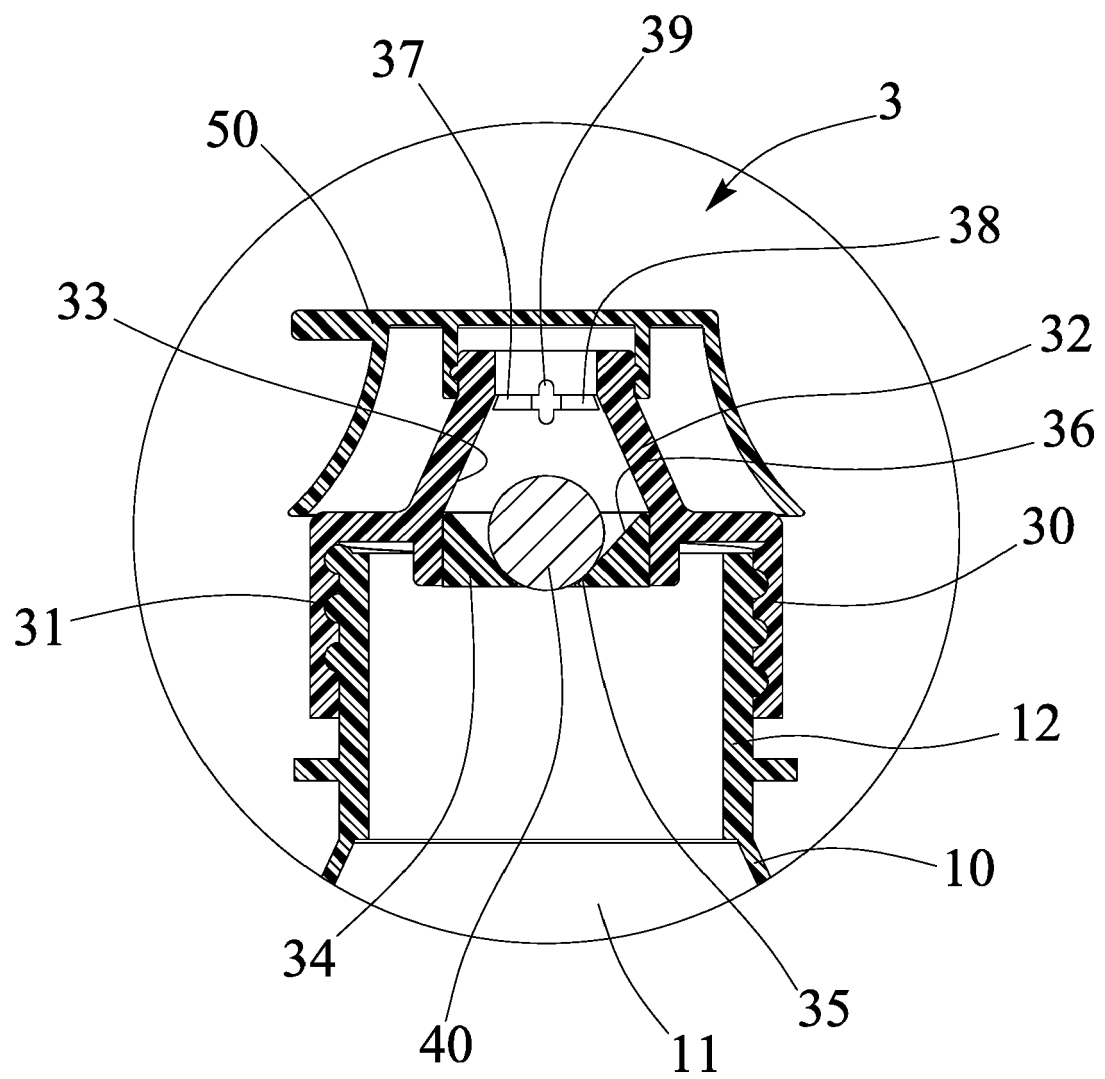


FIG. 6

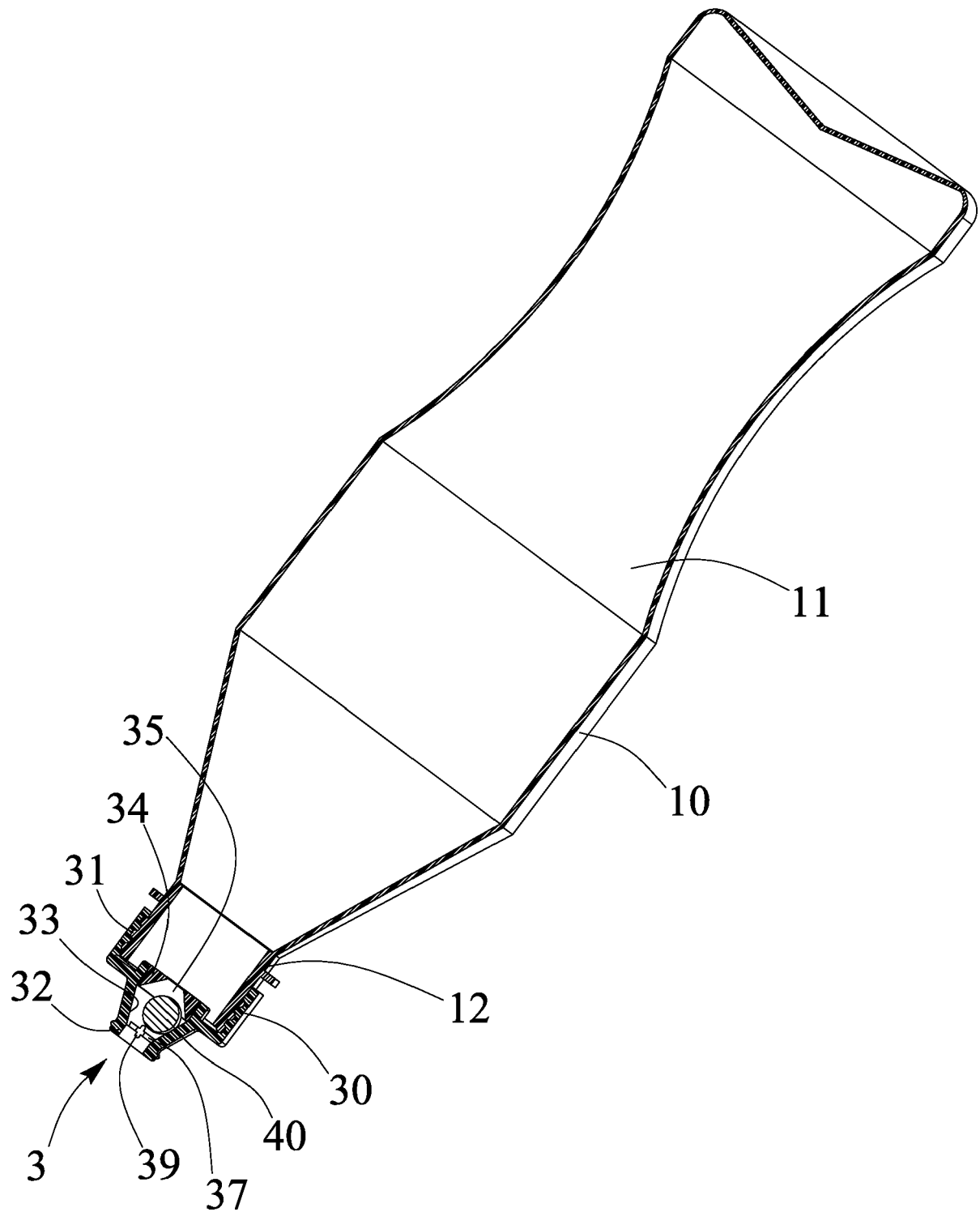


FIG. 7



EUROPEAN SEARCH REPORT

Application Number
EP 18 17 3360

5

10

15

20

25

30

35

40

45

50

55

1

EPO FORM 1503 03.82 (P04C01)

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 3 399 811 A (MILLER IRA H) 3 September 1968 (1968-09-03) * column 1, line 66 - column 3, line 23; figures *	1-8	INV. A47G19/22 B65D47/32 B65D49/04
X	GB 2 008 531 A (UG CLOSURES & PLASTICS LTD) 6 June 1979 (1979-06-06) * page 1, line 103 - page 2, line 123; figures *	1-8	
X	US 2 260 156 A (WANDELL JAMES W) 21 October 1941 (1941-10-21) * page 1, column 2, line 5 - page 2, column 2, line 14; figures *	1-8	
X	WO 2017/003401 A1 (ATATÜRK ÜNİVERSİTESİ BİLİMSEL ARASTIRMA PROJELERİ [TR]; KOMESLİ OKAN T) 5 January 2017 (2017-01-05) * page 3, line 28 - page 5, last line; figures *	1-4,6-8	
X	WO 87/06457 A1 (ERGONOMI DESIGN GRUPPEN AB [SE]; WINBLAD BENGT [SE]; NORBERG ASTRID [S]) 5 November 1987 (1987-11-05) * page 2, line 31 - page 6, line 29; figures *	1-4,6-8	TECHNICAL FIELDS SEARCHED (IPC) A47G B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 3 October 2018	Examiner 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	

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

EP 18 17 3360

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

03-10-2018

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3399811 A	03-09-1968	NONE	
GB 2008531 A	06-06-1979	NONE	
US 2260156 A	21-10-1941	NONE	
WO 2017003401 A1	05-01-2017	NONE	
WO 8706457 A1	05-11-1987	AU 7304287 A	24-11-1987
		EP 0267226 A1	18-05-1988
		SE 451943 B	09-11-1987
		US 4921112 A	01-05-1990
		WO 8706457 A1	05-11-1987