(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 3 604 162 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
05.02.2020 Bulletin 2020/06

(51) Int Cl.:
B65D 43/02 *(2006.01)* ***B65D 47/10*** *(2006.01)*
B65D 55/16 *(2006.01)*

(21) Application number: **18208194.3**

(22) Date of filing: **25.11.2018**

(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

(30) Priority: **31.07.2018 TW 10710434 U**

(71) Applicant: **Hsu, Yu-Ting**
Neihu Dist. (TW)

(72) Inventor: **Hsu, Yu-Ting**
Neihu Dist. (TW)

(74) Representative: **Cabinet Chaillot**
16/20, avenue de l'Agent Sarre
B.P. 74
92703 Colombes Cedex (FR)

(54) CUP LID

(57) A cup lid containing:

a body (10) and a covering layer (20). The body (10) covers a mouth of a cup and includes a raised portion (11), a cap (12) connected to the raised portion (11), and a connection neck (13) connecting the raised portion (11) and the cap (12). The raised portion (11) and the cap (12) are formed in one-piece, and the connection neck (13) is torn by exerting a force to the cap (12) so as to separate the cap (12) from the raised portion (11) and to expose an opening (14) in the raised portion (11). The covering layer (20) is adhered to an outer wall of the cap (12) and covers the raised portion (11) and the cap (12). The connection neck (13) is torn by exerting the force to the cap (12) so as to separate the cap (12) and the covering layer (20) from the raised portion (11), thus exposing the opening (14) in the raised portion (11).

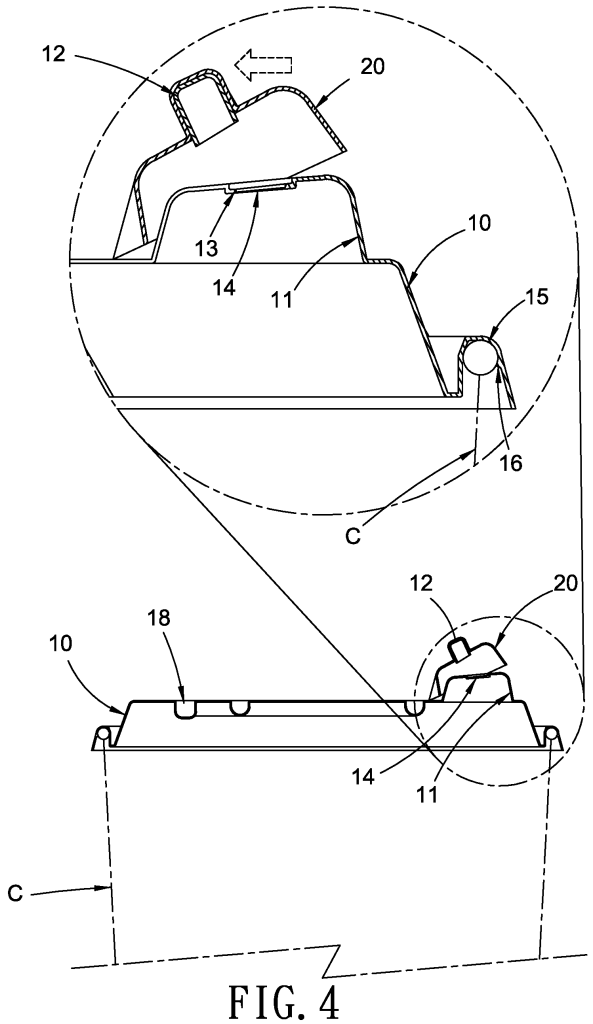

FIG. 4

EP 3 604 162 A1

Description

FIELD OF THE INVENTION

[0001] The present invention relates to a cup lid which is used hygienic and is simplified greatly.

BACKGROUND OF THE INVENTION

[0002] A conventional cup made of paper or plastic material contains a mouth which is sealed so as to avoid beverage spilling out of the cup, wherein the mouth of the cup is heat sealed by a plastic film and a detachable cap made of the plastic material.

[0003] When the mouth of the cup is heat sealed by the plastic film, the plastic film is pierced by a sharp straw and is detachable difficultly. Furthermore, the plastic film is heat sealed on the mouth of the cup by ways of a heat sealing machine.

[0004] A conventional cup lid made of plastic material is removably covered on the mouth of the cup and has an opening formed on the cup lid so that user drinks beverage in the cup via the opening, thus causing unhygienic opportunity when the opening is not closed.

[0005] An improved cup lid contains a body and a covering layer. The body includes a closing portion formed around the body, a fixing trench arranged adjacent to a central position of the body, a raised opening formed around a part of the fixing trench, and a locking groove corresponding to and spaced from the opening. The covering layer includes an engagement portion configured to retain with the fixing trench, an extension integrally extending from the covering layer, and at least one bending portion formed in a C shape on the extension, wherein each of the at least one bending portion has a protrusion formed on a recessed surface of each bending portion and has an indention opposite to the protrusion. The protrusion corresponds to the opening, and the indention corresponds to the locking groove. However, such an improved cup lid is quite complicated, thus increasing fabrication cost.

[0006] The present invention has arisen to mitigate and/or obviate the afore-described disadvantages.

SUMMARY OF THE INVENTION

[0007] The primary objective of the present invention is to provide a cup lid which is used hygienic and is simplified greatly

[0008] To obtain above-mentioned objectives, a cup lid provided by the present invention contains: a body and a covering layer.

[0009] The body is configured to cover a mouth of a cup, and the body includes a raised portion extending upward outside a central position of the body, a cap connected with a top of the raised portion, and a connection neck formed between the raised portion and the cap. The raised portion and the cap are one-piece formed, and the connection neck is torn off by exerting a pulling force to the cap so as to separate the cap from the raised portion and to expose an opening outside the top of the raised portion.

[0010] The covering layer is adhered on an outer wall of the cap and is covered on the raised portion and the cap, wherein the connection neck is torn off after exerting the pulling force to the cap so as to separate the cap from the covering layer and the raised portion, such that the opening exposes outside the top of the raised portion.

[0011] Preferably, the body is one-piece made of polyethylene (PE) or polypropylene (PP).

[0012] Preferably, the body further includes an annular groove defined around an inner wall thereof facing the cup, and the body includes a protruded portion formed on a peripheral side of the annular groove.

[0013] Preferably, the connection neck is integrally connected between the raised portion and the cap.

[0014] Preferably, the covering layer is made of plastic material.

[0015] Preferably, the covering layer is adhered on an outer wall of the cap by using adhesive.

[0016] Preferably, the covering layer is adhered on an outer wall of the cap in an ultrasonic welding manner.

[0017] Preferably, the body further includes an accommodation recess formed on a top thereof and configured to accommodate the cap and a part of the covering layer around the cap after the cap is separated from the raised portion.

[0018] Preferably, the body further includes an air orifice configured to communicate with the cup and external air.

[0019] To avoid foreign objects and dusts, the covering layer is covered on the raised portion and the opening.

[0020] When pulling the covering layer upward, the cap and the raised portion are separated simultaneously, thus obtaining easy operation.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021]

FIG. 1 is a perspective view showing the exploded components of a cup lid according to a first embodiment of the present invention.

FIG. 2 is a perspective view showing the assembly of the cup lid according to the first embodiment of the present invention.

FIG. 3 is a cross sectional view showing taken along the line A-A of FIG. 2.

FIG. 4 is a cross sectional view showing the operation of the cup lid according to the first embodiment of the present invention.

FIG. 5 is a perspective view showing the operation of the cup lid according to the first embodiment of the present invention.

FIG. 6 is a cross sectional view taken along the line B-B of FIG. 5.

FIG. 7 is a perspective view showing the assembly of a part of the cup lid according to the first embodiment of the present invention.

FIG. 8 is a cross sectional view showing the assembly of a part of the cup lid according to the first embodiment of the present invention.

FIG. 9 is a perspective view showing the exploded component of a cup lid according to a second embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0022] With reference to FIGS. 1 and 2, a cup lid according to a first embodiment of the present invention comprises: a body 10 and a covering layer 20.

[0023] The body 10 is configured to cover a mouth of a cup C, and the body 10 includes a raised portion 11 extending upward outside a central position of the body 10, a cap 12 connected with a top of the raised portion 11, wherein the raised portion 11 and the cap 12 are one-piece formed, and the body 10 is made of polyethylene (PE) or polypropylene (PP). Preferably, the raised portion 11 and the cap 12 are one-piece injection molded from plastic material. As shown in FIG. 3, the body 10 further includes a connection neck 13 integrally connected between the raised portion 11 and the cap 12. As illustrated in FIG. 4, the connection neck 13 is torn off by exerting a pulling force to the cap 12 so as to separate the cap 12 from the raised portion 11 and to expose an opening 14 outside the top of the raised portion 11, as shown in FIG. 5, thus drinking beverage in the cup C.

[0024] Referring to FIG. 3, the body 10 further includes an annular groove 15 defined around an inner wall thereof facing the cup C, and the body 10 includes a protruded portion 16 formed on a peripheral side of the annular groove 15, such that the body 10 is engaged with the mouth of the cup C by way of the annular groove 15 and the protruded portion 16.

[0025] With reference to FIGS. 7 and 8, the covering layer 20 is made of plastic material, and the covering layer 20 is transparent or is opaque. In this embodiment, the covering layer 20 is opaque.

[0026] The covering layer 20 is adhered on an outer wall of the cap 12 by using adhesive or in an ultrasonic welding manner, wherein a size of the covering layer 20 is equal to or more than a size of the raised portion 11 and the cap 12.

[0027] Referring to FIG. 4, in operation, user exerts the pulling force to the cap 12 so as to tear off the connection neck 13 and to separate the cap 12 from the covering layer 20 and the raised portion 11, such that the opening 14 exposes outside the top of the raised portion 11, as shown in FIG. 5, and the beverage in the cup C is drunk via the opening 14.

[0028] Preferably, the body 10 further includes an accommodation recess 18 formed on a top thereof and configured to accommodate the cap 12 and a part of the covering layer 20 around the cap 12 after the cap 12 is separated from the raised portion 11.

[0029] To avoid foreign objects and dusts, the covering layer 20 is covered on the raised portion 11 and the opening 14.

[0030] When pulling the covering layer 20 upward, the cap 12 and the raised portion 11 are separated simultaneously, thus obtaining easy operation.

[0031] Referring to FIG. 9, in a second embodiment, the body 10 further includes an air orifice 17 configured to communicate with the cup C and external air.

[0032] While the preferred embodiments of the invention have been set forth for the purpose of disclosure, modifications of the disclosed embodiments of the invention as well as other embodiments thereof may occur to those skilled in the art. Accordingly, the appended claims are intended to cover all embodiments which do not depart from the spirit and scope of the invention.

Claims

1. A cup lid comprising:

   a body (10) configured to cover a mouth of a cup (c), and the body (10) including a raised portion (11) extending upward outside a central position of the body (10), a cap (12) connected with a top of the raised portion (11), and a connection neck (13) formed between the raised portion (11) and the cap (12), wherein the raised portion (11) and the cap (12) are one-piece formed, and the connection neck (13) is torn off by exerting a pulling force to the cap (12) so as to separate the cap (12) from the raised portion (11) and to expose an opening (14) outside the top of the raised portion (11); and

   a covering layer (20) adhered on an outer wall of the cap (12) and covered on the raised portion (11) and the cap (12), wherein the connection neck (13) is torn off after exerting the pulling force to the cap (12) so as to separate the cap (12) from the covering layer (20) and the raised portion (11), such that the opening (14) exposes outside the top of the raised portion (11).

2. The cup lid as claimed in claim 1, wherein the body (10) is one-piece made of polyethylene (PE) or polypropylene (PP).

3. The cup lid as claimed in claim 1, wherein the body (10) further includes an annular groove (15) defined around an inner wall thereof facing the cup (c), and the body (10) includes a protruded portion (16) formed on a peripheral side of the annular groove (15).

4. The cup lid as claimed in claim 1, wherein the con-

nection neck (13) is integrally connected between the raised portion (11) and the cap (12).

5. The cup lid as claimed in claim 1, wherein the covering layer (20) is made of plastic material.

6. The cup lid as claimed in claim 1, wherein the covering layer (20) is adhered on an outer wall of the cap (12) by using adhesive.

7. The cup lid as claimed in claim 1, wherein the covering layer (20) is adhered on an outer wall of the cap (12) in an ultrasonic welding manner.

8. The cup lid as claimed in claim 1, wherein the body (10) further includes an accommodation recess (18) formed on a top thereof and configured to accommodate the cap (12) and a part of the covering layer (20) around the cap (12) after the cap (12) is separated from the raised portion (11).

9. The cup lid as claimed in claim 1, wherein the body (10) further includes an air orifice (17) configured to communicate with the cup (c) and external air.

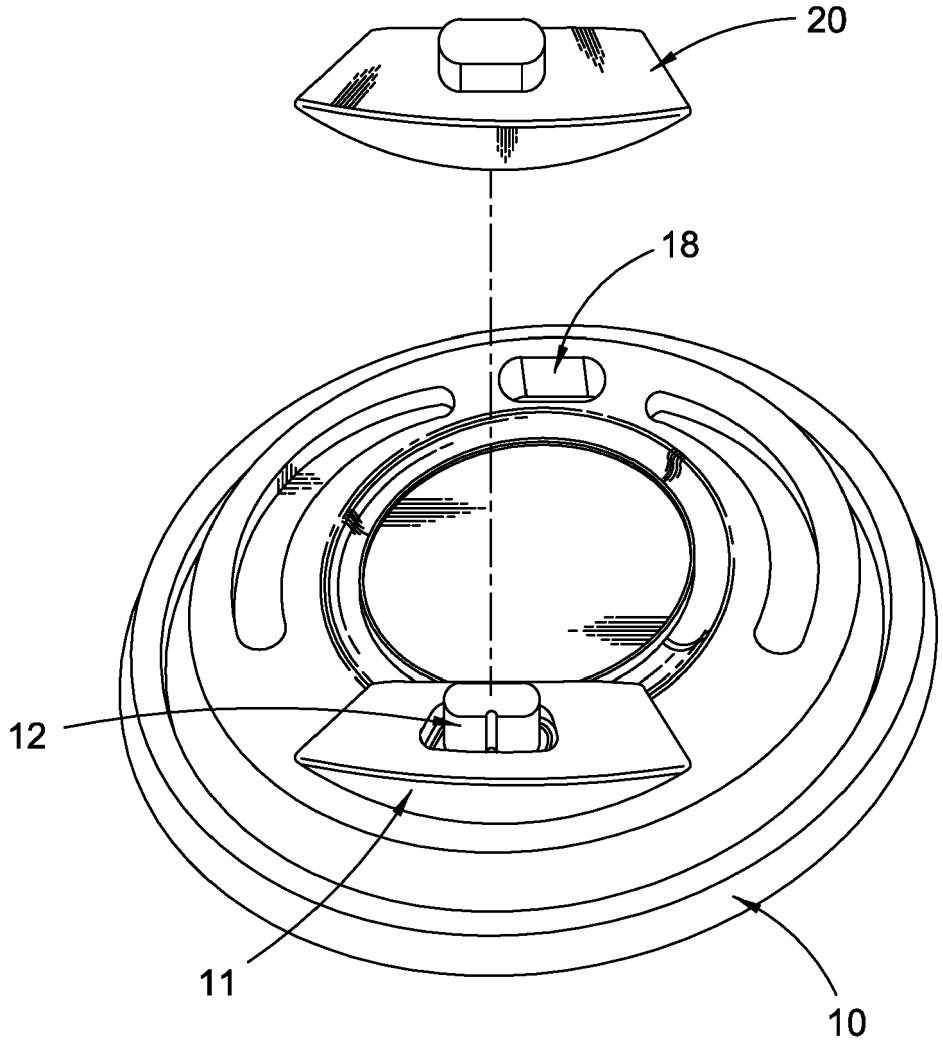

FIG. 1

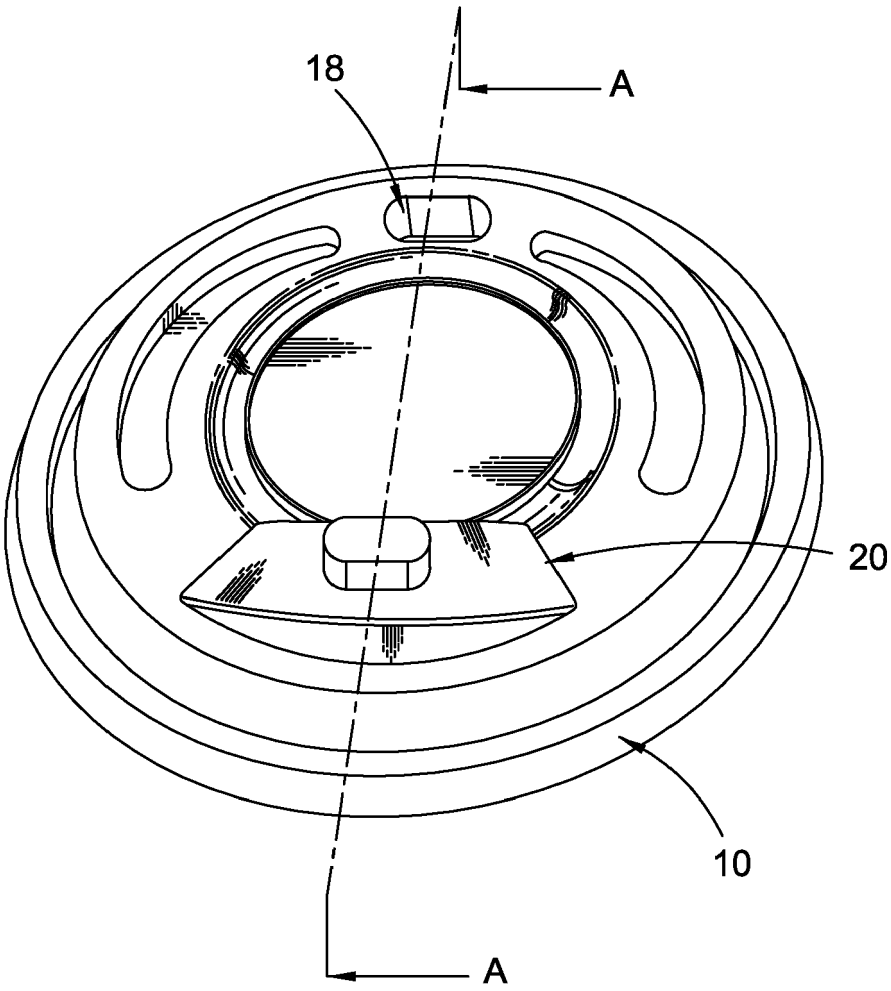

FIG. 2

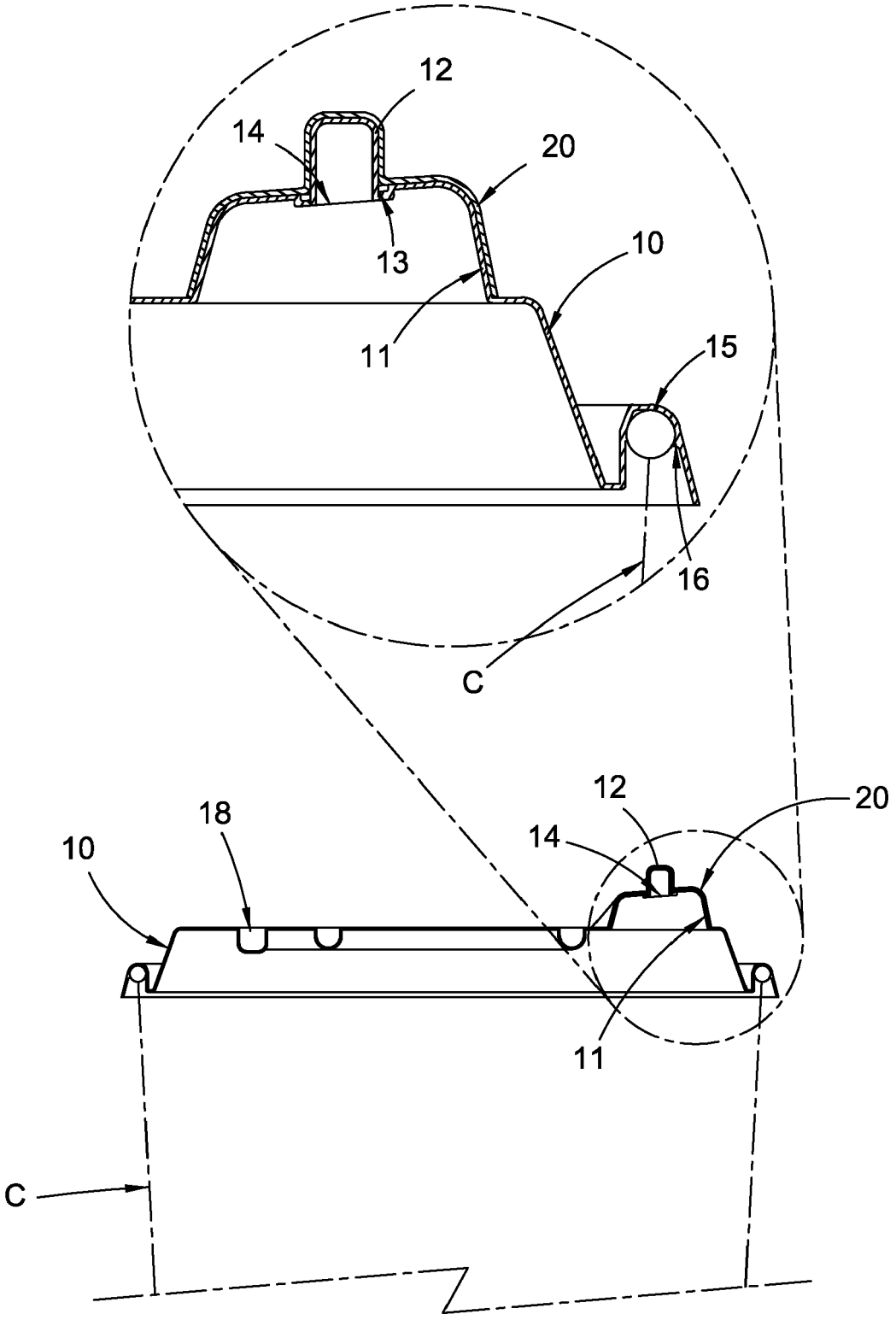

FIG. 3

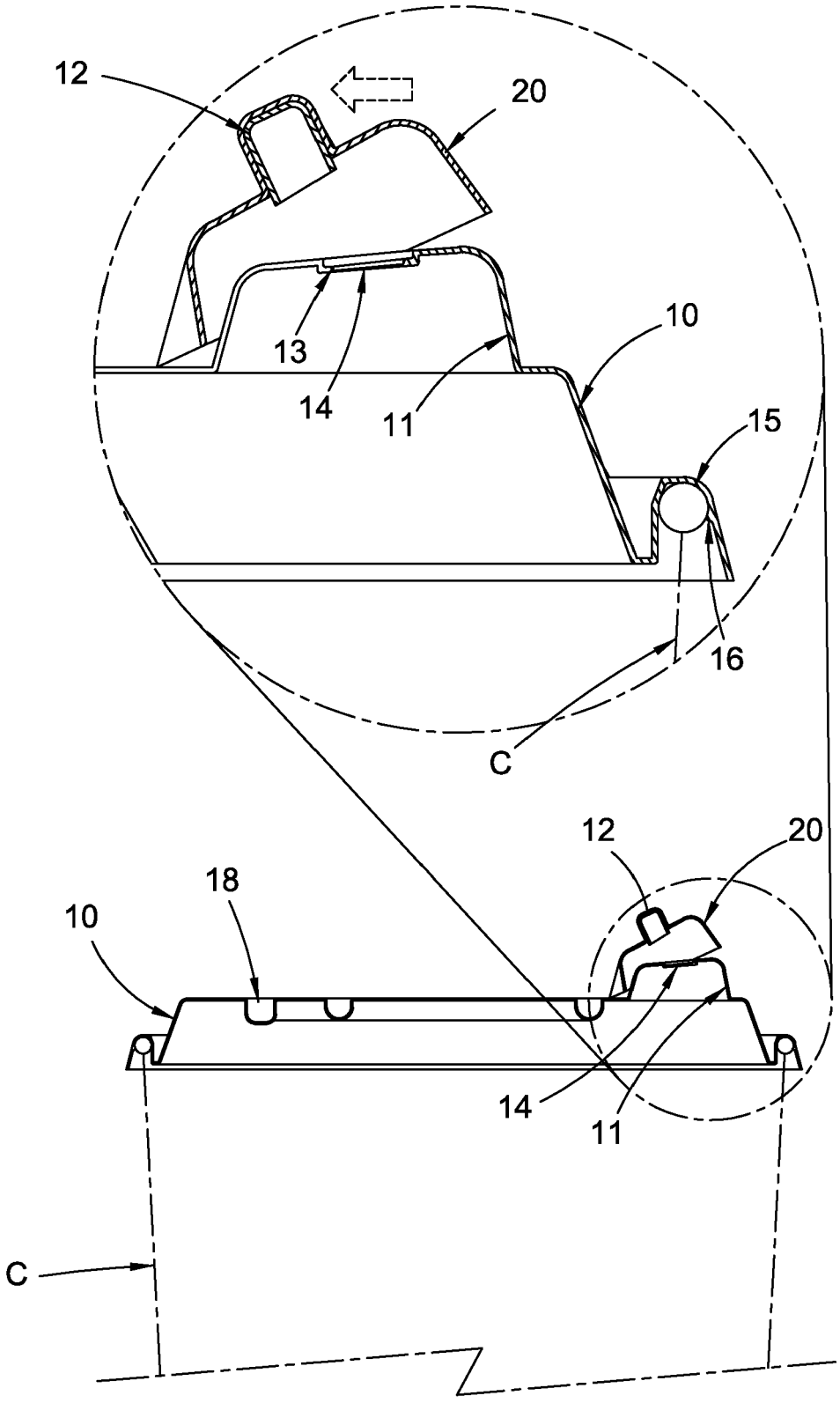

FIG. 4

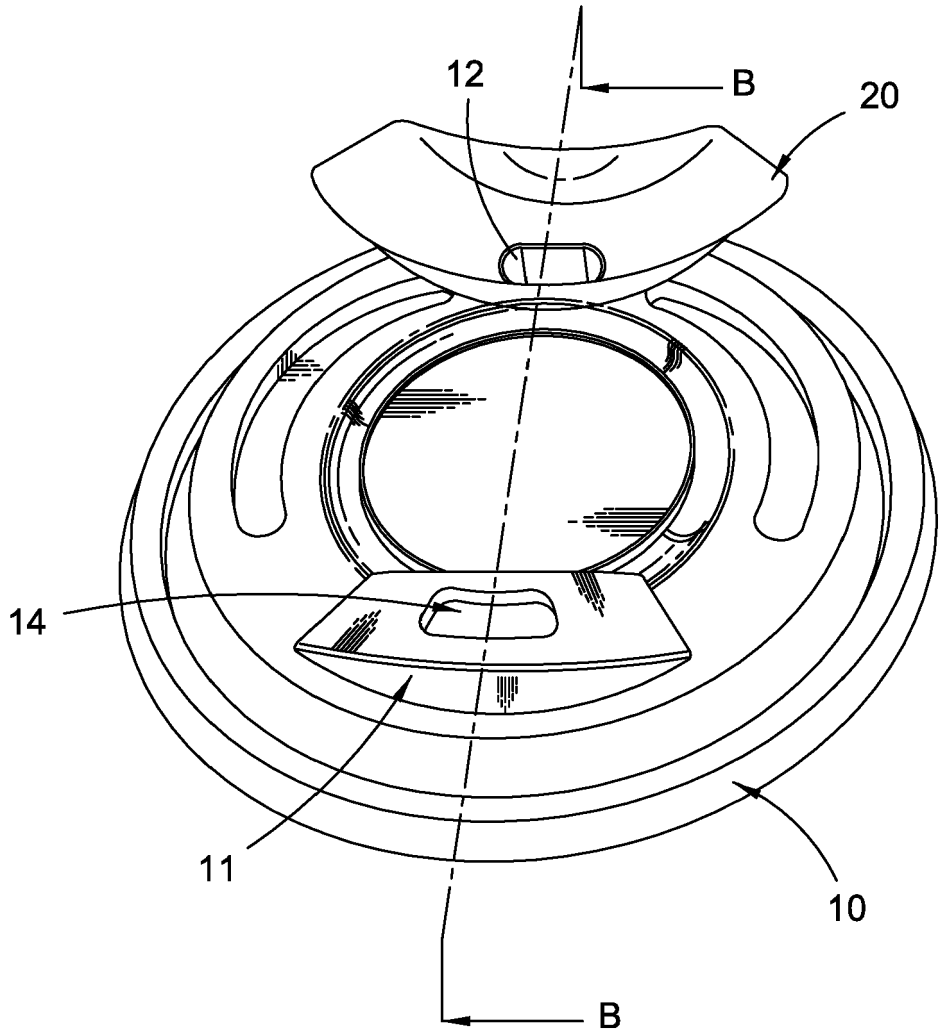

FIG. 5

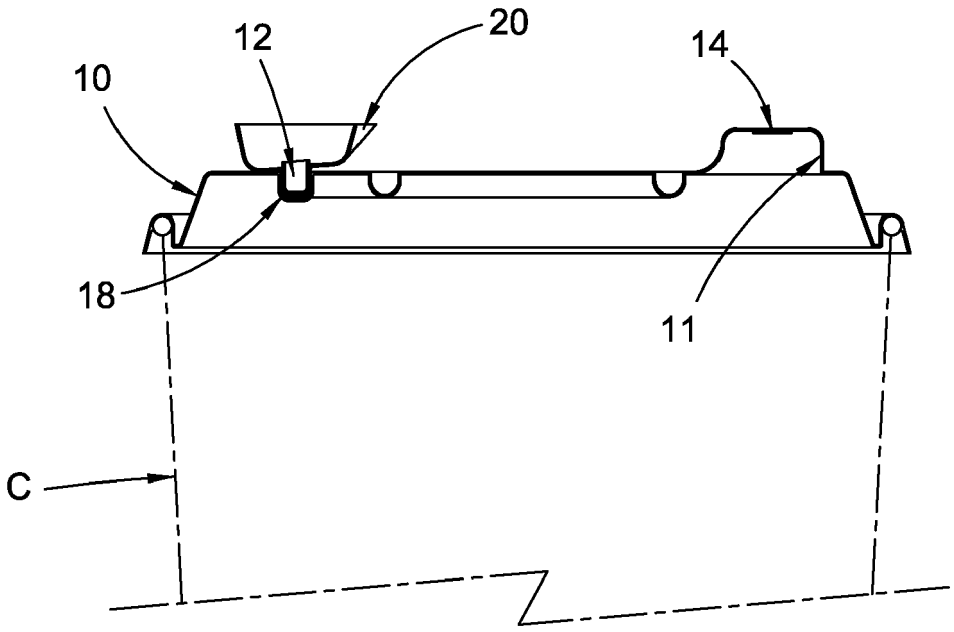

FIG. 6

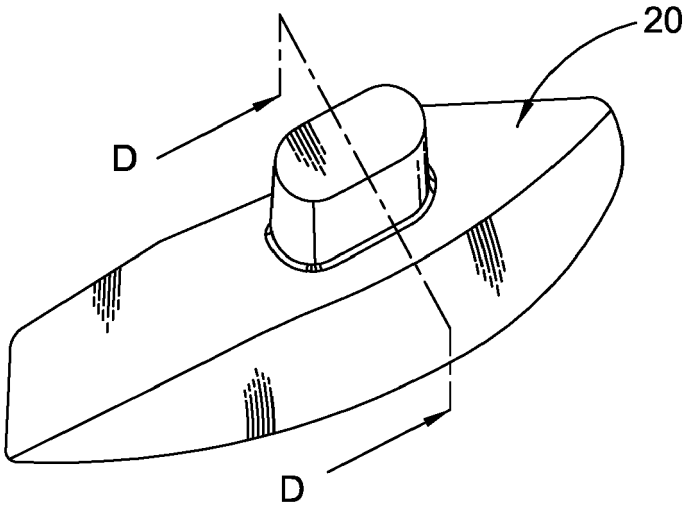

FIG. 7

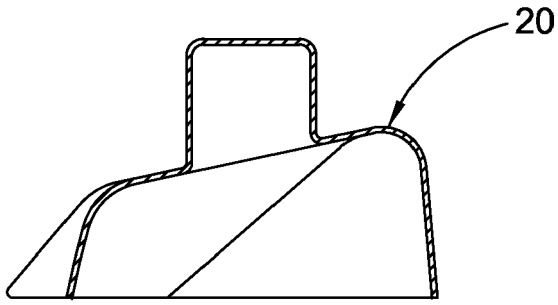

FIG. 8

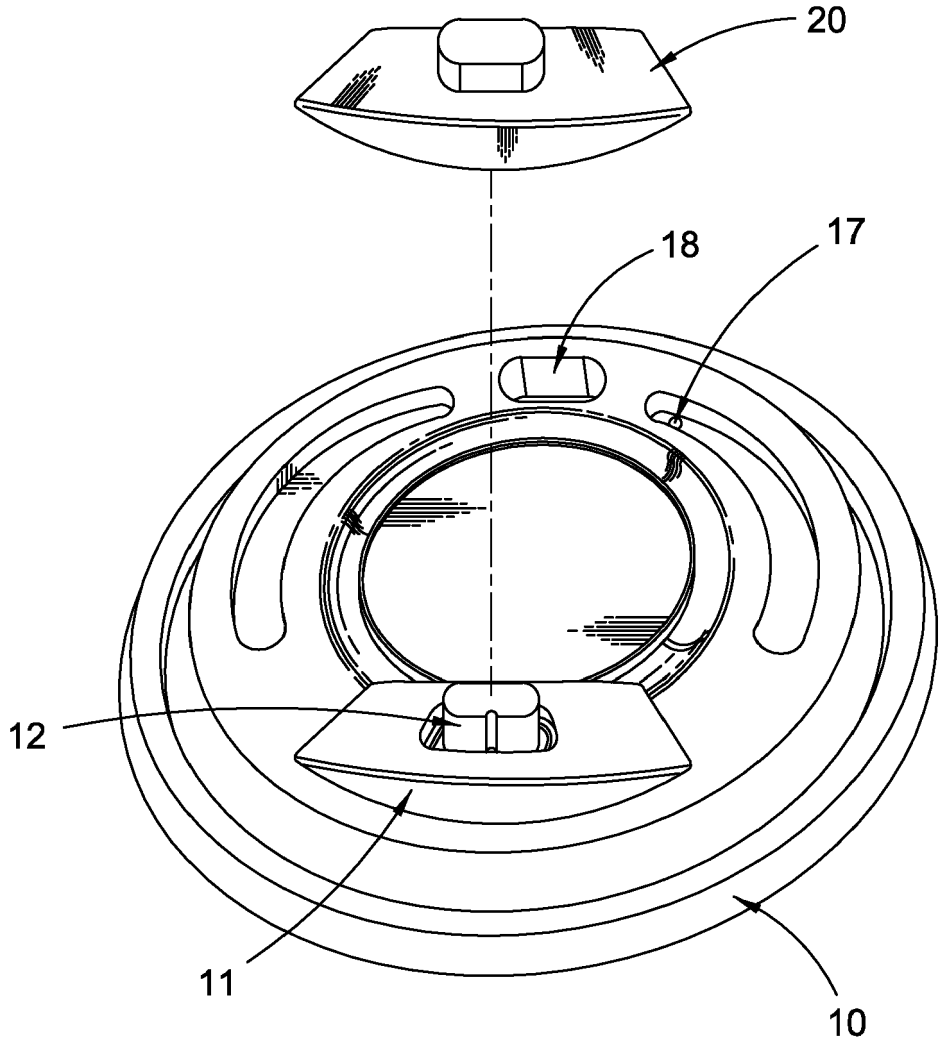

FIG. 9

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 18 20 8194

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 2006/213908 A1 (CLARKE BRIAN NORMAN [GB] ET AL) 28 September 2006 (2006-09-28) * figures 7,8 *	1-9	INV. B65D43/02 B65D47/10 B65D55/16
A	US 2009/223981 A1 (LEVEY WILLIAM M [US]) 10 September 2009 (2009-09-10) * paragraph [0106]; figures 9A,9B *	1-9	

TECHNICAL FIELDS SEARCHED (IPC)

B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	8 July 2019	Sundell, Olli

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 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 18 20 8194

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.

08-07-2019

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006213908 A1	28-09-2006	AT 376520 T	15-11-2007
		DE 60223126 T2	14-08-2008
		EP 1321374 A2	25-06-2003
		ES 2295281 T3	16-04-2008
		US 2003116568 A1	26-06-2003
		US 2005155969 A1	21-07-2005
		US 2006213908 A1	28-09-2006
US 2009223981 A1	10-09-2009	AU 2009221740 A1	11-09-2009
		CA 2717768 A1	11-09-2009
		US 2009223981 A1	10-09-2009
		WO 2009111718 A2	11-09-2009

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82