



(11)

EP 4 530 213 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
02.04.2025 Bulletin 2025/14

(51) International Patent Classification (IPC):
B65D 43/02 ^(2006.01) **B65D 47/08** ^(2006.01)
B65D 47/32 ^(2006.01)

(21) Application number: **23199964.0**

(52) Cooperative Patent Classification (CPC):
B65D 43/0212; B65D 47/089; B65D 47/32;
B65D 2543/00046

(22) Date of filing: **27.09.2023**

(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 ME MK MT NL
NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
KH MA MD TN

(72) Inventor: **Wang, Linda**
Shanghai, 201506 (CN)

(74) Representative: **dompatent von Kreisler Selting**
Werner -
Partnerschaft von Patent- und Rechtsanwälten
mbB
Deichmannhaus am Dom
Bahnhofsvorplatz 1
50667 Köln (DE)

(71) Applicant: **Top Green World BIOTECHNOLOGY**
CO., Ltd
Shanghai, 201506 (CN)

(54) **BEVERAGE CUP COVER**

(57) Disclosed by the present invention is a beverage cup cover, comprising: a cover body (1) and an upper sealing cover (2), wherein the upper sealing cover is connected on the cover body, and a drinking port (4) and an anti-overflow groove (5) are formed on the upper cover; the bottom of the anti-overflow groove is provided with an anti-overflow cover sheet (51), on which a first air outlet (52) and a lower partition bar (53) are provided; a raised slot (111) is formed on the upper surface of the upper cover; there is a positioning hole (6) next to the anti-overflow groove; a first clamp strip (132) is provided on the outer lateral side of the upper cover; the upper sealing cover is integrally formed, with a plug hole (21) and an anti-overflow plug (22) formed at both ends of the upper sealing cover, and a folding line (23) is provided between the plug hole and the anti-overflow plug; the front end of the plug hole is provided with an elastic clamping part (24) to clamp the upper cover, and there is a fixed slot on the back of the elastic clamping part; when folded along the folding line, the fixed slot is clamped to the first clamp strip; the anti-overflow plug is provided with a second air outlet (221), and the lower surface of the anti-overflow plug is provided with an upper partition bar (222), which is buckled with the lower partition bar (53) and separates the first and second air outlets; the lower surface of the upper sealing cover is provided with a positioning column (25), which is inserted into the positioning hole.

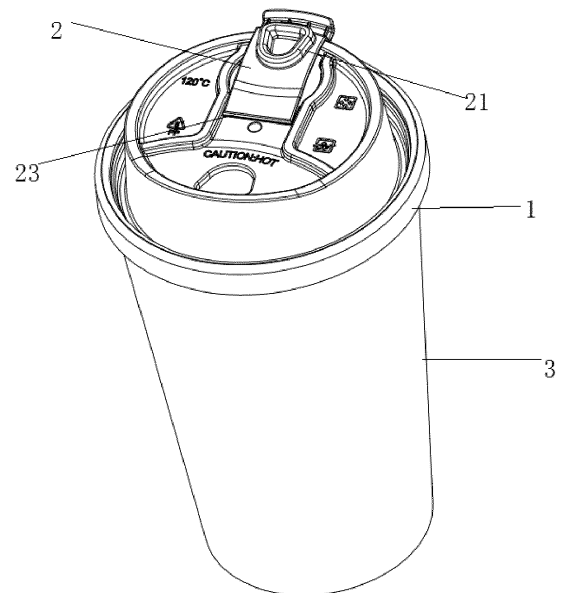


Fig. 5

EP 4 530 213 A1

Description

Technical Field

[0001] The present invention relates to a beverage cup cover.

Background

[0002] The existing beverage cup cover comprises a cover body with an air hole and a drinking port, and a drinking port cover. The drinking port cover is small, directly covered on the drinking port. With the rise of the take-out industry, there is an increasing demand for beverage takeout. However, the currently used beverage cup covers often experience drinking port blockage during transportation due to shaking and falling, or the beverage is spilled from the air hole, resulting in low consumer recognition of the brand.

[0003] How to effectively prevent the drinking port cover from falling off and prevent beverages from spilling from the air hole is an urgent problem to be solved.

Summary

[0004] The present application proposes a beverage cup cover, which aims to solve the problems of easy falling of the drinking port cover and spillage of beverages from the air hole in the prior art.

[0005] To achieve the above technical objectives, the present application adopts the following technical solution:

a beverage cup cover, comprising: a cover body and an upper sealing cover, wherein the upper sealing cover is connected on the cover body, and the cover body comprises an upper cover, a lateral side extending downwards along the periphery of the upper cover, and a buckle edge extending outwards and folding from the edge of the lateral side; a drinking port and an anti-overflow groove are respectively formed on the centerline of the upper cover, and the bottom of the anti-overflow groove is provided with an anti-overflow cover sheet; a first air outlet is provided on the anti-overflow cover sheet, and a lower partition bar is formed on the anti-overflow cover sheet; the upper surface of the upper cover is formed with a raised slot along the centerline of the upper cover, and the slot is located on the outer side of the anti-overflow groove; there is a positioning hole next to the anti-overflow groove; a raised first clamp strip is provided on the edge of the upper cover on one side close to the anti-overflow groove; the buckle edge is elastically buckled to the upper edge of a beverage cup; the upper sealing cover is integrally formed, with a plug hole and an anti-overflow plug formed at both ends of the upper sealing cover, and a folding line is provided between the plug hole and the anti-overflow plug; the plug hole and the drinking port are in match seal, and the anti-overflow plug and the anti-overflow groove are in match

seal; the front end of the plug hole is provided with a raised elastic clamping part, which is clamped to the lateral side of the upper cover; and there is a fixed slot on the back of the elastic clamping part; when one end with the plug hole is folded along the folding line, the fixed slot is clamped to the first clamp strip; the anti-overflow plug is provided with a second air outlet, and the lower surface of the anti-overflow plug is provided with an upper partition bar, which is buckled with the lower partition bar when the anti-overflow plug seals the anti-overflow groove; the upper partition bar and the lower partition bar separate the first and second air outlets; the lower surface of the upper sealing cover is provided with a positioning column, which is located between the folding line and the anti-overflow cover and inserted into the positioning hole.

[0006] Preferably, the upper partition bar is provided with an inward clamp position, and the lower partition bar is correspondingly provided with an outward second clamp strip; when the anti-overflow cover is combined with the anti-overflow groove, the lower partition bar and the upper partition bar are buckled with each other.

[0007] Preferably, the drinking port has a diameter of 0.5-1.4cm.

[0008] Preferably, the upper cover with the drinking port is an upward-sloping structure.

[0009] Preferably, there are protruding limit strips on both sides of the anti-overflow groove corresponding to the slot, and the limit strips are clamped with the two lateral sides of the sealing cover.

[0010] Preferably, the anti-overflow groove sinks by at least 1cm.

[0011] Preferably, the anti-overflow cover sheet tilts towards the first air outlet.

[0012] Due to the use of the above technical features, the present application has the following advantages:

1. Upon adopting an integrated upper sealing cover, the plug hole and the anti-overflow plug are formed together on the upper sealing cover, and connected by positioning holes and positioning columns, reducing the probability of the plug hole easily falling off;

2. A sunken anti-overflow groove is provided, and upper partition bar, lower partition bar and a second air outlet are added, therefore, in case of ensuring ventilation, even a small amount of overflow can overflow into the anti-overflow groove without spilling onto the outer side of the cup body; at the same time, the stability of the upper sealing cover is further increased by connecting the upper and lower partition bars.

Brief Description of the Drawings

[0013]

Fig. 1 is a structural schematic diagram of the cover

body of an embodiment of the present application;

Fig. 2A is a structural schematic diagram I of the upper sealing cover of an embodiment of the present application;

Fig. 2B is a structural schematic diagram II of the upper sealing cover of an embodiment of the present application;

Fig. 3 is a structural schematic diagram of the whole body of an embodiment of the present application;

Fig. 4A is a structural schematic diagram of the use on a cup in an embodiment of the present application;

Fig. 4B is a schematic diagram of the local structure of the section in Fig. 4A;

Fig. 5 shows the usage status of the present application; and

Fig. 6 is the side view of Fig. 1.

Detailed Description

[0014] The technical solution of the present invention will be further described below through embodiments and in conjunction with the accompanying drawings.

[0015] Fig. 3 is a structural schematic diagram of the whole body of an embodiment of the present application. The beverage cup cover of the present application comprises a cover body 1 and an upper sealing cover 2. The upper sealing cover 2 is connected on the cover body 1.

[0016] Fig. 1 is a structural schematic diagram of the cover body 1 of an embodiment of the present application. As shown in the figures, the cover body 1 comprises an upper cover 11, a lateral side 12 extending downwards along the periphery of the upper cover 11 and a buckle edge 13 extending outwards and folding from the edge of the lateral side 12. The buckle edge 13 is folded to form a flex groove 131, as shown in Fig. 4A and Fig. 4B, and at least two raised clamp strips 132 and 133 are formed on the inner lateral side of the flex groove 131. The clamp strip 132 is used for clamping the raised top edge of the cup body 3 while combining the cup body 3, and the clamp strip 133 is used for clamping the lateral side of the cup body below the top edge. As shown in Fig. 1 and Fig. 4, an inward bend is formed on the surface of the inner side of the flex groove 131, so that the inner lateral side 1311 of the flex groove 131 and the clamp strip 133 form an elastic bayonet to the top edge of the cup body, in order to firmly connect the upper end of the cup body 3.

[0017] As shown in Fig. 1, a drinking port 4 and an anti-overflow groove 5 are respectively formed on the centerline of the upper cover 11. The drinking port 4 and the anti-overflow groove 5 are respectively located at both ends of

the upper cover 11. The drinking port 4 can be used as a direct drinking port, so the upper cover 11 is set as an upward-sloping structure at the drinking port 4, and the drinking port 4 tilts with the upper cover 11 to match the fit of the lips. Meanwhile the drinking port 4 can be inserted into a straw. Thus, the diameter of the drinking port 4 is set as 0.5-1.4cm, in order to meet two requirements for thin and thick straws.

[0018] As shown in Fig. 1, the bottom of the anti-overflow groove 5 of the upper cover 11 is provided with an anti-overflow cover sheet 51, and a first air outlet 52 is provided on the anti-overflow cover sheet 51; the first air outlet 52 is also used as a reflux hole when the liquid in the cup overflows, and so the anti-overflow cover sheet tilts towards the first air outlet. A lower partition bar 53 is formed on the anti-overflow cover sheet 51. A raised slot 111 is formed on the upper surface of the upper cover 11 along the centerline of the upper cover 11, and the slot 111 is located at the outer side of the anti-overflow groove 5. A raised line 112 is provided on the lateral side of the slot 111 at the anti-overflow groove 5 to further secure the sealing cover 2. There is a positioning hole 6 beside the anti-overflow groove 5, and the positioning hole 6 is combined with the sealing cover 2 to fix the sealing cover 2 on the upper cover 11 to prevent from easy falling off. The positioning hole 6 tilts towards the anti-overflow groove 5 for easy directional positioning. As shown in Fig. 3, there is a raised first clamp strip 54 on the outer edge of the upper cover 11 near the anti-overflow groove 5. On both sides of the slot 111 corresponding to the anti-overflow groove 5, there are protruding limit strips 113, which are clamped with both lateral sides of the sealing cover 2.

[0019] Combining Fig. 2A, Fig. 2B, and Fig. 3, the upper sealing cover 2 is an integrated molding structure. A plug hole 21 and an anti-overflow plug 22 are respectively formed at both ends of the upper sealing cover 2, and a folding line 23 is provided between the plug hole 21 and the anti-overflow plug. The plug hole 21 is used for plugging at the drinking port, and the anti-overflow plug 22 is used for plugging at the anti-overflow groove 5. The folding line 23 enables the folding of the upper sealing cover 2. At the front end of the plug hole 21, there is a raised elastic clamping part 24, which is used to clamp the corresponding lateral side of the upper cover 11, achieving the purpose of connecting and fixing one end of the upper sealing cover 2 to the cover body 1. As shown in Fig. 3, a fixed slot is provided on the back of the elastic clamping part 24. When one end with a plug hole is folded along the folding line 23, the folded part of the sealing cover 2 is clamped in the raised slot, and the fixed slot is clamped with the first clamp strip 54, making it easy to use the plug hole.

[0020] As shown in Fig. 2A, a second air outlet 221 is provided on the anti-overflow plug 22, and an upper partition bar 222 is provided on the lower surface of the anti-overflow plug 22. As shown in Fig. 3, when the anti-overflow plug 222 blocks the anti-overflow groove 5,

the upper partition bar 222 is buckled with the lower partition bar 53, strengthening the connection between the sealing cover 2 and the upper cover 11. The upper partition bar 222 and the lower partition bar 53 separate the first air outlet 51 and the second air outlet 221, in order to prevent water vapor under thermal pressure from splashing and injuring people. Meanwhile, the liquid shaken out during transportation will accumulate in the sunken anti-overflow groove 5, and will slowly flow back into the cup body without overflowing the cup cover, causing the liquid to spill out. The anti-overflow groove 5 sinks by at least 1cm.

[0021] The lower surface of upper sealing cover 2 is provided with a positioning column 25, which is inserted into the positioning hole 6, ensuring the connection between the upper sealing cover 2 and the upper cover 11 whether in a plugged or drinking state.

[0022] In order to achieve a stable connection, the upper partition bar 222 is provided with an inward clamp position, and the lower partition bar 53 is correspondingly provided with an outward second clamp strip; when the anti-overflow cover is combined with the anti-overflow groove, the lower partition bar and the upper partition bar are buckled with each other.

[0023] To sum up, after the present application adopts an integrated upper sealing cover, the plug hole and the anti-overflow plug are formed together on the upper sealing cover, and connected by positioning holes and positioning columns, reducing the probability of the plug hole easily falling off. Meanwhile, the upper partition bar is combined with the lower partition bar in the anti-overflow groove, and the upper limit strip is clamped with two lateral sides of the sealing cover on the slot, in order to further strengthen the connection between the upper sealing cover and the cover body.

[0024] The present application is further provided with a sunken anti-overflow groove, and an upper partition bar, a lower partition bar and a second air outlet are added. Therefore, in case of ensuring ventilation, even a small amount of overflow can overflow into the anti-overflow groove and return to the cup without spilling onto the outer side of the cup body. The connection between the upper and lower partition bars can block storage of water vapor under thermal pressure, preventing it from shaking and causing water vapor to directly splash outwards.

[0025] The above implementation modes are only to illustrate the present invention and not to limit the scope of the present invention. The equivalent changes and modifications made by those skilled in the art to the present invention shall fall within the scope of the claims attached to the present invention.

Claims

1. A beverage cup cover, **characterized by** comprising: a cover body and an upper sealing cover, where-

in the upper sealing cover is connected on the cover body.

The cover body comprises an upper cover, a lateral side extending downwards along the periphery of the upper cover, and a buckle edge extending outwards and folding from the edge of the lateral side; a drinking port and an anti-overflow groove are respectively formed on the centerline of the upper cover, and the bottom of the anti-overflow groove is provided with an anti-overflow cover sheet; a first air outlet is provided on the anti-overflow cover sheet, and a lower partition bar is formed on the anti-overflow cover sheet; the upper surface of the upper cover is formed with a raised slot along the centerline of the upper cover, and the slot is located on the outer side of the anti-overflow groove; there is a positioning hole next to the anti-overflow groove; a raised first clamp strip is provided on the outer lateral side of the upper cover on one side close to the anti-overflow groove; the buckle edge is elastically buckled to the upper edge of a beverage cup;

the upper sealing cover is integrally formed, with a plug hole and an anti-overflow plug formed at both ends of the upper sealing cover, and a folding line is provided between the plug hole and the anti-overflow plug; the plug hole and the drinking port are in match seal, and the anti-overflow plug and the anti-overflow groove are in match seal; the front end of the plug hole is provided with a raised elastic clamping part, which is clamped to the lateral side of the upper cover; there is a fixed slot on the back of the elastic clamping part; when one end with the plug hole is folded along the folding line, the fixed slot is clamped to the first clamp strip; the anti-overflow plug is provided with a second air outlet, and the lower surface of the anti-overflow plug is provided with an upper partition bar, which is buckled with the lower partition bar when the anti-overflow plug seals the anti-overflow groove; the upper partition bar and the lower partition bar separate the first and second air outlets; the lower surface of the upper sealing cover is provided with a positioning column, which is located between the folding line and the anti-overflow cover and inserted into the positioning hole.

2. The beverage cup cover according to claim 1, **characterized in that:** the upper partition bar is provided with an inward clamp position, and the lower partition bar is correspondingly provided with an outward second clamp strip; when the anti-overflow cover is combined with the anti-overflow groove, the lower partition bar and the upper partition bar are buckled

with each other.

3. The beverage cup cover according to claim 1, **characterized in that:** the drinking port has a diameter of 0.5-1.4cm. 5
4. The beverage cup cover according to claim 1, **characterized in that:** the upper cover with the drinking port is an upward-sloping structure. 10
5. The beverage cup cover according to claim 1, **characterized in that:** there are protruding limit strips on both sides of the anti-overflow groove corresponding to the slot, and the limit strips are clamped with the two lateral sides of the sealing cover. 15
6. The beverage cup cover according to claim 1, **characterized in that:** the anti-overflow groove sinks by at least 1cm. 20
7. The beverage cup cover according to claim 1, **characterized in that:** the anti-overflow cover sheet tilts towards the first air outlet. 25

30

35

40

45

50

55

5

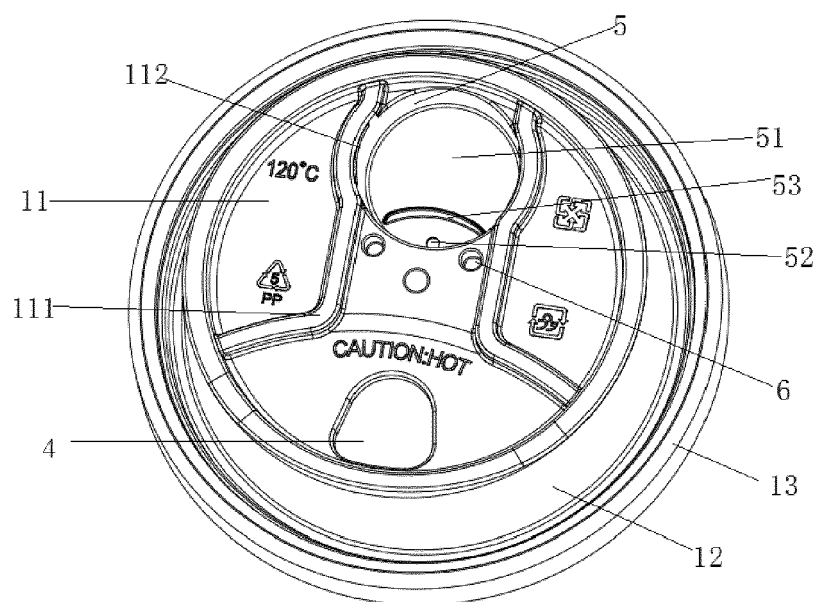


Fig. 1

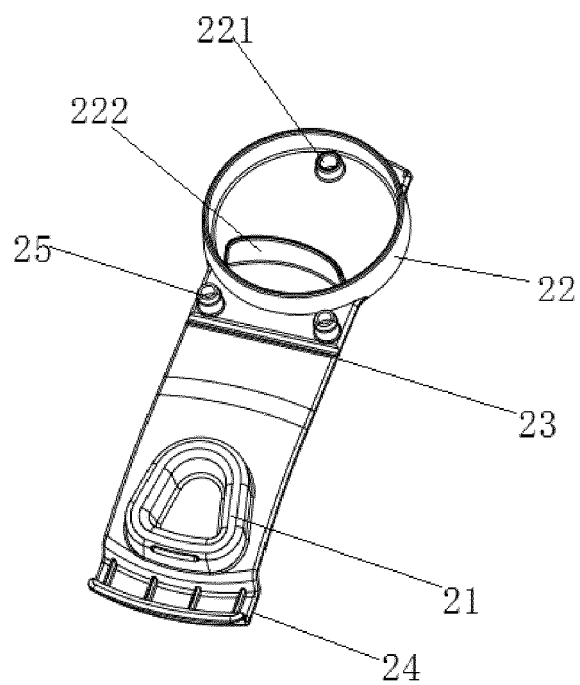


Fig. 2A

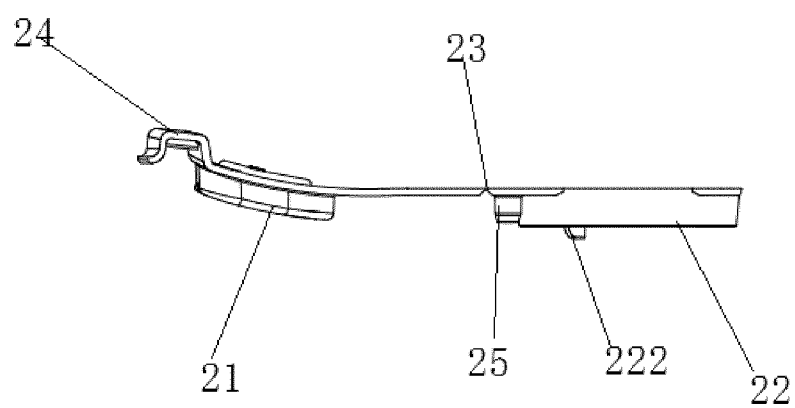


Fig. 2B

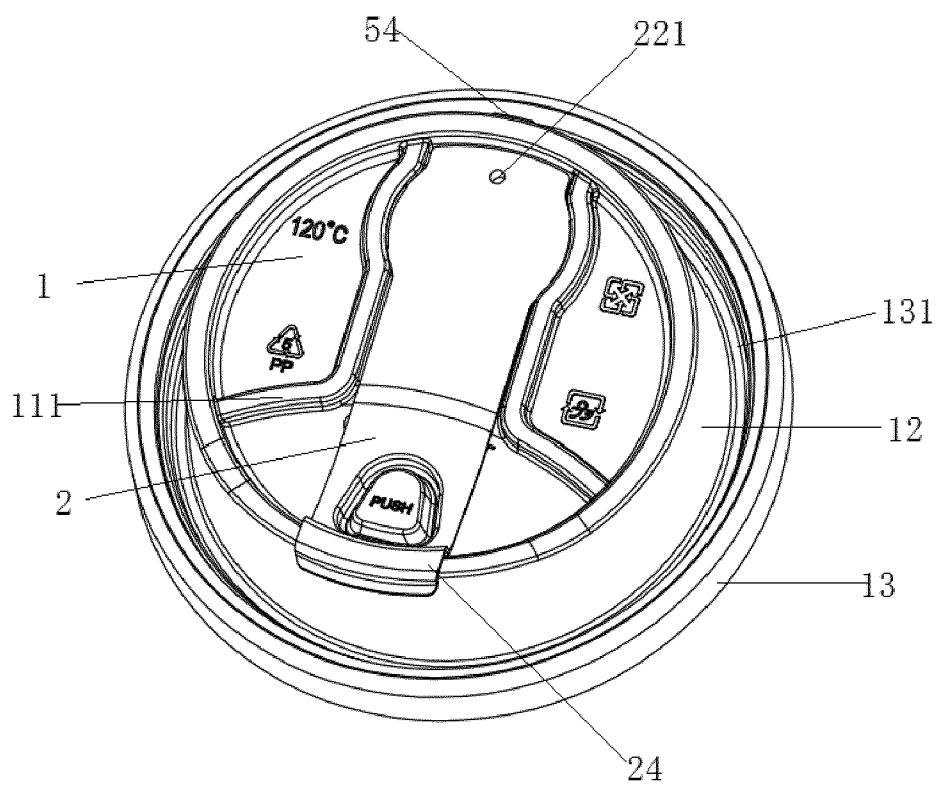


Fig. 3

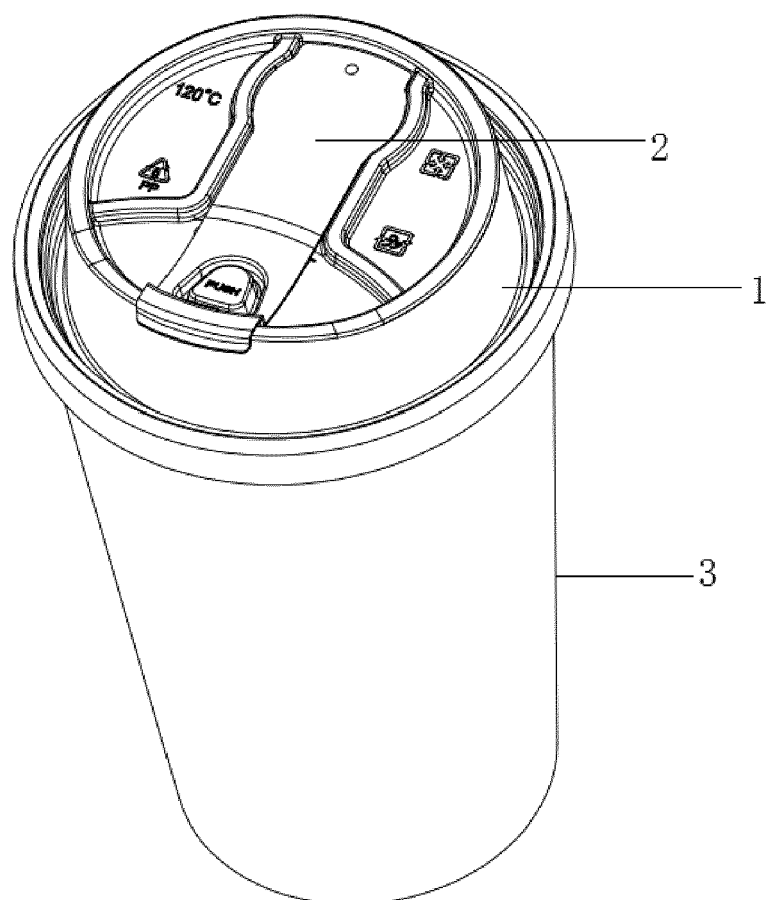


Fig. 4A

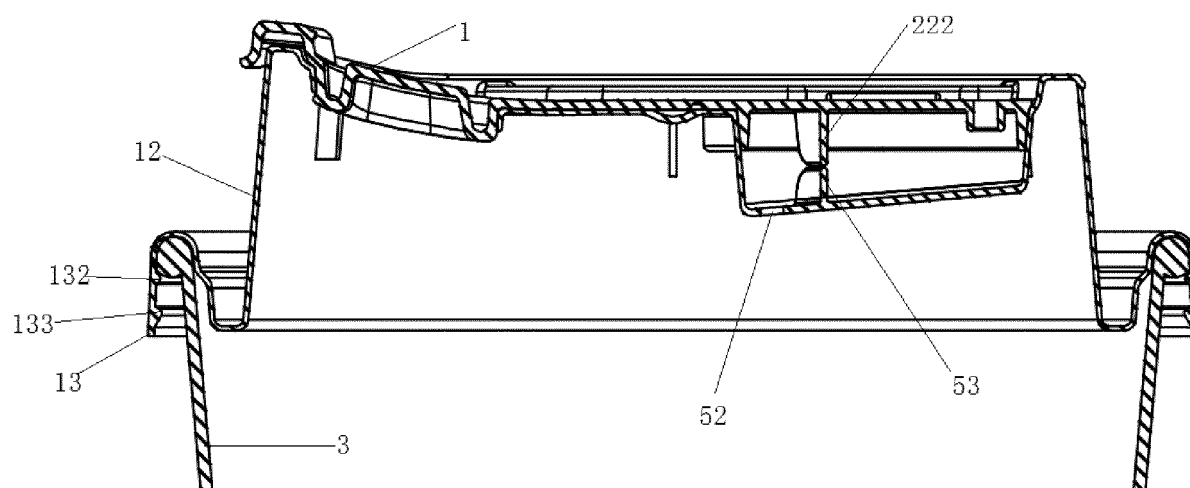


Fig. 4B

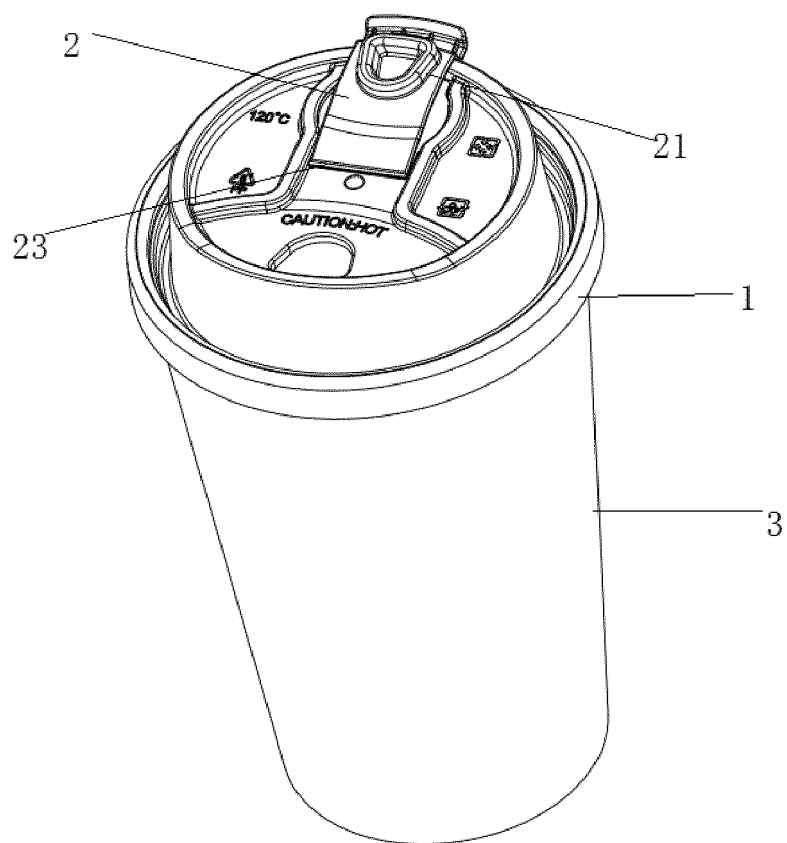


Fig. 5

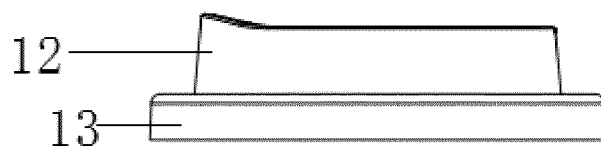


Fig. 6



EUROPEAN SEARCH REPORT

Application Number

EP 23 19 9964

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	CN 209 769 935 U (ANHUI HENGXIN ENVIRONMENTAL SCIENCE & TECH CO LTD) 13 December 2019 (2019-12-13) * paragraph [0032] * * paragraph [0034] * * figures * -----	1-7	INV. B65D43/02 B65D47/08 B65D47/32
A	CN 210 479 534 U (FENGYI IND SHANGHAI CO LTD) 8 May 2020 (2020-05-08) * paragraph [0033]; figures * -----	1-7	TECHNICAL FIELDS SEARCHED (IPC) B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 9 February 2024	Examiner Bridault, Alain
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 23 19 9964

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.

09-02-2024

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CN 209769935	U	13-12-2019	NONE

CN 210479534	U	08-05-2020	NONE

15

20

25

30

35

40

45

50

55

EPO FORM P0459

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