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(54) **Cup lid having a drink-through opening**

(57) The lid of the present invention has a top plate (10), a side wall (15) and an engaging portion (20). The side wall includes a linear extension section (151) and a linear inner engaging section (152). The extension section connects the inner engaging section to the periphery of the top plate. The engaging portion includes a top engaging section (21), an outer engaging section (22) and a guiding section (23). The guiding section slantedly ex-

tends outward from the lower end of the outer engaging section. The top engaging section connects to the engaging section and the side wall. An engaging slot (24) is defined between the inner engaging section, the outer engaging section and the top engaging section. At least one engaging rim (25) extends from a portion between the outer engaging section and the guiding section. As such, the engaging lip can be restrained in the engaging slot while the lid is capped on a cup.

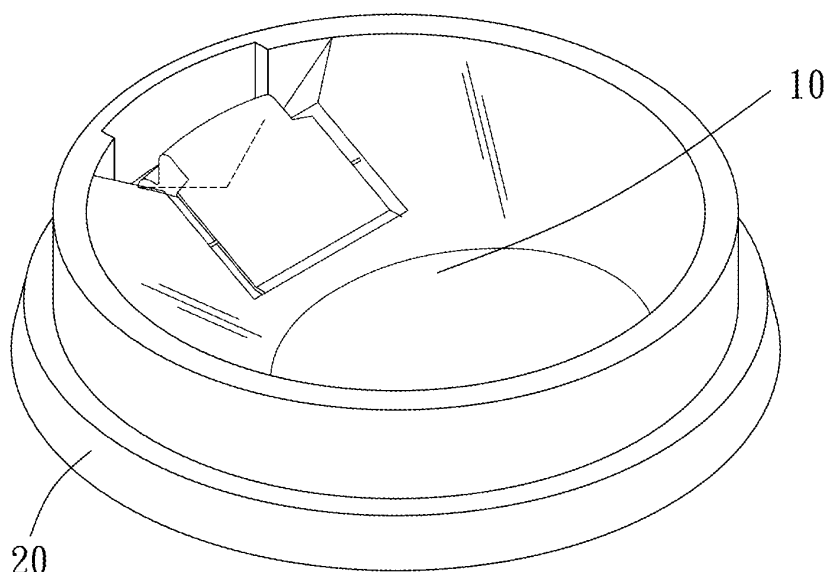


FIG. 1

Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to a cap for capping a cup.

Description of the Prior Art

[0002] A cup can be enclosed by a cap. A conventional cap has an annular engaging rim extended downward to engage with an engaging lip of the cup.

[0003] When the cup is pressed to slightly deform, the engaging lip may not tightly engage with the engaging rim. As a result, the contents in the cup may leak, and the cap may disengage from the cup.

[0004] As shown in Fig. 5, a cup 1 is provided with an engaging slot 2 to tightly receive the engaging lip therein, so that the cap cannot be easily disengaged from the cup. However, the conventional cap is shaped by pressing, thus the structure thereof must be continuous. For example, there must be a curved connecting section 5 formed between the top surface 3 and the inner engaging section 4. The existence of the curved connecting section 5 will shrink the area of the top plate, and thus the sip opening 6 locates closer to the cup center. In other words, the sip opening 6 is more remote from the cup periphery. As a result, it is not convenient for the user to approach a sip opening closer to the cup center with his/her mouth.

[0005] The present invention is, therefore, arisen to obviate or at least mitigate the above mentioned disadvantages.

SUMMARY OF THE INVENTION

[0006] The main object of the present invention is to provide a cap whose top plate can have a bigger area.

[0007] To achieve the above and other objects, a cap of the present invention is adapted for a cup which has an engaging lip. The cap has a top plate, a side wall and an engaging portion. The side wall annularly extends downward from a periphery of the top plate, and the side wall includes a linear extension section and a linear inner engaging section. The extension section connects the inner engaging section to the periphery of the top plate. The engaging portion includes an annular top engaging section, an annular outer engaging section and an annular top engaging section. The outer engaging section has an upper end and a lower end. The guiding section slantedly extends outward from the lower end of the outer engaging section. The top engaging section connects to the upper end of the outer engaging section at one end thereof, and the top engaging section connects to a portion between the extension section and the inner engaging section at another end thereof. An engaging slot is defined between the inner engaging section, the outer

engaging section and the top engaging section. At least one engaging rim extends from a portion between the outer engaging section and the guiding section toward the engaging slot. A distance between the inner engaging section and the outer engaging section equals to a thickness of the engaging lip. A distance between the inner engaging section and the engaging rim is slightly smaller than the thickness of the engaging lip. As such, the engaging lip can be restrained in the engaging slot while the cap is capped on the cup.

[0008] The present invention will become more obvious from the following description when taken in connection with the accompanying drawings, which show, for purpose of illustrations only, the preferred embodiment(s) in accordance with the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009]

Fig. 1 is a perspective drawing showing a cap of the present invention;

Fig. 2 is a perspective drawing showing a cap of the present invention at another viewing angle;

Fig. 3 is a profile showing a cap of the present invention;

Fig. 4 is a profile showing a cap of the present invention and a cup;

Fig. 5 is a profile showing a cap of the prior art.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0010] Please refer to Fig. 1 to Fig. 4. The cap of the present invention is adapted to be capped on a cup, in which the cup has an annular engaging lip 7. In a preferred embodiment of the present invention, the cap has a top plate 10, a side wall 15 and an engaging portion 20.

[0011] The top plate 10 is formed with a sip opening 11, which locates adjacent to the side wall 15. Preferably, a cutting element 12 is formed in the sip opening 11 for cutting films such as plastic films or aluminum foil.

[0012] The side wall 15 annularly extends downward from a periphery of the top plate 10, and the side wall 15 includes a linear extension section 151 and a linear inner engaging section 152. The extension section 151 connects the inner engaging section 152 to the periphery of the top plate 10. In other words, the extension section 151 directly connects to the inner engaging section 152 without the existence of a curved section.

[0013] The engaging portion 20 includes an annular top engaging section 21, an annular outer engaging section 22 and an annular guiding section 23. The outer engaging section 22 has an upper end and a lower end. The guiding section 23 slantedly extends outward from the lower end of the outer engaging section 22. The top engaging section 21 connects to the upper end of the outer engaging section 22 at one end thereof, and the

top engaging section 21 connects to a portion between the extension section 151 and the inner engaging section 152 at another end thereof. That is, the side wall 15 is divided into the extension section 151 and the inner engaging section 152 by the top engaging section 21. An engaging slot 24 is defined between the inner engaging section 152, the outer engaging section 22 and the top engaging section 21. At least one engaging rim 25 extends from a portion between the outer engaging section 22 and the guiding section 23 toward the engaging slot 24. In the present embodiment, there is only one engaging rim 25 annularly formed between the outer engaging section 22 and the guiding section 23. In other possible embodiments of the present invention, there can be a plurality of engaging rims formed between the outer engaging section 22 and the guiding section 23, and the engaging rims are arranged discontinuously around the engaging slot.

[0014] A distance between the inner engaging section 152 and the outer engaging section 22 equals to a thickness of the engaging lip 7, while a distance between the inner engaging section 152 and the engaging rim 25 is slightly smaller than the thickness of the engaging lip 7. As such, the engaging lip 7 is restrained in the engaging slot 24 while the cap is capped on the cup. Preferably, a distance between the engaging rim 25 and the top engaging section 21 equals to a height of the engaging lip 7 so as to further tightly restrain the engaging lip 7 in the engaging slot 24.

[0015] In addition, the largest diameter of the guiding section 23 is bigger than that of the engaging lip 7, so that the engaging lip 7 can be guided by the guiding section 23 when the engaging lip 7 is about to engage with the engaging slot 24.

[0016] Due to the linear disposal of the side wall, the area of the top plate is increased, and the sip opening can be closer to the periphery of the cup. As such, the user can drink the contents without barriers.

Claims

1. A cap for a cup which has an engaging lip (7), wherein the cap has a top plate (10), a side wall (15) and an engaging portion (20), the side wall (15) annularly extends downward from a periphery of the top plate (10), the side wall (15) includes a linear extension section (151) and a linear inner engaging section (152), the extension section (151) connects the inner engaging section (152) to the periphery of the top plate (10), the engaging portion (20) includes an annular top engaging section (21), an annular outer engaging section (22) and an annular guiding section (23), the outer engaging section (22) has an upper end and a lower end, the guiding section (23) slantedly extends outward from the lower end of the outer engaging section (22), the top engaging section (21) connects to the upper end of the outer engaging sec-

tion (22) at one end thereof, and the top engaging section (21) connects to a portion between the extension section (151) and the inner engaging section (152) at another end thereof, an engaging slot (24) is defined between the inner engaging section (152), the outer engaging section (22) and the top engaging section (21), at least one engaging rim (25) extends from a portion between the outer engaging section (22) and the guiding section (23) toward the engaging slot (24), a distance between the inner engaging section (152) and the outer engaging section (22) equals to a thickness of the engaging lip (7), a distance between the inner engaging section (152) and the engaging rim (25) is slightly smaller than the thickness of the engaging lip (7), such that the engaging lip (7) can be restrained in the engaging slot (24) while the cap is capped on the cup.

2. The cap of claim 1, wherein a sip opening (11) is formed on the top plate (10), the sip opening (11) locates adjacent to the side wall (15).
3. The cap of claim 1, wherein the engaging rim (25) is annularly formed between the outer engaging section (22) and the guiding section (23).
4. The cap of claim 1, wherein a plurality of engaging rims (25) are formed between the outer engaging section (22) and the guiding section (23), the engaging rims (25) are arranged discontinuously around the engaging slot (24).
5. The cap of claim 1, wherein a distance between the engaging rim (25) and the top engaging section (21) equals to a height of the engaging lip (7).
6. The cap of claim 1, wherein a largest diameter of the guiding section (23) is bigger than that of the engaging lip (7), so that the engaging lip (7) can be guided by the guiding section (23) when the engaging lip (7) is about to engage with the engaging slot (24).

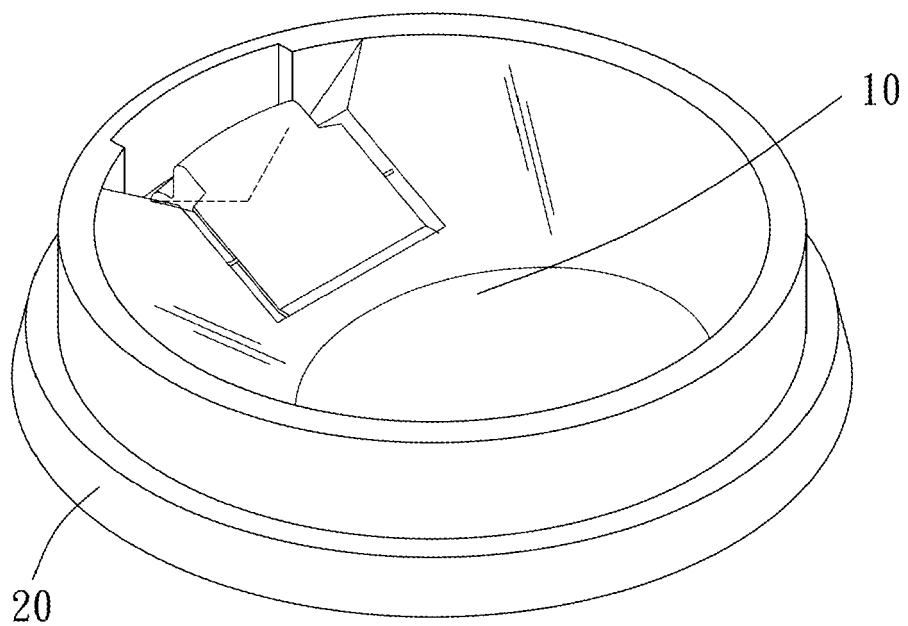


FIG. 1

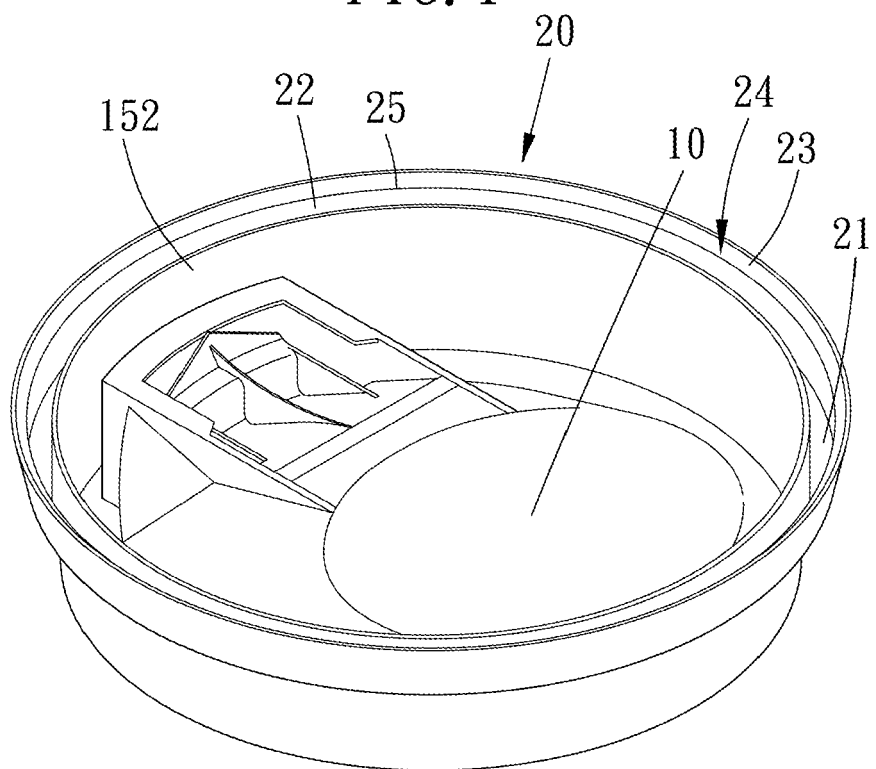


FIG. 2

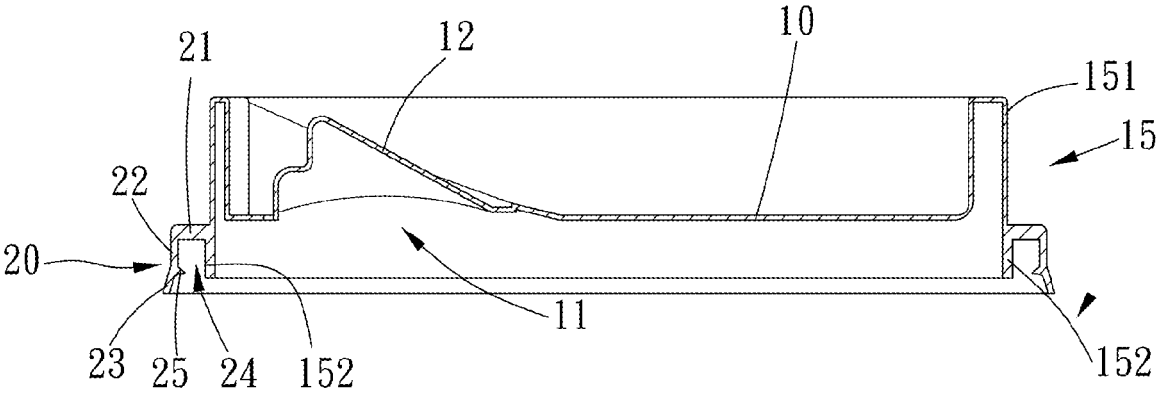


FIG. 3

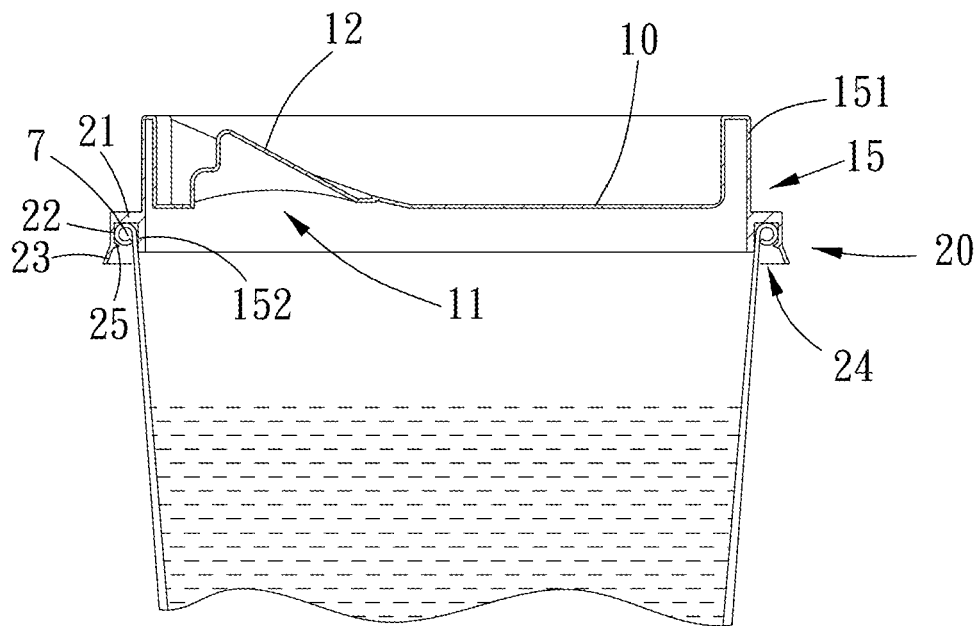


FIG. 4

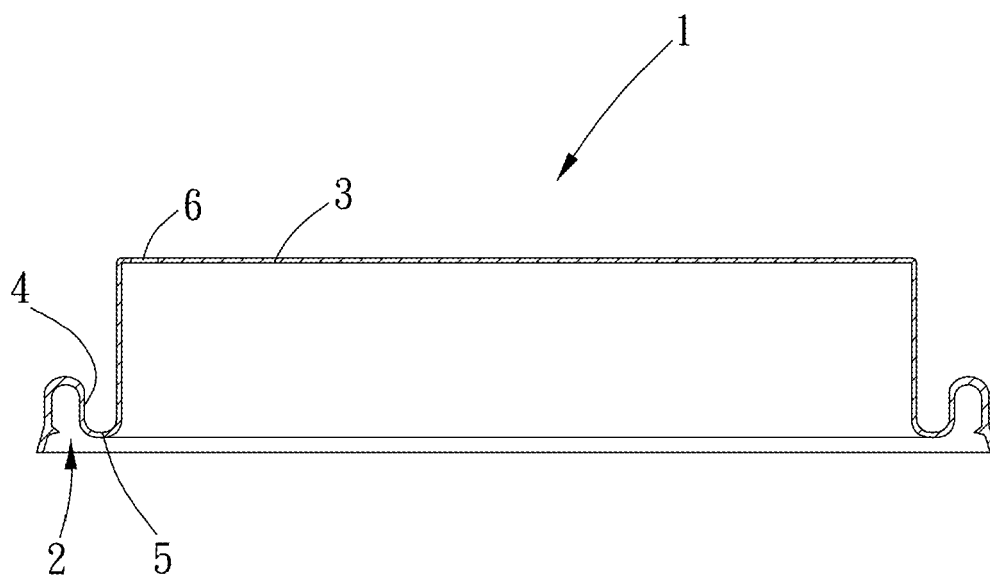


FIG. 5
PRIOR ART



EUROPEAN SEARCH REPORT

Application Number
EP 10 17 0204

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	WO 2004/106187 A1 (CAPITOL CUPS INC [US]; GIRAUD JEAN-PIERRE [FR]) 9 December 2004 (2004-12-09) * page 3, paragraph 6 * * page 9, paragraph 1; figure 10 * -----	1-6	INV. B65D43/02
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A	WO 2009/022745 A1 (TOYO SEIKAN KAISHA LTD [JP]; UCHIDA ATSUSHI [JP]; HIRANO MUTSUSHI [JP]) 19 February 2009 (2009-02-19) * abstract; figures 14,17 * -----	1-6	
A	US 5 294 015 A (LANDIS H RICHARD [US]) 15 March 1994 (1994-03-15) * figures 7,10 * -----	1	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 20 September 2010	Examiner Leijten, René
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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EPO FORM 1503 (03.82) (P04001)

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

EP 10 17 0204

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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20-09-2010

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