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(54) **CUP LID STRUCTURE**

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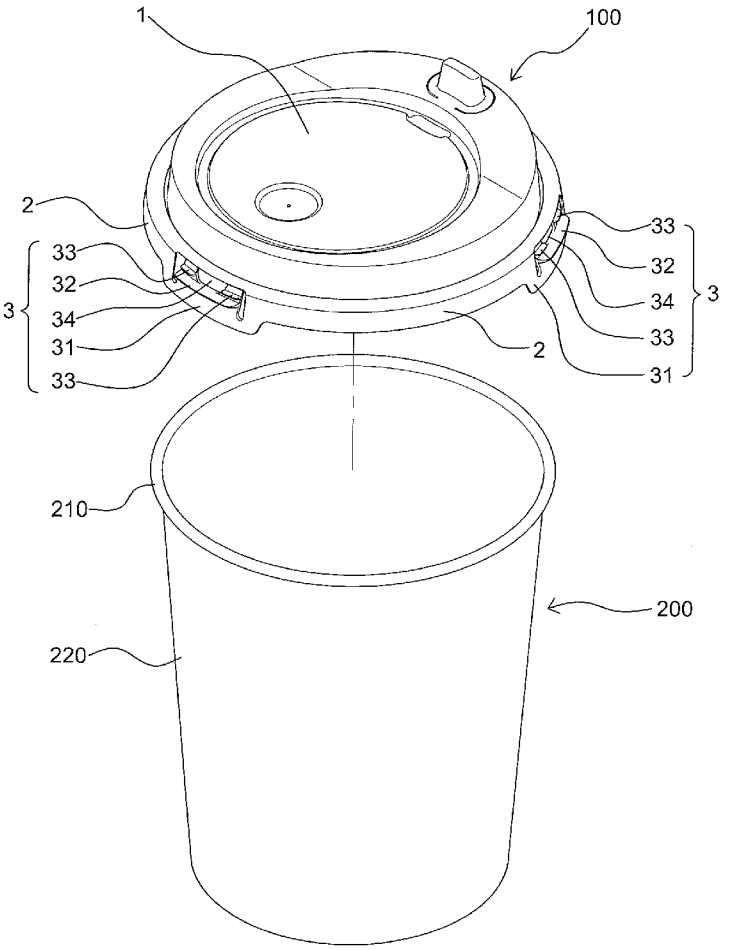
(57) **ABSTRACT**

The present invention provides a cup lid including a top shield, at least two ring shields, and at least two snap-on components. The ring shields extending from a lower edge of the top shield downward are peripherally spaced from each other. Each snap-on component extends from the lower edge of the top shield downward and is arranged between two adjacent ring shields. Each snap-on component includes a U-shaped border, a tab, and at least one Y-shaped resisting member. The U-shaped border and the top shield define an opening. The tab extends from the U-shaped border outward. The Y-shaped resisting member extends from an interior of the U-shaped border upward and is bendably held in the opening. The cup lid can be fitted on a cup body or separated from the cup body through the Y-shaped resisting members without a further operation step for repeated utilization and environmental effect.



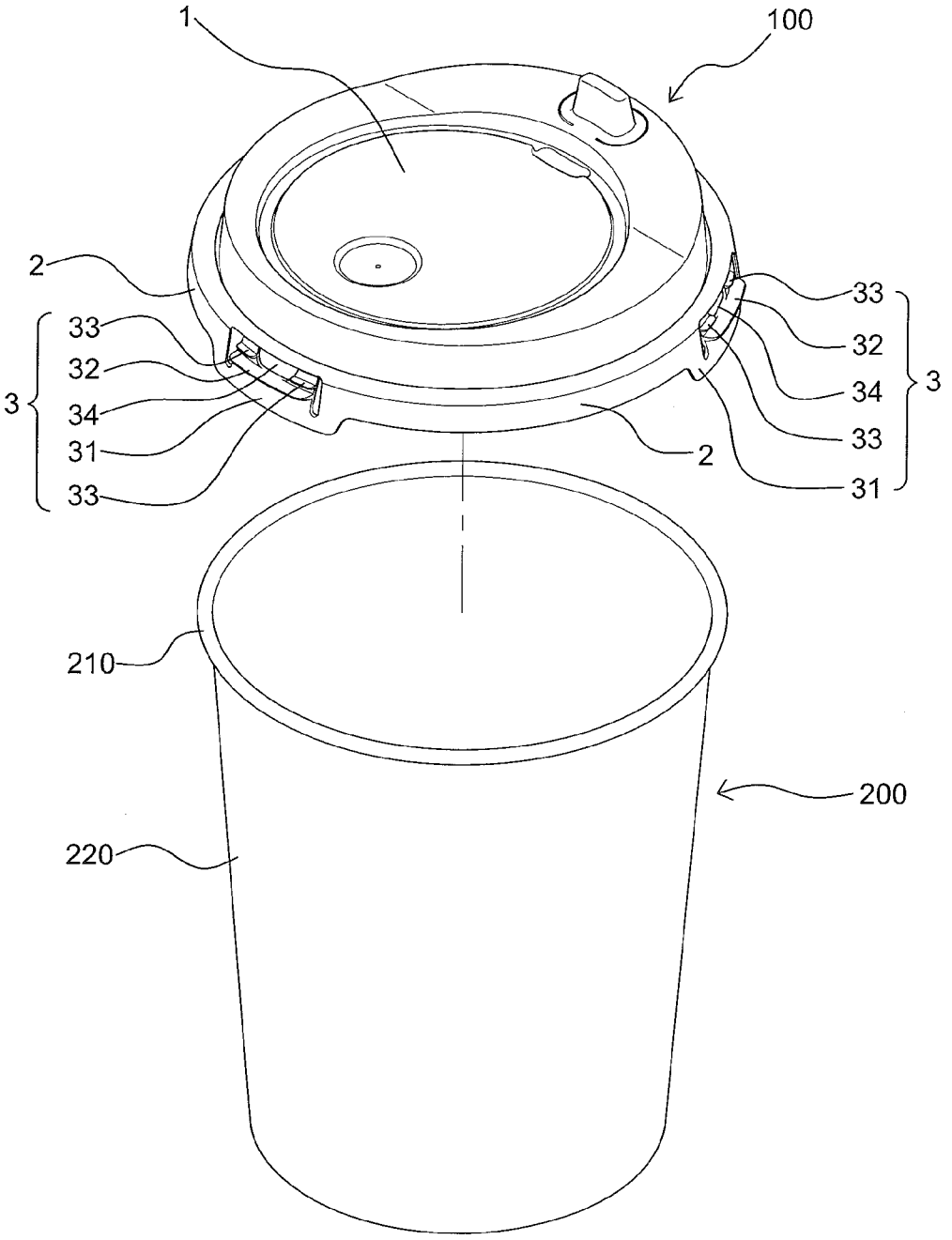


FIG.1

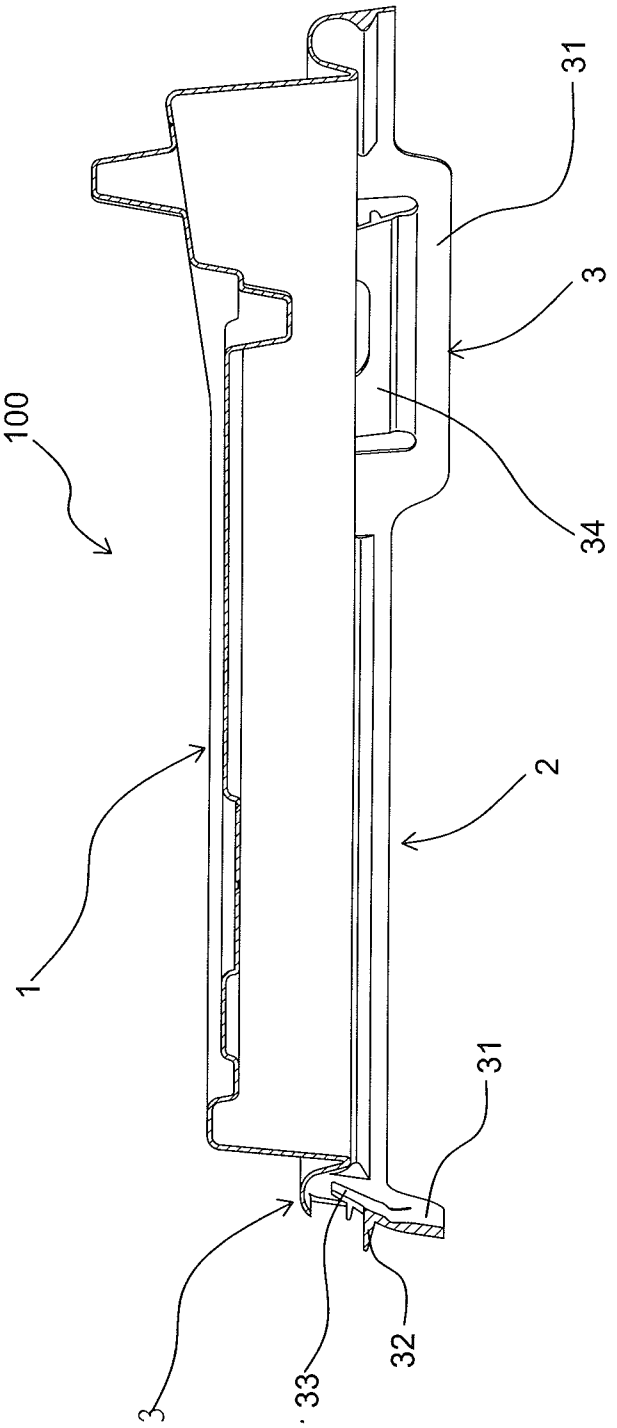


FIG.2

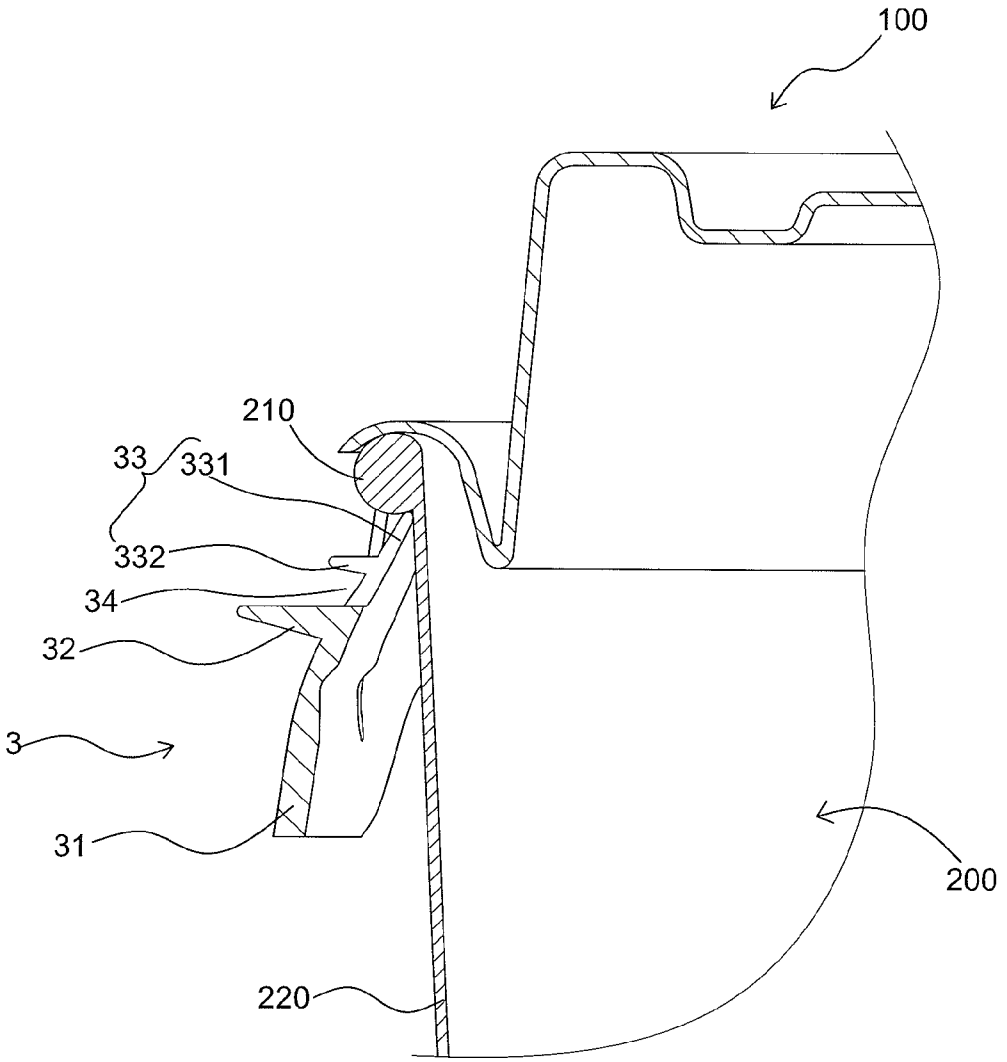


FIG.3

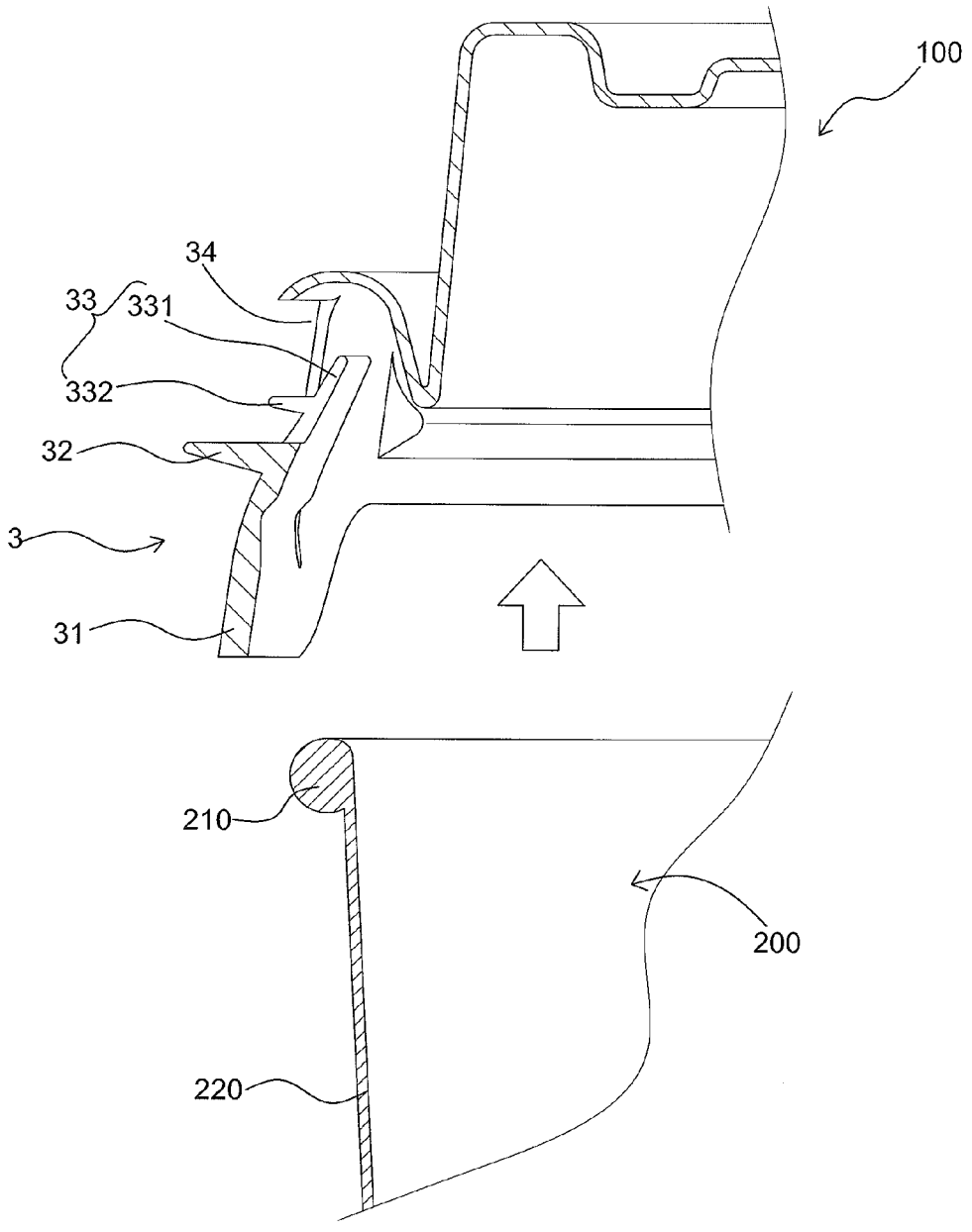


FIG.4

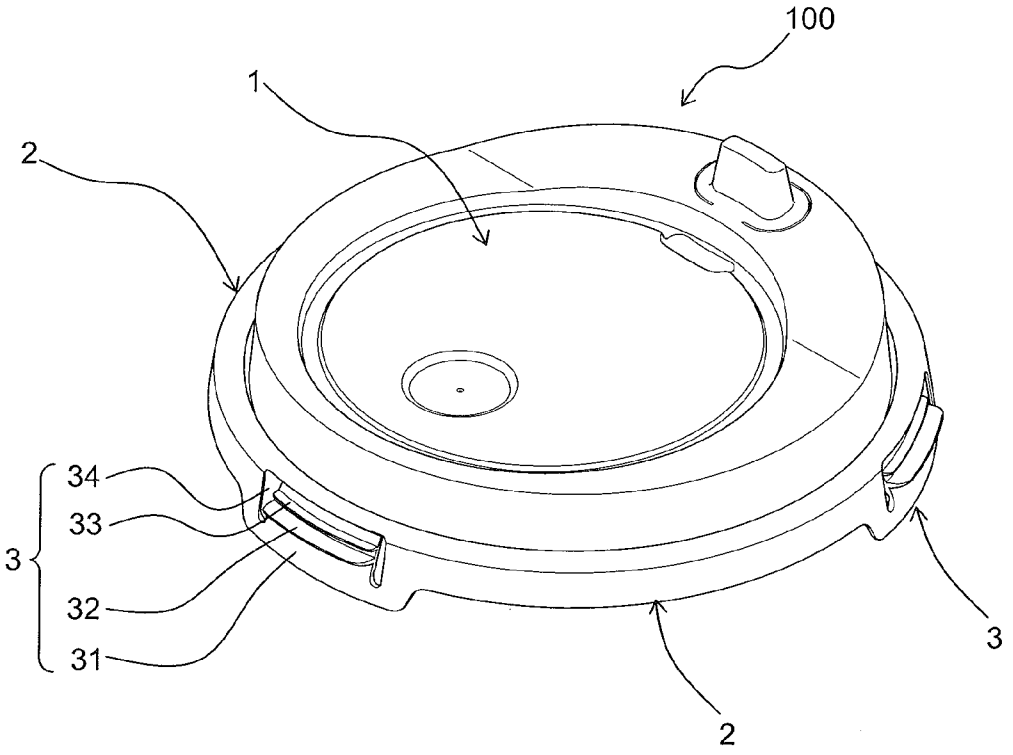


FIG.5

CUP LID STRUCTURE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a cup lid structure and, more particularly, to a cup lid which can be securely covered on and easily removed from a cup rim.

[0003] 2. Description of the Related Art

[0004] With the society evolving, breakfast bars and drink shops standing in great numbers are selling freshly brewed hot or cold drinks. As common beverage containers, disposable plastic or paper cups are intended for containing and drinking drinks conveniently. In this regard, the cup rim of a cup body in which cold drinks are contained is sealed with one layer of membrane that can be penetrated by a straw for no liquid inside a portable cup spilled or oozy. For a cup with hot drinks held, membrane merely stuck on a cup rim and melt due to thermal expansion may result in leakages of drinks or a straw user scalded by accident. Accordingly, the cup with hot drinks held is usually covered with a cup lid including an optionally upward-opened tab through which a user is able to drink, such as disclosed in the Taiwan Utility Model No. M318382 and No. M323449.

[0005] A conventional cup lid is usually fitted on a cup body's rim with a tab on an end edge of the cup lid. In this regard, the cup lid which is fitted on the cup body by a weak external force is loosened and causes liquid inside spilled when the cup body is slightly deformed. Moreover, a conventional cup lid which is poorly fitted on a cup body makes liquid oozy and a user inconvenient due to movements and wobbles. To overcome the above problems of liquid spilled or oozy, a manufacturer had developed a membrane stuck on a rim of a cup body in which hot drinks are held through radio frequency. However, the membrane stuck on the rim should be torn with the cup lid removed first. As such, the issues such as liquid not drunk by a user easily and an environmental problem attributed to membranes removed contradict a user's requirements.

[0006] As disclosed in Taiwan Patent No. 1414465, a cup lid is covered and fitted on a cup body through a retaining lip of the cup body. The cup lid includes a top portion and a ring shield extending from a periphery of the top portion downward for development of at least one notch in the ring shield. The ring shield includes at least one tab body with a downside extending from the ring shield and with a topside upward extending along the notch in which the tab body is held. A portion between the tab body and the ring shield can be foldable. As such, a user can press and bend the tab body to steadily engage the tab body with the retaining lip of the cup body for neither separation nor loosing of the cup lid from the cup body when the cup lid is covered on the cup body. However, a user who intends to cover the cup lid on the cup body should execute a further step to press and bend the tab body and even use both hands to prevent any turnover risk of the cup body in which hot drinks are contained. Further, since the tab body of the cup lid covering the cup body is insufficient in thickness, the tab body is easily broken during laborious removal and neither recycled nor environment-friendly when the user adds sugar or coffee cream into the cup body.

BRIEF SUMMARY OF THE INVENTION

[0007] Thus, an objective of the present invention is to provide a cup lid which can directly cover and secure a cup body by Y-shaped resisting members of snap-on components of the cup lid without risk of injuring a user in a further operation step and which can be easily separated from the cup body through the Y-shaped resisting members of the snap-on components for repeated utilization and environmental effect.

[0008] To achieve this and other objectives, a cup lid structure of the present invention includes a top shield, at least two ring shields, and at least two snap-on components. The top shield includes an annular lower edge. The ring shields extends from the lower edge of the top shield downward and are spaced from one another around the lower edge of the top shield. The snap-on components extends from the lower edge of the top shield downward and are spaced from one another around the lower edge of the top shield. Each of the snap-on components is arranged between two adjacent ring shields and includes a U-shaped border, a tab, and at least one Y-shaped resisting member. The U-shaped border and the lower edge of the top shield define an opening therebetween. The tab extends from an interior of the U-shaped border outward and horizontally. The Y-shaped resisting member extends from the interior of the U-shaped border upward and is bendably held in the opening.

[0009] In a preferred form, the Y-shaped resisting member includes an introvert portion and an extrovert portion. The introvert portion is adapted for resisting an upper peripheral edge of a cup body when the cup lid is detachably engaged with the cup body.

[0010] In another preferred form, the at least one Y-shaped resisting member includes two spaced Y-shaped resisting members.

[0011] The present invention will become clearer in light of the following detailed description of illustrative embodiments of this invention described in connection with the drawings.

DESCRIPTION OF THE DRAWINGS

[0012] The illustrative embodiments may best be described by reference to the accompanying drawings where:

[0013] FIG. **1** shows a schematic view of a cup lid in accordance with a first embodiment of the present invention, with a cup body separated from the cup lid.

[0014] FIG. **2** is a sectional view of the cup lid of FIG. **1**.

[0015] FIG. **3** is a partial sectional view of the cup lid of FIG. **1**, with the cup lid covering the cup body.

[0016] FIG. **4** is a schematic sectional view illustrating the cup lid of FIG. **3** being separated from the cup body.

[0017] FIG. **5** is a schematic view illustrating a cup lid in accordance with a second embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0018] A cup lid according to a first embodiment of the present invention is shown in FIGS. **1** through **4** of the drawings and generally designated **100**. The cup lid **100** is adapted for covering a cup body **200** which is made of paper, plastic, or other materials. The cup body **200** has a tubular outer surface **220** and an upper peripheral edge (or a cup rim) **210** formed on a top of the cup body **200** and defining a top opening therein. The cup lid **100** includes a top shield **1**, at least two ring shields **2**, and at least two snap-on components **3**. In the embodiment, the cup lid **100** includes, without limi-

tation, three ring shields **2** and three snap-on components **3**, which are used to explain the cup lid **100** herein.

[0019] The top shield **1** is approximately designed as but not limited to a circle. Each of the ring shields **2** extends from an annular lower edge of the top shield **1** downward, and the ring shields **2** around the top shield **1** are peripherally spaced from one another by a specific angle. The snap-on components **3** extend from the lower edge of the top shield **1** downward, and each of the snap-on components **3** is arranged between two adjacent ring shields **2**. Each of the snap-on components **3** includes a U-shaped border **31**, a tab **32**, and at least one Y-shaped resisting member **33**. The U-shaped border **31** and the lower edge of the top shield **1** define an opening **34** therebetween. The tab **32** is formed in the U-shaped border **31** and extends from an interior of the U-shaped border **31** outward and horizontally. The Y-shaped resisting member **33** is formed in the U-shaped border **31** and extends from the interior of the U-shaped border **31** upward and horizontally. Furthermore, The Y-shaped resisting member **33** is located above the tab **32** and bendably held in the opening **34**. In this embodiment, the Y-shaped resisting member **33** includes an introvert portion **331** and an extrovert portion **332**. The introvert portion **331** is used in resisting the upper peripheral edge **210** of the cup body **200** when the cup lid **100** is detachably engaged with the cup body **200**.

[0020] In the embodiment, each of the snap-on components **3** includes two Y-shaped resisting members **33** spaced from each other. In another embodiment (see FIG. **5**), each of the snap-on components **3** includes only one Y-shaped resisting member **33** which is structurally analogous to and functions as the Y-shaped resisting member **33** in the first embodiment and is not explained hereinafter.

[0021] To cover and secure the cup lid **100** on the cup body **200** (see FIG. **3**), a user should match the cup lid **100** with the upper peripheral edge **210** of the cup body **200** directly and apply a force downward, so that the upper peripheral edge **210** of the cup body **200** resists an inner surface of the introvert portion **331** of the Y-shaped resisting member **33**, and the top of the introvert portion **331** of the Y-shaped resisting member **33** is temporarily bent outward. Then, the top of the introvert portion **331** of the Y-shaped resisting member **33** of the totally pressed cup lid **100** resists the upper peripheral edge **210** of the cup body **200**, allowing the cup lid **100** to be secured on the cup body **200** without a further operation step to push the snap-on components **3**.

[0022] To remove the cup lid **100** from the cup body **200** and add sugar or coffee cream (see FIG. **4**), a user should press the tab **32** of the snap-on component **3** which drives the Y-shaped resisting member **33** to disengage from the upper peripheral edge **210** and the outer surface **220** of the cup body **200** through deformation of the introvert portion **331**, making the cup lid **100** separated from the cup body **200** without the cup lid **100** damaged. As such, the cup lid **100** can be reused on the same cup body **200**.

[0023] Thus since the invention disclosed herein may be embodied in other specific forms without departing from the spirit or general characteristics thereof, some of which forms have been indicated, the embodiments described herein are to be considered in all respects illustrative and not restrictive. The scope of the invention is to be indicated by the appended claims, rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are intended to be embraced therein.

1. A cup lid structure, comprising:

a top shield including an annular lower edge;

at least two ring shields extending from the lower edge of the top shield downward and spaced from one another around the lower edge of the top shield; and

at least two snap-on components extending from the lower edge of the top shield downward and spaced from one another around the lower edge of the top shield, with each of the snap-on components arranged between two adjacent ring shields, with each of the snap-on components including a U-shaped border, a tab, and at least one Y-shaped resisting member, with the U-shaped border and the lower edge of the top shield defining an opening therebetween, with the tab extending from an interior of the U-shaped border outward and horizontally, with the Y-shaped resisting member extending from the interior of the U-shaped border upward and bendably held in the opening.

2. The cup lid structure according to claim **1**, wherein the Y-shaped resisting member includes an introvert portion and an extrovert portion, with the introvert portion adapted for resisting an upper peripheral edge of a cup body when the cup lid is detachably engaged with the cup body.

3. The cup lid structure according to claim **2**, wherein the at least one Y-shaped resisting member includes two spaced Y-shaped resisting members.

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