| | |
|---|---|
| United States Patent Application Publication | 20250263203 |
| Kind Code | A1 |
| Publication Date | August 21, 2025 |
| Inventor(s) | HUANG; CHUN-HUNG |


# RECYCLABLE TAKEAWAY CUP


## Abstract

A recyclable takeaway cup contains: a body, a lid, and a flexible connection unit. The body includes a lower edge, an enlarged fringe, a mouth, a recessed face, and an inlet defined. The body and the lid are one-piece connected via the flexible connection unit, and the flexible connection unit is bendable in a U shape so that the lid is covered on the mouth of the body. The lid includes a surround fence configured to cover the mouth, a platform formed on a top of the surround fence, an opening defined on the platform, corresponding to the conduit and configured to receive the sucking element. The sucking element is removable and hollow so that when the lid is covered on the mouth of the body, the sucking element is inserted into a top of the conduit to suck content in the body.



**Inventors:** **HUANG; CHUN-HUNG (Changhua County, TW)**

**Applicant:** **HUANG; CHUN-HUNG** (Changhua County, TW)



**Family ID:** **1000007698754**

**Appl. No.:** **18/582053**

**Filed:** **February 20, 2024**


## Publication Classification

**Int. Cl.:** **B65D25/46** (20060101); **B65D43/16** (20060101); **B65D43/24** (20060101)

**U.S. Cl.:**

CPC **B65D25/465** (20130101); **B65D43/162** (20130101); **B65D43/24** (20130101); B65D2547/066 (20130101)

## Background/Summary

## TECHNICAL FIELD

[0001] The present invention relates to a recycle container, and more particularly to a recycle takeaway cup which contains a body and a cup one-piece molded with the body so as to suck ingredients in the body via a sucking element without using a straw made of plastic.

## BACKGROUND

[0002] In the past few decades, sellers of beverage industry have provided consumers with disposable cups (such as paper cups or plastic cups) for internal use or take-out. However, it has resulted in alarming plastic pollution and garbage. In recent years, the government has expanded plastic reduction policies and hopes that consumers will bring their own beverage cups, thermos cups and other containers to hold the purchased tea and coffee. But, beverage cups or thermos cups are sometimes not convenient to carry. Therefore, some sellers have discovered business opportunities and provided a product service of carrying cups for recycling.

[0003] Recyclable takeaway cups (also called “recycling cups or loan cups”) are reusable cups provided by the sellers for consumers to fill with drinks and then return them to a specific recycling place within a certain period of time after use (such as chain stores). The used cups will be cleaned by professional manufacturers and will be reused next time. No plastic cups or paper cups will be used in the process, and consumers will also enjoy the convenience of buying drinks on the go.

[0004] The portable cup is mainly comprised of a cup body and a lid. After returning it, consumers need to put the body and lid into the recycling bin respectively. Then, the operator will carry the body and lid back to wash, sterilize, dry and package them separately. Accordingly, takeaway cups are not environmentally friendly in terms of cleaning, wasting water, electricity, and packaging materials. In addition, when there are ingredients (such as rice balls, pudding, jelly, etc.) in the drink, it is required to insert a straw to absorb the ingredients.

[0005] The present invention has arisen to mitigate and/or obviate the afore-described disadvantages.

## SUMMARY

[0006] The primary aspect of the present invention is to provide a recyclable takeaway cup which contains the body and the lid one-piece molded with the body to simplify structure and cleaning and to reduce water, power and material consumption.

[0007] Secondary aspect of the present invention is to provide a recyclable takeaway cup which contains the body and the lid one-piece molded with the body to suck the drinks and ingredients directly via a sucking element without using a straw made.

[0008] Further aspect of the present invention is to provide a recyclable takeaway cup which is portable conveniently.

[0009] To obtain above-mentioned aspects, a recyclable takeaway cup provided by the present invention contains: a body, a lid, and a flexible connection unit.

[0010] The body includes a lower edge, an enlarged fringe extending upward from the lower edge, a mouth formed on a top of the enlarged fringe, a conduit defined on an inner wall of the enlarged fringe, a recessed face formed on the enlarged fringe beside two ends of the conduit, and an inlet defined between the conduit and the lower edge.

[0011] The body and the lid are one-piece connected via the flexible connection unit, and the flexible connection unit is bendable in a U shape so that the lid is covered on the mouth of the body. A first end of the flexible connection unit is connected on a bottom of the mouth, and a second end of the flexible connection unit is connected on a bottom of the lid.

[0012] The lid includes a surround fence configured to cover the mouth, a platform formed on a top of the surround fence, an opening defined on the platform, corresponding to the conduit and configured to receive the sucking element. The sucking element is removable and hollow so that when the lid is covered on the mouth of the body, the sucking element is inserted into a top of the conduit to suck ingredients in the body.

[0013] Preferably, the recessed face has a first tilted connection portion formed on a top thereof and extending upward to the enlarged fringe.
[0014] Preferably, the recessed face has a second tilted connection portion formed on a bottom thereof and extending to the lower edge. The inlet is defined on a center of the second tilted connection portion.
[0015] Preferably, the conduit has a window fixed adjacent to the enlarged fringe and made of transparent or translucent material.
[0016] Preferably, the sucking element includes a bendable flexibility sheet connected thereon, a plug connected on an end of the bendable flexibility sheet and configured to close the sucking element. The platform has a lower portion, a high portion, a beveled coupling face configured to connect the lower portion with the high portion, and an air orifice defined on the beveled coupling face. The bendable flexibility sheet has a head formed on a predetermined position thereof and configured to be received in the orifice. The high portion has an arcuate receiving portion configured to receive the plug, when removing the plug from the sucking element.
[0017] Preferably, the body, the lid, and the flexible connection unit are one-piece molded by a plastic mold.
[0018] Accordingly, the recyclable takeaway cup has advantage as follows: [0019] 1) The recyclable takeaway cup is one-piece molded to obtain easy recycling without removal, thus increasing using willingness and saving water and power consumption while cleaning the recyclable takeaway cup (such as in washing, drying and sterilizing process). [0020] 2) The recyclable takeaway cup includes the sucking element received therein to enhance using convenience while sucking the ingredients (such as rice balls, jelly, pudding or konjac) in the body. [0021] 3) The conduit has a window fixed adjacent to the enlarged fringe of the body so that the ingredients in the body are viewable via the window, thus enhancing drinking pleasure.

---

## Description

BRIEF DESCRIPTION OF THE DRAWINGS
[0022] FIG. **1** is a perspective view showing the assembly of a recyclable takeaway cup according to a preferred embodiment of the present invention.
[0023] FIG. **2** is another perspective view showing the assembly of the recyclable takeaway cup according to the preferred embodiment of the present invention.
[0024] FIG. **3** is a cross sectional view showing the assembly of the recyclable takeaway cup according to the preferred embodiment of the present invention.
[0025] FIG. **4** is a perspective view showing the operation of the recyclable takeaway cup according to the preferred embodiment of the present invention.
[0026] FIG. **5** is a cross sectional view of FIG. **4** according to the preferred embodiment of the present invention.
DETAILED DESCRIPTION
[0027] With reference to FIGS. **1**-**4**, a recyclable takeaway cup according to a preferred embodiment of the present invention comprises: a body **10**, a lid **20**, a flexible connection unit **30**, and a sucking element **40**.
[0028] Referring to FIGS. **1**-**3**, the body **10** includes a lower edge **11**, an enlarged fringe **12** extending upward from the lower edge **11**, a mouth **13** formed on a top of the enlarged fringe **12**, a conduit **14** defined on an inner wall of the enlarged fringe **12**, a recessed face **15** formed on the enlarged fringe **12** beside two ends of the conduit **14**, and an inlet **16** defined between the conduit **14** and the lower edge **11**. The recessed face **15** has a first tilted connection portion **151** formed on a top thereof, and the recessed face **15** has a second tilted connection portion **152** formed on a bottom thereof, wherein the first tilted connection portion **151** extends upward to the enlarged fringe **12**

from the top of the recessed face **15**, and the second tilted connection portion **152** extends to the lower edge **11** from the bottom of the recessed face **15**. As shown in FIG. **3**, the inlet **16** is defined on a center of the second tilted connection portion **152**.

[0029] Referring to FIGS. **1-3**, to view a capacity and ingredients in the body **10**, the conduit **14** has a window **141** fixed adjacent to the enlarged fringe **12** and made of transparent or translucent material.

[0030] As shown in FIGS. **1-3**, the body **10** and the lid **20** are one-piece connected via the flexible connection unit **30**, and the flexible connection unit **30** is bendable in a U shape so that the lid **20** is covered on the mouth **13** of the body **10**. A first end of the flexible connection unit **30** is connected on a bottom of the mouth **13**, and a second end of the flexible connection unit **30** is connected on a bottom of the lid **20**.

[0031] As illustrated in FIGS. **1-3**, the lid **20** includes a surround fence **21** configured to cover the mouth **13**, a platform **33** formed on a top of the surround fence **21**, an opening **23** defined on the platform **22**, corresponding to the conduit **14** and configured to receive the sucking element **40**. The sucking element **40** is removable and hollow so that when the lid **20** is covered on the mouth **13** of the body **10**, the sucking element **40** is inserted into a top of the conduit **14** to suck the content in the body **10**.

[0032] With reference to FIGS. **2** and **4**, the sucking element **40** includes a bendable flexibility sheet **41** connected thereon, a plug **42** connected on an end of the bendable flexibility sheet **41** and configured to close the sucking element **40**. The platform **22** has a lower portion **221**, a high portion **222**, a beveled coupling face **223** configured to connect the lower portion **221** with the high portion **222**, and an air orifice **224** defined on the beveled coupling face **223**. The bendable flexibility sheet **41** has a head **411** formed on a predetermined position thereof and configured to be received in the orifice **224**. The high portion **222** has an arcuate receiving portion **225** configured to receive the plug **42** when removing the plug **42** from the sucking element **40**.

[0033] The body **10**, the lid **20**, and the flexible connection unit **30** are one-piece molded from environmentally friendly plastic material by a plastic mold, such that the recyclable takeaway cup is recycle without being removed when cleaning and recycling the recyclable takeaway cup, thus saving water and power consumption.

[0034] Thereby, the recyclable takeaway cup of the present invention has advantages as follows:

[0035] 1) When recycling the recyclable takeaway cup, the recyclable takeaway cup is placed to recycling equipment directly, since the body **10** and the lid **20** are one-piece connected via the flexible connection unit **30**, thus obtaining easy recycling. [0036] 2) Because the body **10** and the lid **20** are one-piece connected via the flexible connection unit **30**, the body **10** and the cup **20** are washed together to save the water consumption. [0037] 3) The body **10**, the lid **20**, and the flexible connection unit **30** are one-piece molded from the environmentally friendly plastic material, thus having cleaning, drying and sterilizing operations, and recycling process one time. [0038] 4) The body **10** and the cup **20** are one-piece molded and the sucking element **40** is received in the body **10**, thus simplifying material preparation, cleaning, and recycling. [0039] 5) Referring to FIGS. **4** and **5**, in use, drink is accommodated in the body **10**, and the lid **20** is covered on the mouth **13**, thus obtaining easy drinking. Preferably, the sucking element **40** is configured to suck drinks in the body **10** via the conduit **14**, and the ingredients in the body **10** are viewable via the window **141**, thus enhancing drinking pleasure. Also, the cup is one-piece connected with the body, thereby eliminating a seal film on the body and obtaining dustproof, leakproof and temperature maintaining purposes.

[0040] While the first 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. The scope of the claims should not be limited by the first embodiments set forth in the examples, but should be given the broadest interpretation consistent with the description as a whole.

## Claims

**1**. A recyclable takeaway cup comprising: a body, a lid, and a flexible connection unit; wherein the body includes a lower edge, an enlarged fringe extending upward from the lower edge, a mouth formed on a top of the enlarged fringe, a conduit defined on an inner wall of the enlarged fringe, a recessed face formed on the enlarged fringe beside two ends of the conduit, and an inlet defined between the conduit and the lower edge; wherein the body and the lid are one-piece connected via the flexible connection unit, and the flexible connection unit is bendable in a U shape so that the lid is covered on the mouth of the body, wherein a first end of the flexible connection unit is connected on a bottom of the mouth, and a second end of the flexible connection unit is connected on a bottom of the lid; and wherein the lid includes a surround fence configured to cover the mouth, a platform formed on a top of the surround fence, an opening defined on the platform, corresponding to the conduit and configured to receive the sucking element, wherein the sucking element is removable and hollow so that when the lid is covered on the mouth of the body, the sucking element is inserted into a top of the conduit to suck ingredients in the body.

**2**. The recyclable takeaway cup as claimed in claim 1, wherein the recessed face has a first tilted connection portion formed on a top thereof and extending upward to the enlarged fringe.

**3**. The recyclable takeaway cup as claimed in claim 1, wherein the recessed face has a second tilted connection portion formed on a bottom thereof and extending to the lower edge, wherein the inlet is defined on a center of the second tilted connection portion.

**4**. The recyclable takeaway cup as claimed in claim 1, wherein the conduit has a window fixed adjacent to the enlarged fringe and made of transparent or translucent material.

**5**. The recyclable takeaway cup as claimed in claim 1, wherein the sucking element includes a bendable flexibility sheet connected thereon, a plug connected on an end of the bendable flexibility sheet and configured to close the sucking element; wherein the platform has a lower portion, a high portion, a beveled coupling face configured to connect the lower portion with the high portion, and an air orifice defined on the beveled coupling face; the bendable flexibility sheet has a head formed on a predetermined position thereof and configured to be received in the orifice; the high portion has an arcuate receiving portion configured to receive the plug, when removing the plug from the sucking element.

**6**. The recyclable takeaway cup as claimed in claim 1, wherein the body, the lid, and the flexible connection unit are one-piece molded by a plastic mold.