

A Cap Structure For A Container Outlet

Field of the Invention

The present invention provides a cap structure for a container outlet, particularly a cap structure, which can be sleeved and engaged with a beverage container to conveniently provide the drinking
5 user the effect of quickly mixing over two liquid beverages with each other in said container for mixing drinking.

Background of the Invention

Nowadays, all the conventional beverage containers only provide a single beverage. If
consumer wants to have different flavor beverage for his personal preference, he usually has to mix
10 two different beverages with each other for drinking, such as mixing soda bubble beverage with alcoholic soft beverage, or mixing fruit beverage with soda bubble beverage etc.

Moreover, the normal mixing way aforementioned is to pour the first prime beverage into
drinking cup, then pour the second minor beverage with estimated quantity into such drinking cup
for drinking. The mixing procedure should be iterated each time for finishing every drinking cup, so
15 that it causes inconvenience.

In view of the inconvenience in needful mixing variety of different flavor beverages to satisfy
with demand of consumer personal drinking habit and taste preference, the inventor of the present
invention meticulously research and develop a cup structure in association with beverage container.
In the present invention, two different flavor beverages of beverage G and beverage R can be
20 separately filled in such cap body and associated beverage container respectively. By turning such
cap body to move its internal separating blocker, which locating in between said cap body and
associated beverage container, said beverage R will flow downwards into such associated beverage
container, and immediately mix with said beverage G wherein for instantaneous drinking;

For example, all the referential cases in prior art by the inventor of the present invention such as
25 Taiwan Utility Patent Numbers 093212058, 093212059 and 093207276 (License Number:
M262462).

However, through continuously subsequent follow-up research such prior arts aforementioned, the inventor of the present invention finds out there still is room for simplifying related parts and decreasing selling-price in association with cost. After thoroughly research and revision, he originates the present invention in consequence of the achievement of breakthrough improvement.

5 **Summary of the Present Invention**

The primary objective of the present invention is to provide a cap structure for a container outlet, wherein the cap body can be stuffed with any granule solid or liquid material to be mixed with another beverages in the associated container , to achieve the effect of quickly mixing over two liquid beverages with each other; The main object is to enhance the economic effect by means of re-
10 simplifying the parts of the present invention, which results in more complying with the effect of environmental protection due to decreasing the recycling quantity of junk.

In other words, the present invention originates a cap structure for a container outlet, which comprises a cap body and a separating blocker, wherein said cap body comprises a top side, a bottom and a lateral side, the top side of said cap body is contrived into closed plate, the bottom side
15 is contrived into vent opening, the lateral side links top side and bottom side such as being surrounded as an unitary body; a hollow compartment is formed of said internal top side of said cap body, and a hollow cap linking channel is formed near the other end of said bottom side; and the separating blocker is inserted at the joint of said hollow compartment in said cap body and said cap
20 linking channel, the top side faces said hollow compartment and the bottom side faces said cap linking channel respectively.

Any granule solid or liquid material being stuffed in the hollow compartment in said cap body can be separated and blocked from leaking when said separating blocker is inserted in duly position.

After said cap linking channel at said bottom side of said cap body being sleeved and engaged with the vent opening of the container, it provides drinking user the effect of quickly mixing over
25 two materials with each other in said container outlet.

Brief Description of the Drawings

Fig. 1 is an exploded perspective view according to a first preferred embodiment of the present invention.

Fig.2 is a assembly perspective view according to a first preferred embodiment of the present invention.

Fig.3 is a sectional view according to a first preferred embodiment of the present invention at work.

Fig.4 is another sectional view according to the first preferred embodiment of the present invention at work.

Fig.5 is a assembly perspective view according to a second preferred embodiment of the present invention.

Fig.6 is a sectional view according to the second preferred embodiment of the present invention at work.

Fig.7 is another sectional view according to the first preferred embodiment of the present invention at work.

Fig.8 is a assembly sectional view according to a third preferred embodiment of the present invention.

Fig.9 shows a sectional view taken along the direction indicated by a line A-A as shown in Fig. 8.

Fig.10 is a sectional view according to the third preferred embodiment of the present invention at work.

Fig.11 is a perspective view of another cap body of the preferred embodiment of the present invention.

Fig.12 is a perspective view according to a fourth preferred embodiment of the present invention.

Fig.13 is another perspective view according to a fourth preferred embodiment of the present invention.

Fig.14 is a sectional view according to a fourth preferred embodiment of the present invention at work.

Fig.15 is another sectional view according to a fourth preferred embodiment of the present invention at work.

5 Fig.16 is another sectional view according to a fourth preferred embodiment of the present invention at work.

Detailed Description of the Preferred Embodiment

Referring to Fig. 1 to Fig. 3, the first preferred embodiment of the present invention comprise:

10 a cap body 10 , which contains a top side 11, a bottom side 12 and a lateral side 13, wherein said top side 11 is contrived into closed plate, said bottom side 12 is contrived into vent opening, then said lateral side 13 links top side 11 and bottom side 12 such as being surrounded as an unitary body; hence, a hollow compartment 14 is formed of in said internal top side 11 of said cap body 10 to contain any granule, powder or liquid material, and a hollow cap linking channel 15 is formed near the other end of said bottom side 12 such that its aperture is slightly greater than the outer
15 diameter of the vent opening 31 of the container outlet 30;

thus, said hollow compartment 14 and said cap linking channel 15 are linked to enable pass through each other, an additional locking flange 16 is also form at their joint; and

20 a separating blocker 20 is inserted in between said hollow compartment 14 and said cap linking channel 15 of said cap body 10 inside; wherein, said top side 21 faces said hollow compartment 14, and its bottom side 22 faces said cap linking channel 15, and a locking groove ring 24 is created on its ring lateral 23 to be engaged with said locking flange 16 of said cap body 10 in order to temporarily prevent pre-stuffed material inside from leaking out of said hollow compartment 14.

25 Referring to Fig. 2 to Fig. 4, a different flavor beverage R is first stuffed in said hollow compartment 14 of said cap body 10 ; then, said separating blocker 20 is inserted into said cap linking channel 15 through said bottom side 12 ;

Until said locking groove ring 24 on said ring lateral 23 of said separating blocker 20 is engaged with said locking flange 16 of said cap body in position, it can prevent pre-stuffed beverage R inside from leaking out of said hollow compartment 14;

Continuously, said cap linking channel 15 at said bottom side 12 of said cap body 10 is sleeved and engaged with said vent opening 31 of said container 30 such that said vent opening 31 being contact with said bottom side 22 of said separating blocker 20; thus, said container 30 and said cap body 10 can separately keep different constituent or flavor beverage G and beverage R respectively without mixing each other temporarily by means of separating blocker 20 in between (as shown in Fig. 3);

If drinking user wants to mix said beverage G and said beverage R for drinking, he can press to the way of said container 30 by force on said top side 11 of said cap body 10 so that said locking groove ring 24 on said ring lateral 23 of said separating blocker 20 disengages from said locking flange 16 of said cap body 10 by means of upwards pushing force of said vent opening 31 at said container 30.

Moreover, said separating blocker 20 keeps on moving into said hollow compartment 14 and lets said beverage R inside flow downwards into said container 30 to mix with said beverage G wherein (as shown in Fig. 4).

Referring to Fig. 5 to Fig. 7, illustrated is the second preferred embodiment of the present invention, wherein said cap linking channel 15 on said bottom side 12 of said cap body 10 is created to have a female thread 151 in its internal side; said vent opening 31 of said container 30a is formed to have a male thread 32 at its outer surface; and said female thread 151 is to screw engagement with said male thread 32 (as shown in Fig. 5);

By turning force on said lateral side 13 of said cap body 10, it saves much force to bring said separating blocker 20 downwards together so that said locking groove ring 24 of said separating blocker 20 disengages from said locking flange 16 of said cap body 10a by means of upwards pushing force of said vent opening 31 at said container 30a; Moreover, it also achieves the effect of mixing said beverage R with said beverage G (as shown in Fig. 7).

Referring to Fig. 8 to Fig. 10, illustrated is the third preferred embodiment of the present invention, wherein the outer diameter of said separating blocker 20a is slightly smaller than the internal diameter of said hollow compartment 14b inside of said cap body 10b;

Moreover, some fracturable bridge rings 25 are inserted into the ring gap in between said ring lateral 23a and said hollow compartment 14b inside of said cap body 10b (as shown in Fig. 9),
5 Then, the granules of the solid food are stuffed into said hollow compartment 14 (as shown in Fig. 8);

If drinking user wants to mix said solid food S and said beverage G for drinking, he can turn said cap body 10b to break said fracturable bridge rings 25 by means of revolving force, Thus, it not only
10 let the granules of said solid food S in said hollow compartment 14 fall into said container 30, but also achieves the effect of mixing said solid food S with said beverage G (as shown in Fig. 10).

Referring to Fig. 11, illustrated is another design type in the appearance of said cap body 10c of the present invention, wherein said lateral side 13c of said cap body 10c is in polygon shape to enhance the convenience of finger-grip and force-exerting.

15 Referring to Fig. 12 to Fig. 13, illustrated is the fourth preferred embodiment of the present invention, wherein the lower end of said bottom side 12 of said cap body 10 is attached a safety collet 40 with fracturable rib 41, Thus, it prevents said separating blocker 20a from unduly displacement, which might resulting in leakage out of said beverage R in said hollow compartment 14, due to unexpected force acting on said cap body 10.

20 Referring to Fig. 14 to Fig. 16, the drinking user must pull said safety collet 40, which being attached the lower end of said cap body 10, to break and remove said fracturable rib 41 along with said safety collet 40 (as shown in Fig. 14);

Continuously, he can exert the turning force on said cap body 10 to let said separating blocker 20 move towards said hollow compartment 14 (as shown in Fig. 15), Thus, said beverage R is
25 allowed to flow downwards into said container 30 to achieve the effect of mixing with said beverage G (as shown in Fig. 16).

What is Claimed is:

1. A cap structure for a container outlet, comprising:

a cap body, which contains a top side, a bottom side and a lateral side, wherein said top side is contrived into closed plate, said bottom side is contrived into vent opening,
5 said lateral side links top side and bottom side such as being surrounded as an unitary body; a hollow compartment is created in said internal top side of said cap body to contain any granule, powder or liquid material, and a hollow cap linking channel is formed near the other end of said bottom side; said hollow compartment and said cap linking channel are linked to enable pass through each other; and

10 a separating blocker which contains a top side, a bottom side and a lateral side; wherein, said top side faces said hollow compartment, and said bottom side faces said cap linking channel, and said lateral side is inserted in the joint of said hollow compartment and said cap linking channel inside said cap body in order to temporarily prevent pre-stuffed material inside from leaking out of said hollow compartment.

15 2. A cap structure for a container as recited in claim 1, wherein a locking flange is created at the joint of said hollow compartment in said cap body and said cap linking channel, and a locking groove ring is formed on said lateral side of said separating blocker;

20 3. A cap structure for a container as recited in claim 1, wherein said cap linking channel on said bottom side of said cap body is created to have a female thread in its internal side, said vent opening of said container is formed to have a male thread at its outer surface and said female thread is to screw engagement with said male thread.

25 4. A cap structure for a container as recited in claim 1, wherein the outer diameter of said separating blocker is slightly smaller than the internal diameter of said hollow compartment inside of said cap body, and some fracturable bridge rings are inserted into the ring gap in between said ring lateral and said hollow compartment inside of said cap body.

5. A cap structure for a container as recited in claim 1, wherein said lateral side of said cap body is in polygon shape to enhance the convenience of finger-grip and force-exerting.

6. A cap structure for a container as recited in claim 1, the lower end of said bottom side
5 of said cap body is attached a safety collet with fracturable rib.