MULTI CUPS WITH SECURED ENGAGEMENT

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ABSTRACT

Combined cups of 1) a straight shape lower cup and bowl shape upper cup, 2) a straight shape cup and an inserts, and 3) a straight shape lower cup and a straight shape upper cup are provided for carrying soft drinks and snacks with one hand securely. Four kinds of lower cups, five kinds of shallow bowl shape cups, and two kinds of inserts are provided.
MULTI CUPS WITH SECURED ENGAGEMENT

BACKGROUND OF THE INVENTION

[0001] Most of combined cups for carrying drinks and snacks with one hand have bulky upper cup for snacks and long and narrow lower cup for drinks. A major drawback of the previous combined cups is that the bulky upper cup body is easily separated from the lower cup body and spills the contents.

[0002] 1. Field of the Invention

[0003] The present invention relates to combined cups for carrying soft drinks and snacks with one hand. Various kinds of grooves are designed for engaging the upper and lower cup body securely.

[0004] 2. Description of the Prior Art


[0006] Before the Pat. No. '3,288,344 of 1965 most combined cup is cup in cup type. They were not so popular because the volume of lower cup is decreased when the upper cup is inserted into the lower cup. However, most customers want to put more drinks into one cup.

[0007] From Pat. No. '5,176,283 to recent Application 2001/0032791, all the previous related works have cup on cup structure. All of the upper cups of the prior arts have larger diameter than the lower cup. Pat. Nos. '4,938,373, '5,249,700, '5,573,131, D 397,911, '5,984,131, '6,338,417, '6,425,480, and '2001/0032791, almost all of them have much larger diameter. Such structure is very unstable.

[0008] Various kinds of grooves are developed to engage the upper cup and lower cup bodies securely.

SUMMARY OF THE INVENTION

[0009] The object of the present invention is to provide a combined cup designed for storing drinks and snacks. Combinations of 1) a straight shape lower cup and bowl shape cup, 2) a straight shape cup and an inserts, and 3) a straight shape lower cup and a straight shape upper cup are provided for carrying soft drinks and snacks with one hand securely. Four kinds of lower cups, five kinds of shallow bowl shape cups, and two kinds of inserts are provided. The combined cups of the current invention are securely engaged due to the various grooves.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1-a is an over view of a first embodiment of a shallow bowl shape cup for an upper cup body of one of the combined cup of the current invention.

[0011] FIG. 1-b is a cross sectional view of a first embodiment of the shallow bowl shape cup for an upper cup body of the combined cup of one of the current invention.

[0012] FIG. 1-c is a cross sectional view of a large size cup for a lower cup body of one of the combined cup of the current invention.

[0013] FIG. 1-d is a cross sectional view of a first embodiment of a small size cup for lower cup body of one of the combined cup of the current invention.

[0014] FIG. 2-a is a cross sectional view of a second embodiment of the shallow bowl shape cup for an upper cup body of one of the combined cup of the current invention.

[0015] FIG. 2-b is a bottom view of the first and second embodiment of the shallow bowl shape cup for an upper cup body of one of the combined cup of the current invention.

[0016] FIG. 3-a is an over view of a third embodiment of a shallow bowl shape cup for an upper cup body of one of the combined cup of the current invention.

[0017] FIG. 3-b is a cross sectional view of a third embodiment of the shallow bowl shape cup for an upper cup body of one of the combined cup of the current invention.

[0018] FIG. 3-c is a cross sectional view of a variation in bottom groove of the third embodiment of the shallow bowl shape cup for an upper cup body of one of the combined cup of the current invention.

[0019] FIG. 4-a is an over view of an insert for dividing the small lower cup into an upper section and a lower section.

[0020] FIG. 4-b is a schematic drawing illustrating how the insert is engaged into a small lower cup of current invention.

[0021] FIG. 4-c is a side view of a variation of the insert in the bottom groove.

[0022] FIG. 5-a is an over view of a first embodiment of a straight cup for an upper cup body of one of the combined cup of the current invention.

[0023] FIG. 5-b is a cross sectional view of a first embodiment of a straight cup for an upper cup body of one of the combined cup of the current invention.

[0024] FIG. 5-c is a cross sectional view of a second embodiment of a small cup for a lower cup body of one of the combined cup of the current invention.

[0025] FIG. 6-a is an over view of a second embodiment of a straight cup for an upper cup body of one of the combined cup of the current invention.

[0026] FIG. 6-b is a schematic drawing illustrating how the second embodiment of upper straight cup of current invention is engaged into a first embodiment of a small lower cup of current invention.

[0027] FIG. 7-a is an over view of a third embodiment of a small cup for a lower cup body of one of the combined cup of the current invention.

[0028] FIG. 7-b is a schematic drawing illustrating how the second embodiment of a straight cup of current invention is engaged into a third embodiment of a small lower cup of current invention.
FIG. 8-a is a side view of a fourth embodiment of a shallow bowl shape cup for an upper cup body of one of the combined cup of current invention.

FIG. 8-b is an over view of the fourth embodiment of a small cup for a lower cup body of one the combined cup of the current invention.

FIG. 8-c is a side view of the fourth embodiment of a small cup for a lower cup body of one the combined cup of the current invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1-a is an over view of a first embodiment of a shallow bowl shape cup (1) for upper cup body of one the combined cup of the current invention. FIG. 1-b is a cross sectional view of a first embodiment of the shallow bowl shape cup (1). The bowl shape cup (1) is designed to be mountable on two different sizes under cups, which contain beverages, and hold snacks. FIG. 1-c is a cross sectional view of large size cup (2) for a lower cup body of one of the combined cup of the current invention. The upper open part of the bowl shape cup (1) has a circular brim (3), which has a groove structure (3-1) to receive rolled up brim (4) of the mouth of a large under cup (2). FIG. 1-d is a cross sectional view of a first embodiment of a small size cup (5) for lower cup body of one of the combined cup of the current invention. Another groove (6) for receiving the rolled up brim (7) of the first embodiment of lower cup body for one of the combined cup has structure of (6-1) and developed on the bottom of the bowl shape cup (1). A hole (8) for a straw is also developed at the bottom of the bowl shape cup (1).

FIG. 2-a is a cross sectional view of a second embodiment of the shallow bowl shape cup (9) for an upper cup body of one of the combined cup of the current invention. The circular brim (3-1) has the same structure as in FIG. 1-b. Another groove (10) developed at the bottom of the bowl shape cup (9) has more angular structure (10-1) than the previous groove (6-1) for more secure engagement of rolled up brim (7) of the lower cup body of (9).

FIG. 2-b is a bottom view of the first and second embodiment of the shallow bowl shape cups of (1) and (9). Pluralities of wrinkles (11) are developed along the outer sides of grooves, (6) and (10), at the bottom of the bowl shape cups of (1) and (9). The wrinkles (11) form three-dimensional structure to reinforce the strength of the grooves of (6) and (10) developed at the bottom of the bowl shape cups of (1) and (9).

FIG. 3-a is an over view of a third embodiment of a shallow bowl shape cup (12) for an upper cup body of one of the combined cup of current invention. And FIG. 3-b is a cross sectional view of a third embodiment of the shallow bowl shape cup (12). The cup (12) has a partially extended bottom (13). The circular brim (14) at the upper open part of the bowl shape cup (12) has the same shape structure of the previous circular brim (3-1). Since the bottom of the cup (12) is partially extended, two new bottom grooves (15-1) and (15-2) are provided. The upper groove (15-1) is for receiving the rolled up brim (7) of the first embodiment of small cup (5) and the lower groove (15-2) is for receiving a groove (7-1), which is developed at the side of the first embodiment of a small cup (5). Due to the two grooves of (15-1) and (15-2), the third embodiment of bowl shape cup (12) and the first embodiment of small cup (5) are engaged more tightly than ever. FIG. 3-c is a cross sectional view of a variation of the third embodiment of the shallow bowl shape cup (12) for an upper cup body of one of the combined cup of the current invention. The only variation of the third cup (12) is the lower groove (15-3). The groove (15-3) is projected outwardly while the previous groove (15-2) is projected inwardly. The third cup (12) with the groove of (15-3) is engaged to a second embodiment of the small lower cup (23) in FIG. 5-c, which has two horizontal grooves developed outwardly.

FIG. 4-a is an over view of an insert (16) for dividing the first embodiment of the small lower cup body (5) into an upper section and a lower section. The insert has a hole (17) for a straw at the inner circular part and a hemi circular, vertically straight, groove (18) for another straw at the outer perimeter of the insert (16). FIG. 4-b schematically illustrates how the insert (16) is engaged into the first embodiment of a small lower cup body (5) of current invention. When a user pushes down the insert (16) into the lower small cup body (5), the groove (16-1), developed at the lower part of the insert (16), is engaged to another groove (7-2) developed on the wall of the small lower cup body (5). A user can put beverage and snack in one cup utilizing this insert (16) and the small lower cup body (5). FIG. 4-c is a variation of the insert (16) in the groove (16-2). This groove (16-2) is developed outwardly to engage the insert (16) to the second embodiment of the small lower cup (23) in FIG. 5-c, which has two horizontal grooves developed outwardly.

FIG. 5-a is an over view of the first embodiment of a straight shape upper cup body (19) of the current invention. The upper cup body (19) has a hole (20) for a straw at the inner circular part and a hemi circular, vertically straight, groove (21) for another straw at the outer rim of the upper cup body (19). FIG. 5-b is a cross sectional view of the first embodiment of an upper cup body (19) of current invention. A groove (22), projected outwardly, is developed horizontally along the diameter of the upper cup body (19). FIG. 5-c is a cross sectional view of second embodiment of a small lower cup body (23) of the current invention. Two, outwardly projected, grooves (24) and (25) are developed horizontally along the perimeter. The groove (22) of the upper cup body (19) may be engaged to one of the grooves (24 and (25) depends on the relative size of the upper cup body (19) and the lower cup body (23).

FIG. 6-a is an over view of a second embodiment of a straight shape upper cup body (24) of the current invention. A hole (25) for a straw is developed at the bottom. FIG. 6-b is a side view of the second embodiment of the upper cup body (24). A groove (26) for another straw is developed inwardly and vertically on the perimeter of the cup upper body (24) and another groove (27) is developed horizontally and inwardly along the perimeter of the upper cup body (24). FIG. 6-c is a schematic drawing illustrating how the second embodiment of the upper cup body (24) of current invention is engaged into a first embodiment of a small lower cup body (5) of current invention. When a user pushes down the upper cup body (24) into the small lower cup body (5), the horizontal groove (27) is engaged to one of the grooves of (7-1) and (7-2) depends on the relative sizes of the two cup bodies of (24) and (5).
FIG. 7-a is an over view of a third embodiment of a small lower cup body (28) of the current invention. Four small vertical projections (29) are horizontally developed inwardly along the inside perimeter of the lower cup of (28). FIG. 7-b is a schematic drawing illustrating how a third embodiment of an upper cup (30) of current invention is engaged into the third embodiment of a small lower cup (28) of the current invention. The third upper cup (30) is very similar to the second cup (24). The only difference is the shape of horizontal groove. The groove (27) of the second cup (24) is inwardly rounded. The groove (31) of the third upper cup (30) is inwardly triangular. A sharp slope (32) is developed between the upper section and lower section of the lower cup (28). When a user pushes the upper cup (30) into the lower cup (32), the four small vertical projections (29) on the lower cup (28) are engaged to the triangular groove (31) of the upper cup (30).

FIG. 8-a is a side view of a fourth embodiment of a shallow bowl shape lid (33) for upper cup body of the combined cup of current invention. FIG. 8-b is an over view of the fourth embodiment of a small lower cup (34) of the current invention.FIG. 8-c is a side view of the fourth embodiment of a small lower cup (34) of the current invention. The fourth lower cup (34) has four wings (35) developed along the perimeter of the open mouth portion of the cup (34). Four grooves (36) match to the four wings (35) are developed at the bottom of the fourth bowl shape lid (33). A user can engage the fourth lid (33) to the fourth lower cup (34) by align the wings (35) and grooves (36) and twist. It provides another securely engaged multi-cup.

What is claimed is:

1. A combined cup which is comprised of: 1) an upper cup body of a bowl shape having a circular brim of a groove structure at the upper open part thereof, a hole for a straw developed at the bottom thereof, another groove developed between the first bottom and the second bottom thereof, and a third groove developed inwardly along the perimeter of the extended bottom wall and 2) a bottom cup with a straight side wall.

2. A combined cup of claim 1, wherein a bottom cup has two grooves inwardly developed along sidewall.

3. A combined cup of claim 1, wherein an upper cup body of a bowl shape having a circular brim of a groove structure at the upper open part thereof, a hole for a straw developed at the bottom thereof, and another groove of angular inner structure developed at the bottom thereof.

4. A combined cup of claim 1, wherein pluralities of wrinkles are developed at the bottom of the bowl shape upper cup body along the outer sides of grooves.

5. A combined cup which is comprised of: 1) an upper cup body of a bowl with extended bottom shape having a circular brim of a groove structure at the upper open part thereof, a hole for a straw developed at the bottom thereof, another groove developed between the first bottom and the second bottom thereof, and a third groove developed inwardly along the perimeter of the extended bottom wall and 2) a bottom cup with straight side wall.

6. A combined cup of claim 5, wherein a bottom cup has two grooves inwardly developed along sidewall.

7. A combined cup of claim 5, wherein 1) an upper cup body of a bowl with extended bottom shape having a circular brim of a groove structure at the upper open part thereof, a hole for a straw developed at the bottom thereof, another groove developed between the first bottom and the second bottom thereof, and a third groove developed outwardly along the perimeter of the extended bottom wall and 2) a bottom cup has two grooves outwardly developed along side wall.

8. A combined cup which is comprised of: 1) a cup having two grooves developed inwardly along the perimeter of side wall and 2) an insert having a hole for a straw at the inner circular part and a hemi circular, vertically straight, groove for another straw at the outer perimeter of the insert.

9. A combined cup which is comprised of: 1) a straight shape upper cup body having a hole for a straw at the inner circular part and a hemi circular, vertically straight, groove for another straw at the outer rim of the upper cup body and a groove, developed horizontally and projected outwardly along the perimeter and 2) a lower cup body having two outwardly projected grooves developed horizontally along the perimeter.

10. A combined cup of claim 9, wherein 1) a straight shape upper cup body having a hole for a straw at the inner circular part and a hemi circular, vertically straight, groove for another straw at the outer rim of the upper cup body and a groove, developed horizontally and projected inwardly along the perimeter and 2) a lower cup body having two inwardly projected grooves developed horizontally along the perimeter.

11. A combined cup which is comprised of: 1) a lower cup body having four small vertical projections developed horizontally inwardly along the inside perimeter and 2) an upper cup having a sharp slope developed between the upper section and lower section of the lower cup and a horizontal groove developed horizontally inwardly in triangular shape.

12. A combined cup which is comprised of: 1) an upper cup body of a bowl shape having a circular brim of a groove structure at the upper open part thereof and four sloped grooves developed on the bottom thereof; and 2) a bottom cup having four sloped wings developed along the perimeter of the open mouth portion.

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