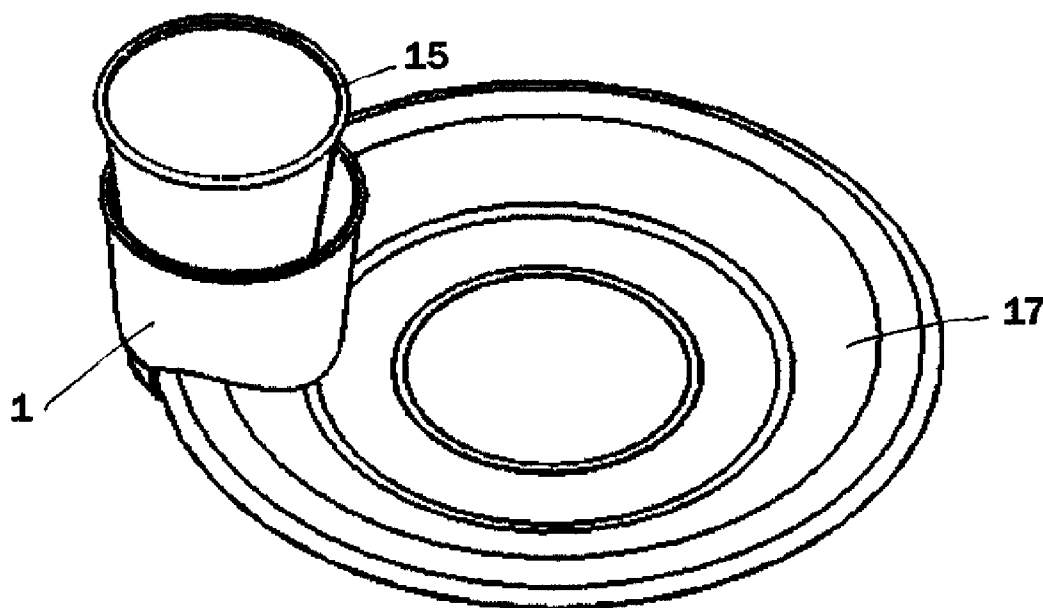




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(19) **United States**(12) **Patent Application Publication**
Ezzy et al.(10) **Pub. No.: US 2009/0120948 A1**(43) **Pub. Date: May 14, 2009**(54) **BEVERAGE CUP HOLDER HAVING MEANS
FOR ATTACHING TO A PLATE****Publication Classification**(76) Inventors: **Michael R. Ezzy**, Van Buren, ME
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ME (US)(51) **Int. Cl.**
B65D 25/00 (2006.01)(52) **U.S. Cl.** **220/737**Correspondence Address:
THOMAS A. GALLAGHER
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STAMFORD, CT 06903 (US)(57) **ABSTRACT**(21) Appl. No.: **12/265,839**(22) Filed: **Nov. 6, 2008****Related U.S. Application Data**(60) Provisional application No. 60/986,300, filed on Nov.
8, 2007.

A beverage cup holder is generally cylindrical having an upper open end and a lower closed end. Near the lower closed end is a diametrical slot which is configured to engage the periphery of a paper or plastic plate. Preferably, the slot is configured to match or somewhat match the curvature of the periphery of a paper or plastic plate. The presently preferred embodiment of the invention is made of plastic. However, it is possible that the invention could be made of paper (cardboard). The invention is easily attachable to the many existing paper and plastic plates in the market.



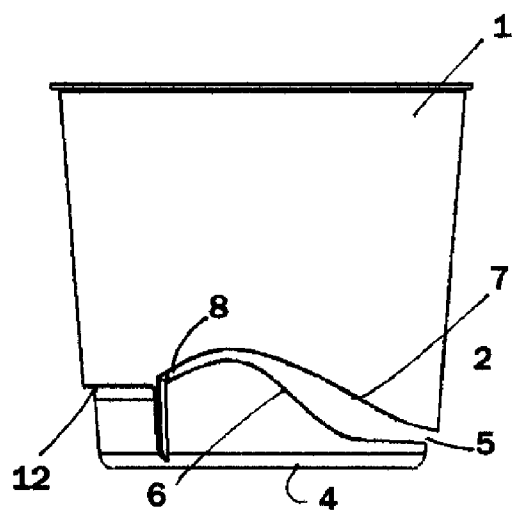


FIG. 1

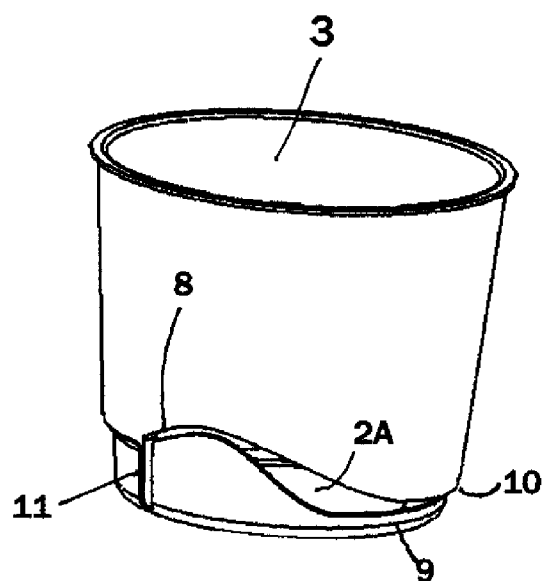


FIG. 2

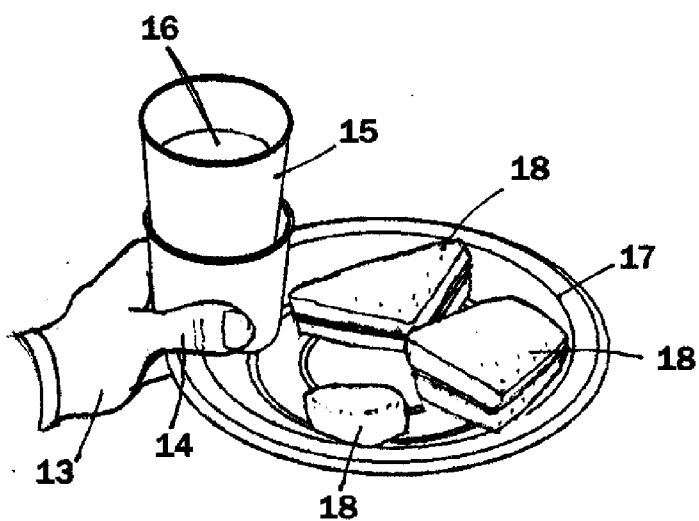


FIG. 3

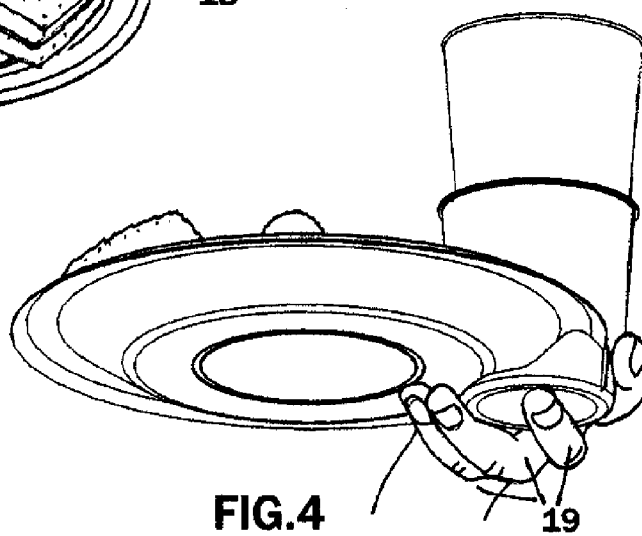
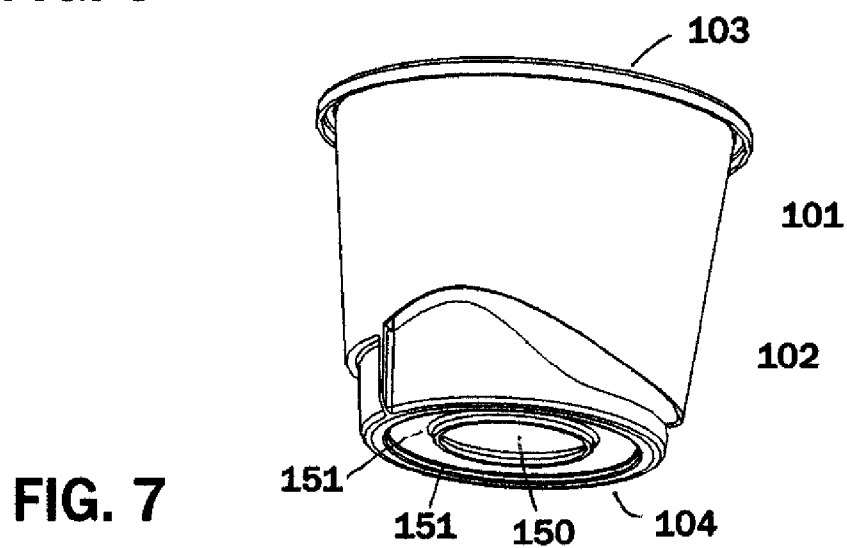
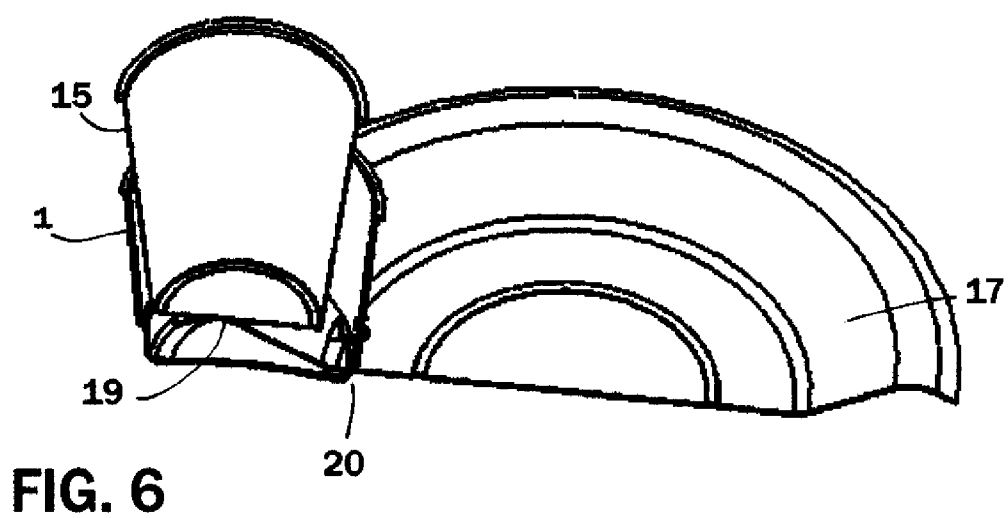
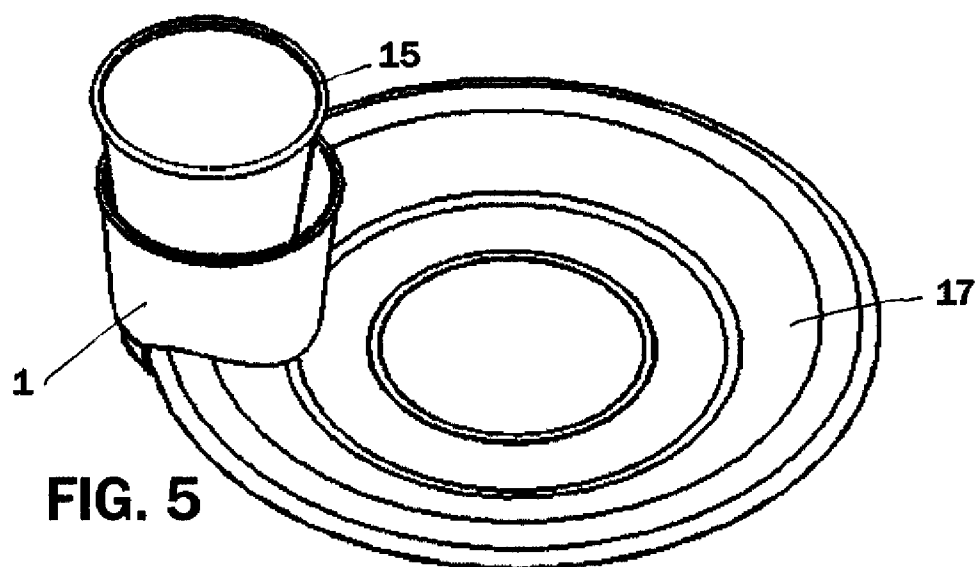


FIG. 4



BEVERAGE CUP HOLDER HAVING MEANS FOR ATTACHING TO A PLATE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of provisional application Ser. No. 60,986,300 filed Nov. 8, 2007.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The invention relates to a beverage cup holder which is configured to engage a plate, particularly a paper or plastic plate.

[0004] 2. State of the Art

[0005] Many parties, receptions, luncheons, etc. do not provide seating for the guests. Instead, the guests stand holding plates of "finger food" and beverage cups. It is difficult to hold a plate and a cup and still manage to eat the food on the plate. Moreover, since many of these gatherings are intended to be an opportunity to meet and network among the guests it would be desirable for the guests to have one hand free to shake hands with other guests. However, holding a plate and a beverage cup requires the use of both hands. This problem has been recognized and several patents have issued for potential solutions to the problem. Many of the proposed solutions involve specially designed plates that incorporate holes or other features for supporting a beverage cup. Yet there are an abundance of paper and plastic party plates already flooding the market.

SUMMARY OF THE INVENTION

[0006] The present invention provides an inexpensive beverage cup holder which easily attaches to an existing plate, preferably paper or plastic, and allows a person to hold the plate and a beverage cup in one hand. Thus, the free hand can be used to grasp finger food on the plate and/or to shake hands with other guests at the gathering.

[0007] According to the presently preferred embodiment, the beverage cup holder is generally cylindrical having an upper open end and a lower closed or open end. Near the lower end is a diametrical slot which is configured to engage the periphery of a paper or plastic plate. As used herein, the term "generally cylindrical" is intended to include, cylindrical, frustoconical, globular, and their equivalents. Preferably, the slot is configured to match or somewhat match the curvature of the periphery of a paper or plastic plate. The presently preferred embodiment of the invention is made of plastic. However, it is possible that the invention could be made of paper (cardboard). The invention is easily attachable to the many existing paper and plastic plates in the market. The dimensions of the beverage cup holder of the invention are easily adapted to fit existing paper and plastic cups. Thus, the slot and diameter of the beverage cup holder can be easily optimized to complement a manufacturer's existing line of disposable plates and cups.

[0008] Additional objects and advantages of the invention will become apparent to those skilled in the art upon reference to the detailed description taken in conjunction with the provided figures.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a side elevation view of a beverage cup holder according to the invention;

[0010] FIG. 2 is a perspective view of a beverage cup holder according to the invention;

[0011] FIG. 3 is a top perspective view of a beverage cup holder according to the invention attached to a paper plate with a drink container in place within the cup holder, showing one method of holding with one hand the three components together, the cup holder, the cup in place and the paper plate;

[0012] FIG. 4 is a bottom perspective view of the cup holder, cup in place and the paper plate showing a typical placement of the fingers of one hand for support of all three components;

[0013] FIG. 5 is a perspective view of the plate, cup and cup holder all in place, showing the position of the plate as deep within the slot of the cup holder as possible;

[0014] FIG. 6 is a perspective view in partial section of the assembly in FIG. 5, showing how the cup rests on the edge of the captured portion of the paper plate; and

[0015] FIG. 7 is a perspective view of a second preferred embodiment of the invention.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

[0016] Referring to the figures generally, the cup holder 1 according to the presently preferred embodiment has the general shape is of a slightly tapered (frustoconical) cylinder with an open top 3 and closed bottom 4. A curved slot 2 cuts diametrically through the sidewalls of the cup holder 1 from one side towards the other.

[0017] The lower edge 6 of slot 2 is curved up and describes a curve more flattened than is typically found in the cross section of the periphery of a paper plate. The upper edge 7 of slot 2 is a flatter curve and both join at location 8 which is spaced radially inward from the wall of the cup holder 1.

[0018] The lower edge 6 is smaller in diametrical length than the upper edge 7. This allows molding without complex injection molding tooling since it leaves a gap with an approximately five degree offset, allowing the mold to shut off in the gap area using a straight draw tool.

[0019] The narrow gap 8 at the inner end of the slot distorts the edge of the paper plate when it is forced into the end of the slot and provides a clamping action on the paper plate.

[0020] The larger opening of the slot shown at 2a allows a variety of paper plate profiles to pass into the slot. The slot entry at 5, comprising bottom front lip 9 and top front lip 10, in combination with the termination points of the slot at 8 and 8 on both sides of the cup holder, form a three point distortion of the plate, further securing it into the slot. The additional weight of a cup of beverage further distorts the rim of the paper plate and increases the 3 point clamping action to the paper plate by adding a forth point.

[0021] Two vertical ribs 11 mark the termination to the slot 2 and provide additional strength to the molded cup holder 1. Horizontal wall 12 extends between the ribs 11 and provides additional stiffening.

[0022] FIG. 3 shows a paper plate 17 in position in slot 2, with a beverage container 15, and beverage 16, with food items 18 on the plate. A typical way of holding the assembly of cup, cup holder and plate is to hold the cup holder with the left hand 13, with thumb 14 on one side of the cup holder, and fingers 19 underneath the cup holder and extending underneath the plate as shown in FIG. 4 arranged to spread the weight of the plate and support the plate from the bottom.

[0023] FIG. 5 shows the cup 15, device 1 and plate 17 in a typical joined state. FIG. 6 shows how the bottom of cup 15,

contained with the cup holder 1, will bear down on the plate 17 at point 19, which will cause the rim of the paper plate to distort and lock it into the slot 2 at points 8 (not visible) and between the upper and lower edges of the slot at point 20.

[0024] FIG. 7 shows an alternate embodiment where the bottom of the cup holder is open rather than closed. Since it is the periphery of the plate that actually supports the bottom of the beverage cup, it is not essential that the bottom of the cup holder be closed. As illustrated, the cup holder 101 has an open top 103, a partially closed bottom 104 being an annulus defining a central hole 150. Slot 102 as described above is arranged near the bottom 104. Molding of the cup holder requires that a portion the steel core and cavity meet together as a shutoff which creates the slot. This embodiment eliminates side action in the tooling which would slow down the molding process and increase molding costs. The off-center meeting of the core and cavity can cause stresses and a side movement of the core resulting eventually in flashing in the side slot. This stress can be countered by having the core and cavity mate centrally to form the hole in the bottom as shown. Concentric ribs 151 on inner and outer edge of the annulus stiffens the part.

[0025] There have been described and illustrated herein a beverage cup holder having means for attaching to a plate, preferably a paper plate or a plastic plate or a combination paper-plastic plate. While particular embodiments of the invention have been described, it is not intended that the invention be limited thereto, as it is intended that the invention be as broad in scope as the art will allow and that the specification be read likewise. It will therefore be appreciated by those skilled in the art that yet other modifications could be made to the provided invention without deviating from its spirit and scope as claimed.

What is claimed is:

1. A beverage cup holder having means for attaching to a plate, said cup holder comprising:
 - a generally cylindrical structure having an upper open end and a lower end and a side wall, and
 - a slot extending diametrically into the side wall.
2. A beverage cup holder according to claim 1, wherein: said lower end is closed.
3. A beverage cup holder according to claim 1, wherein: said lower end is open.
4. A beverage cup holder according to claim 1, wherein: said lower end defines an annulus.
5. A beverage cup holder according to claim 4, wherein: said annulus has inner and outer ribs.

6. A beverage cup holder according to claim 1, wherein: said slot has a profile that substantially matches the profile of the periphery of a disposable plate.
7. A beverage cup holder according to claim 1, wherein: said structure is generally frustoconical.
8. A beverage cup holder according to claim 1, further comprising:
 - a pair of ribs adjacent the end of said slot.
9. A beverage cup holder according to claim 1 wherein: said slot has a tapered thickness.
10. A beverage cup holder according to claim 9, wherein: said slot terminates in a thickness approximately equal to the thickness of a disposable plate.
11. A beverage cup holder according to claim 9, wherein: said tapered thickness is configured to accommodate a variety of disposable plate profiles.
12. A beverage cup holder according to claim 1, wherein: said slot has a profile that distorts the periphery of a disposable plate when the plate is inserted into the slot thereby providing a clamping action.
13. A beverage cup holder according to claim 12, wherein: said slot distorts the plate at three points.
14. A food service apparatus, comprising:
 - a disposable plate having a curved profile periphery;
 - a beverage cup; and
 - a beverage cup holder having a diametrical slot adapted to receive the curved profile periphery of the disposable plate and having a diameter adapted to receive the beverage cup.
15. The apparatus according to claim 14, wherein: said beverage cup holder has a pair of ribs adjacent the end of said slot.
16. The apparatus according to claim 14, wherein: said slot has a tapered thickness.
17. The apparatus according to claim 16, wherein: said slot terminates in a thickness approximately equal to the thickness of the disposable plate.
18. The apparatus according to claim 14, wherein: said slot has a profile that distorts the periphery the plate when the plate is inserted into the slot thereby providing a clamping action.
19. The apparatus according to claim 14, wherein: said slot distorts the plate at three points.
20. The apparatus according to claim 19, wherein: when the beverage cup is placed in the cup holder, the bottom of the beverage cup engages the periphery of the plate.

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