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3,095,132

COMBINATION LID AND STAND FOR PAPER CUPS

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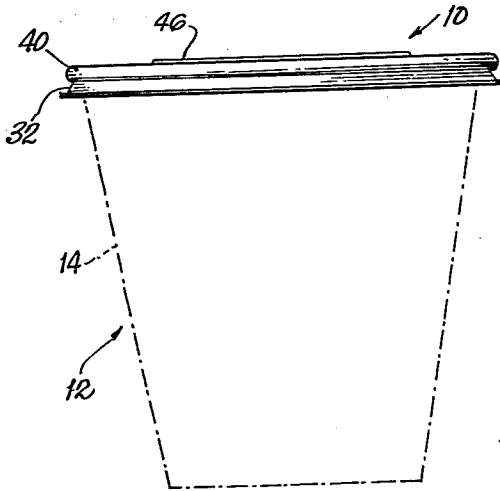


FIG. 1

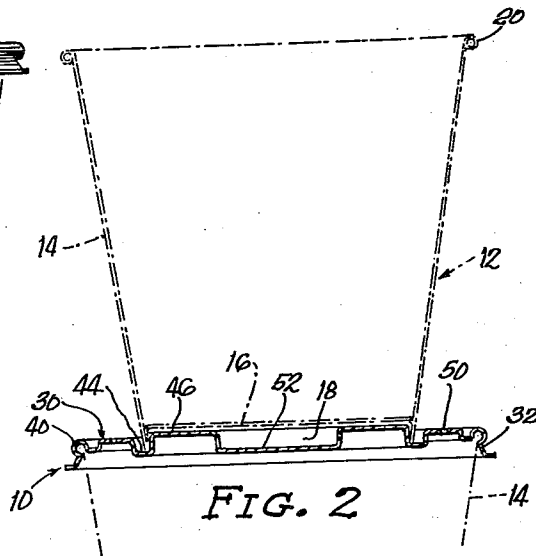


FIG. 2

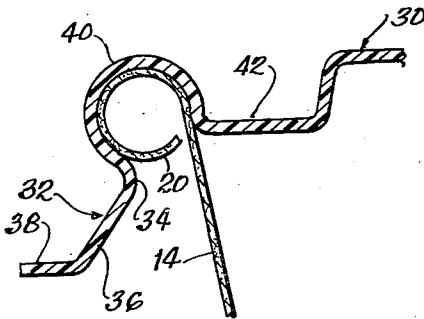


FIG. 4

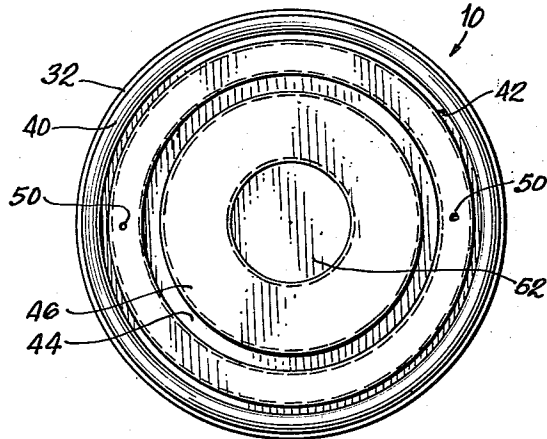


FIG. 3

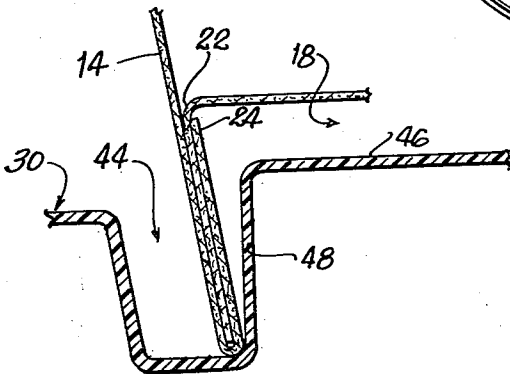


FIG. 5

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3,095,132 COMBINATION LID AND STAND FOR PAPER CUPS

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This invention relates to paper cups or similar expendable receptacles made of thin sheet material.

One object of the present invention is to provide a new and improved device adapted to serve as either a lid or a stand for a paper cup of the type having a flat bottom and a downwardly tapering frusto-conical side wall.

A further object is to provide a new and improved combination lid and stand in the form of a circular disk having a depending peripheral flange for reception around the upper end of the paper cup, an annular downwardly projecting rib adjacent the flange for reception within the upper end of the cup, and an upwardly projecting circular portion for snug reception within the recess at the lower end of the cup.

Thus, it is an object of the present invention to provide a combination lid and stand which will be frictionally retained on the lower end of the cup when the cup is pushed downwardly over the upwardly projecting circular portion of the stand.

A further object is to provide a new and improved device which may be employed as a lid for a paper cup, or as a stand to support a cup on a tray or the like, or as both a lid and stand simultaneously, when one cup is stacked on another.

Further objects and advantages of the present invention will appear from the following description, taken with the accompanying drawings, in which:

FIG. 1 is an elevational view of a combination lid and stand to be described as an illustrative embodiment of the present invention, the embodiment being shown on the upper end of a paper cup to illustrate the use of the embodiment as a lid.

FIG. 2 is a central elevational section showing the embodiment in place under the lower end of a paper cup to illustrate the use of the embodiment as a stand.

FIG. 3 is a top plan view of the combination lid and stand.

FIG. 4 is a greatly enlarged fragmentary sectional view showing the engagement between the embodiment and the upper end of a paper cup when the embodiment is being used as a lid.

FIG. 5 is a greatly enlarged fragmentary section showing the engagement between the embodiment and the lower end of the cup when the embodiment is being used as a stand.

It will be seen that the drawings illustrate a combination device 10 adapted to serve as either a lid or a stand for a paper cup 12 of the type having a downwardly tapering frusto-conical side wall 14. The lower end of the side wall 14 is closed by a flat circular bottom wall 16 which is spaced upwardly from the lower edge of the side wall so as to form a circular recess 18 in the lower end of the cup. The upper end of the side wall 14 may be curled to form an outwardly projecting annular bead 20 which reinforces the mouth of the paper cup. As shown to advantage in FIG. 5, the bottom wall 16 may have a downwardly projecting flange 22 which may interlock with an turned, upwardly projecting flange 24 on the side wall 14. The cup 12 may be made of paper or any other suitable sheet material, such as various plastics.

It will be seen that the combination lid and stand 10 takes the form of a thin circular disk 30 made of a sheet material, which may be paper, but preferably is a suitable plastic, such as polystyrene, polyethylene or the like.

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The disk 30 is formed with a downwardly projecting annular flange 32 which extends around the periphery of the disk and is adapted to be snugly received around the bead 20 at the upper end of the paper cup. The illustrated flange 32 is formed with an inwardly projecting bead or ridge 34 adapted to interlock with the bead 20 on the paper cup. Below the ridge 34, the flange 32 has an outwardly flaring portion 36 which facilitates the mounting of the lid on the paper cup. An outwardly projecting horizontal portion 38 is formed on the extreme lower end of the flange 32 and is adapted to rest upon a tray, counter or other supporting surface when the device of the present invention is being employed as a stand.

Where the flange 32 joins with the disk 30, the device 10 is formed with an annular bead 40 having a cross section which extends through the greater portion of a circle. When the device 10 is used as a lid, the bead 40 is adapted to receive the bead 20 on the paper cup.

At the inner margin of the bead 40, the device 10 is formed with a downwardly projecting annular rib 42 adapted to be received within the upper end of the paper cup. The inner margin of the bead 40 forms the outer margin of the rib 42.

At a substantially smaller diameter than the rib 42, the device 10 is formed with an upwardly facing channel 44 adapted to receive the lower end of the side wall 14 of the paper cup when the device 10 is employed as a stand. At the inner margin of the channel 44 the device 10 is formed with an upwardly projecting circular portion 46 adapted to be snugly received within the recess 18 at the lower end of the paper cup. Thus, the upwardly projecting circular portion 46 may be frictionally retained within the lower end of the side wall 14 as shown to advantage in FIG. 5. The circular portion has an outer, generally cylindrical wall 48 which also forms the inner wall of the channel 44.

One or more vent openings 50 may be formed in the portion of the disk 30 which extends between the channel 44 and the rib 42, so as to prevent the formation of a vacuum under the device 10 when it is resting upon a wet tray or other supporting surface. Such vacuum might tend to cause the combination lid and stand to adhere to the supporting surface. The openings 50 are of an extremely small size so that they will not permit any substantial leakage when the device is used as a lid.

The lid has a depressed central portion 52 which tapers downwardly. It will be seen that the depressed portion 52 is formed in the center of the raised portion 46.

The device 10 may be used as a lid for a paper cup or the like, as shown in FIGS. 1 and 4. For this use, the device is pushed downwardly over the top of the paper cup and is retained by the engagement between the flange 32 and the bead 20.

FIGS. 2 and 5 illustrate the use of the device 10 as a stand for the paper cup. For this use, the lower end of the cup is pushed into the channel 44 so that the upwardly projecting circular portion 46 of the device will be frictionally retained within the recess 18 at the lower end of the cup. Thus, the device may be used to stabilize the cup when it is standing on a tray or other supporting surface.

Of course, the device 10 may be used simultaneously as a lid for one cup and a stand for another, when the cups are stacked. This use is illustrated in FIG. 2, in which the outline of the lower cup is shown in broken lines.

The lids themselves may be stacked, one upon another, in a stable manner, for shipment, storage or the like. When the lids are stacked, the flaring flange 36 on each lid nests over the bead 40 on the lid below. The raised portions 46 and the depressed central portions 52 of the stacked lids also nest and assist in maintaining the lids

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in centered alignment in the stack. Thus, it is easy to handle and count the stacked lids by mechanical means.

The combination lid and stand of the present invention is extremely effective and convenient, yet is easy to manufacture and low in cost.

Various other modifications, alternative constructions and equivalents may be employed without departing from the true spirit and scope of the invention, as defined in the following claims and exemplified in the foregoing description.

I claim:

1. A combination lid and stand for a paper cup of the type having a downwardly tapering frusto-conical side wall closed by a bottom wall which is spaced upwardly from the lower edge of the side wall so as to form a recess in the bottom of the paper cup, said combination lid and stand comprising a circular disk having a downwardly projecting annular flange extending around the periphery thereof for snug reception around the upper end of the paper cup, said disk having an upwardly projecting circular portion formed thereon for snug reception and frictional retention within the recess in the lower end of the cup, said upwardly projecting circular portion being substantially smaller in diameter than said downwardly projecting annular flange, said disk having a pair of vent openings extending through the portion of said disk between said downwardly projecting annular flange and said upwardly projecting circular portion, substantially at diametrically opposite points, to prevent the development of a vacuum under said disk.

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2. In combination, a paper cup having a downwardly tapered frusto-conical side wall, a bottom wall closing the lower end of said side wall but spaced upwardly from the lower end thereof to form a recess in the lower end of the cup, and a combination lid and stand for the paper cup and comprising a circular disk having a depending annular flange around the periphery thereof and adapted to be received around the upper end of the side wall of the paper cup, said disk having an upwardly projecting circular portion snugly received and frictionally retained in said recess in the lower end of the cup, said upwardly projecting circular portion being substantially smaller in diameter than said annular flange, said disk having first and second vent openings extending through the portion of said disk between said annular flange and said upwardly projecting circular portion, substantially at diametrically opposite points, to prevent the development of a vacuum under said disk.

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