Another embodiment of the present invention describes a dome lid having two drink openings on the rim portion, one with an ordinary opening and the other with a narrow opening equipped with a cooling chamber to regulate hot drink before reaches the mouth. The dome lids have an added future recessed cup holder to securely hold a second cup placed on top of the dome lid which prevent falls and spills. In addition, the cup is equipped with bellowed walls in horizontal four stripes in symmetry creating four vertical walls to strengthen the cup pressure from the above, at the same time reduce fingers touching cup sidewall area heated by hot liquids.
DOME LIDS AND CUPS FOR HOT BEVERAGES

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This is a continuation of my provisional application No. 61/296,736 which was filed on 20 Jan. 2010, titled “Dome lids and cups for hot beverages.”

FIELD OF THE INVENTION

[0002] This invention relates to a lid and cup as one unit to regulate hot drinks. The lid helps reduce temperature to enjoy hot drinks and decreases burn incidents. More particularly, the present invention directs the dome lid clipped on the mouth of the cup described herein as a unit for hot beverage handling. The top surface (planar) of the dome lid provides two drink openings on the top rim portion, one with an ordinary opening and the other with a narrow opening equipped with “cooling chambers” before the hot drink reaches the mouth. The dome lids have an added future recessed cup holder to securely hold a second cup placed on top of the dome lid which will prevent falls and spills. In addition, the cup is equipped with bellowed wall regions allow air to cool off the fingertips from heat emanating from the cup walls while resisting cups to slip off from the fingers. Further more, the cup bottom is designed to fit on top of these recessed dome lids to allow stacking.

BACKGROUND OF THE INVENTION

[0003] Disposable paper cups with lids for hot drinks are commonly used. However, carrying a cup with hot liquids with bare hands is dangerous and the hot liquids can burn a person internally if liquids are consumed right away. Therefore, there is a need for skills in this practice with advanced lid and cup designs to channel hot drinks for safety by reducing the probability of burning fingers, lips and tongues.

DESCRIPTION OF THE PRIOR ART

[0004] There is one United States patent which provides certain basic knowledge of some features of the dome cup lids of the present invention, but said cup lids are not otherwise suitable for purposes of the present invention. This patent is, however, referred to for purposes of establishing basic knowledge as to the prior art. Van Melle U.S. Pat. No. 4,460,103 provides dome lids without a cooling chamber or bellowed cup walls, so it is disadvantageous to handle hot beverages with the current invention.

SUMMARY OF THE INVENTION

[0005] The cup section of the current invention provides the cup wall with horizontal bellowed stripes regions away from the edge of wallpaper lapped member in symmetry on the lower region of the cup. The valley sections of horizontal bellow regions limits fingertip touching surface to the cup wall to reduce heat transfer and to prevent the cup to slip off from the fingertips. Therefore, this bellowed cup skill can eliminate commonly used cup rings to protect fingers from hot cup walls. If a cup wall forms bellow all around, then a cup wall becomes structurally weak from the pressure above. In addition, the cup bottom is formed in accord with the cup holding recess on top planar of dome lid to securely fit the second cup bottom should you choose to stack them. The bellows section formed on the cup wall is uneven.

In addition, the dome lid section of the current invention is equipped with two drink openings in opposite sides of each other on the planed top rim portion, one with a narrow opening hole and the other with a regular opening. An internal plastic sheet equipped with small puncture holes “cooling filter” shields on the narrow opening hole to create “cooling chamber” along with the multiple small external air intake holes. Both cooling filter and external air intake holes create a “cooling chamber” to mix hot liquid came through the cooling filter with external cold air. Hot drinks must flow through each small puncture holes expose liquid more surface to the external air in the cooling chamber to evaporate to cool off temperature known as “the effect of vaporization.” In addition, the skill to mix hot beverages in the cooling chamber with air, allows the inherent liquids natural aroma to disperse into the air and be detected at nose sensory area as liquids are dispersed in the mouth directly from the drink opening.

The other advantage of the dome lids equipped with cup holding recess is to hold the bottom section of the 2nd cup securely which prevents a stacked 2nd cup on skilled lid from falling off and spilling.

Furthermore, the two drink openings of the dome lids located well above the hot drink surface help to prevent the hot beverage leaks through the openings.

These and other features and advantages of domed cup lids combined with horizontal bellowed cup wall regions are described in greater details hereafter.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

[0006] The novel features are believed to be characteristic of the present invention, as to its structure, organization, use and method of operation, together with further objectives and advantages thereof, will be better understood from the following drawings in which a presently preferred embodiment of the invention will now be illustrated by way of example. It is expressly understood, however, that the drawings are for the purpose of illustration and description only and are not intended as a definition of the limits of the invention. Embodiments of this invention will now be described by way of example in association with the accompanying drawings in which:

[0007] FIG. 1 is a perspective view of a typical disposable dome lid of the present invention;

[0008] FIG. 2 is an elevated cross-section view in the direction of arrows 3-3 in FIG. 1;

[0009] FIG. 3 is an elevated cross-section view in the direction of arrows 5-5 in FIG. 1;

[0010] FIG. 4 is a perspective view of a typical disposable hot beverage cup wall equipped with horizontal bellows regions at the lower cup wall, and the cup bottom sized to fit to the dome lid cup holding recess.

[0011] FIG. 5 is an elevated cross-section in the direction of arrow 7-7 in FIG. 4 exposing the cup bottom sized to fit to the dome lid cup holding recess.

[0012] FIG. 6 is an elevated view of working unit of FIG. 3 and FIG. 5 turned 22.5 degrees right exposing cut off section of horizontal bellowed regions.
FIG. 7 is exhibiting the bottom unit of FIG. 3 and FIG. 5 working as a unit by holding the second same working unit on the bottom unit lid cup holding recess;

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

There now follows a more detailed description of certain features of disposable dome lids and drinking cups, as provided by the present invention, together with a discussion as to how the advantages of such disposable dome lids and bellowed cups are achieved.

A first embodiment of disposable dome lid according to the present invention is shown through in FIG. 1 through FIG. 3.

A second embodiment of disposable bellowed cup according to the present invention is shown through FIG. 4 to FIG. 5. A completed form with the dome lid placed on the bellowed cup is shown through FIG. 6 through FIG. 7. The common features of any dome lid 10 and bellowed cup 40, in keeping with this invention, are referred to hereafter using the same reference numerals, for ease of understanding.

Typically, the disposable dome lid 10 is made out of a thin sheet of polystyrene. Therefore the cooling filter 37 portion of the present invention may be stamped internally on near narrow drink opening 12 section separately as an integral part of the dome lid and external air take small holes 33 on the inner circular wall 32 on both side of the opening 12 in symmetry to form the cooling chamber 35. The space in between external air take holes 33 in symmetry is created since the space is covered with upper lip when liquids are consumed.

The present invention of disposable dome lid FIG. 1 is generally circular in configuration, and has a circular planar top rim surface 18 formed by the inner circular wall 32 and outer circular wall 24 equipped with the narrow drink opening 12 and the regular drink opening 22 in opposite sides. The outer circular side wall 24 depends generally downwardly from the top rim surface 18, and form circular cup rim gripper 26 and an outer circular apron 28. Inner circular side wall 32 extends downwardly from the top rim surface 18 to slightly above the cup rim gripping section 26 to form a circular planar top surface 36.

FIG. 2 shows cooling filter 37 and external air take holes forming cooling chamber 35 in relationship to the other part of lid 10.

FIG. 3 shows narrow drink opening 12 equipped with smaller puncture hole on the cooling filter 37 in order to expose large fluid surface into the external air taken from the external air take holes 33 to cool off before reaching to a mouth.

On the other hand, regular drink opening 22 is equipped with larger puncture hole on the top rim surface 18 in order to enjoy a large portion of hot drinks when the temperature come down. Also it shows a circular planar top surface 36, cup bottom locking stubs 16 and the inner circular side wall 32 forms cup holding recess 31 to secure a stacked up 2nd cup on top of the first dome lid. In addition, it shows the outer circular sidewall 24 depends generally downwardly from the top rim surface 18, and form circular cup rim gripper 26 and an outer circular apron 28.

FIG. 4 shows a typical bellowed cup 40 of the present invention and the positions of bellows 44 and flat cup wall sections 46 in relationship to the edge of the cup wall lapped member 42.

FIG. 5 shows an elevated cross-section in the direction of arrow 7-7 in FIG. 4 positioning the cup wall lapped member 42 in the middle of the bellows 44.

FIG. 6 shows the dome lid FIG. 3 mounted on the FIG. 5 turned 22.5 degrees right to exhibit more clearly how the bellows 44 and flat cup wall sections 46 are formed avoiding the edge of the cup wall lapped member 42.

FIG. 7 shows the FIG. 6 turned 22.5 degrees left and placed the dome lid FIG. 3 on top as the bottom cup and placed the bottom of the same securely into the cup holding recess on top of the bottom dome lid.

What is claimed is:

1. A disposable dome lid for placement onto a drinking cup having a narrow drink opening and a larger drink opening on opposite side on a circular planar top rim surface;

   wherein said circular planar top rim surface is extended downwardly to form inner circular side wall and outer circular side wall;

   wherein said outer circular side wall extends downwardly from said top rim surface, and form circular cup rim gripper and outer circular apron;

   wherein said inner circular side wall extends downwardly from said top rim surface to slightly above the cup rim gripping recess region to form a circular planar top surface;

   wherein said narrow drink opening equips with a cooling chamber;

   wherein said cooling chamber is created by a plastic sheet, equipped with multiple small puncture holes, forming a chamber with said outer, inner circular walls and with said circular planar top rim to cover said narrow drink opening from inside;

   wherein said cooling chamber equips with external air take small holes on said inner circular wall on both side away from said narrow drink opening in symmetry.

2. The disposable dome lid of claim 1, wherein said circular planar top surface forms cup bottom holding recess in between said inner circular sidewall and the plural cup bottom locking stubs positioned evenly around said circular planar top surface to grip a secondary cup bottom.

3. The disposable cup bottom forms to fit securely on to said cup bottom holding recess of claim 2.

4. The disposable cup of claim 3 forms evenly placed sectional horizontally bellowed regions at the bottom section of cup wall where fingers generally touch and away from the cup wall lapped member, creating plain wall among said sectional horizontal bellowed regions to maintain said cup wall strength from pressure above.

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