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D. S. BURNS

3,347,409

CONTAINER AND LID ASSEMBLY

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FIG. 1

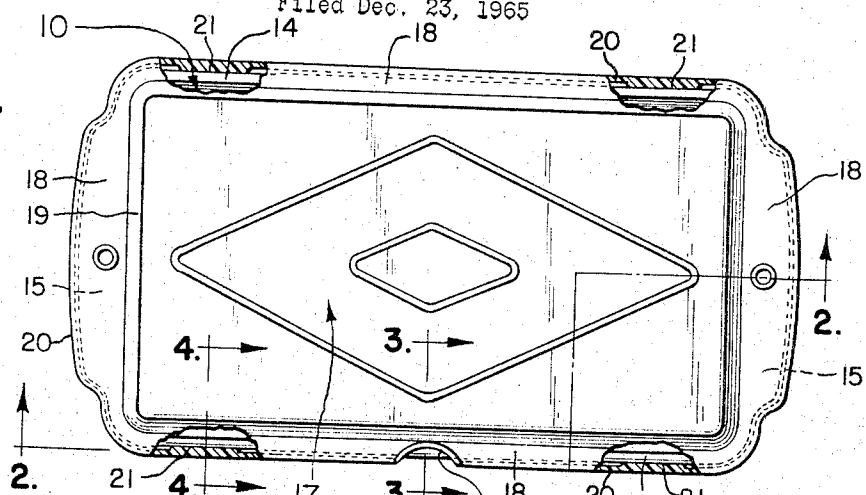


FIG. 2

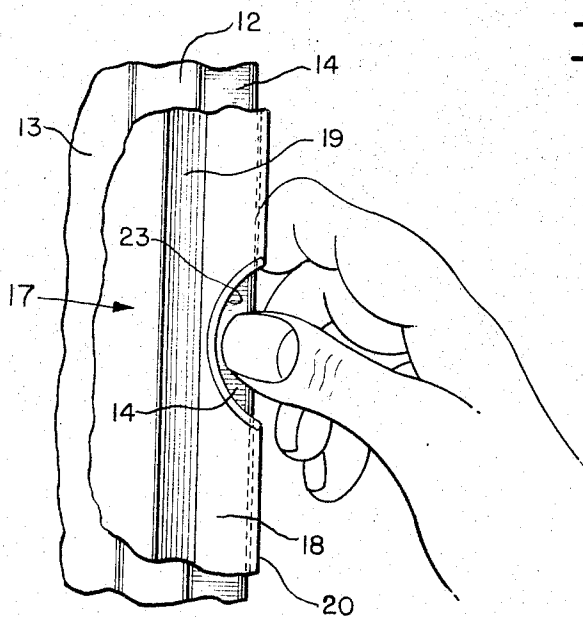
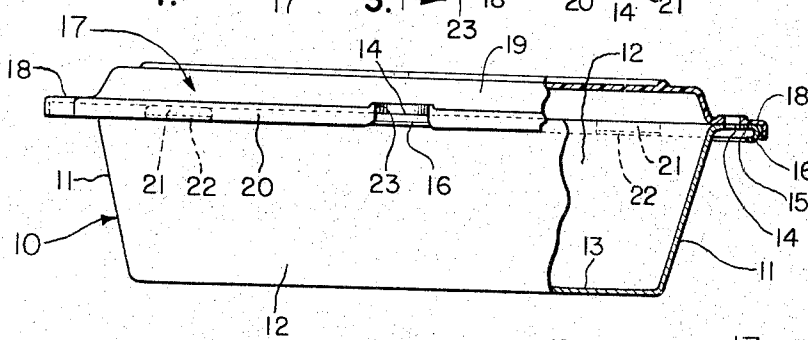


FIG. 5

FIG. 3

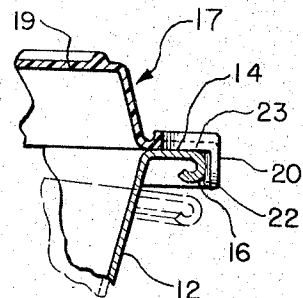
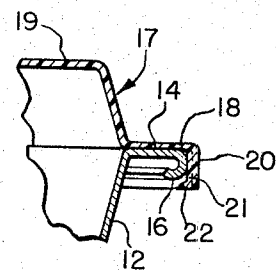


FIG. 4



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## CONTAINER AND LID ASSEMBLY

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3 Claims. (Cl. 220-60)

This invention relates to improvements in snap-on and snap-off container and lid assemblies of the type wherein a peripheral flange on the lid fits over an outstanding bead rolled or otherwise formed around the upper rim of the containers.

In former assemblies of this type, it has been common to provide lifting tabs in the form of ears which project outwardly from the periphery of the lid. In such forms of lid the flange of the lid is sprung outwardly by engaging the lifting tab between the fingers of one hand to pull said tab while the other hand is used to hold the container.

It is an object of the present invention to provide an assembly wherein a portion of the rim of the container is exposed via an opening formed in the flange of the lid in which the thumb of an operator's hand may be received to engage and apply downward force on the rim of the container while the fingers of the same hand may be positioned to engage and apply upward force on the flange of the lid at opposite sides of said opening to expand the flange and thereby free the lid for removal from the container.

For a more complete understanding of the nature and scope of this invention, reference can be had to the following detailed description, taken together with the accompanying drawing, in which:

FIG. 1 is a top plan view of a container and lid assembly in accordance with this invention, with portions removed to disclose details of construction.

FIG. 2 is a side view thereof.

FIG. 3 is an enlarged fragmentary section taken along line 3-3 of FIG. 2.

FIG. 4 is an enlarged fragmentary section taken along line 4-4 of FIG. 2.

FIG. 5 is an enlarged fragmentary plan view showing removal of the lid from the container.

A container and lid assembly of the type to which this invention is directed is illustrated in the drawings in the form of a generally rectangular unit including a container designated generally by reference numeral 10 and having opposed end walls 11 and opposed side walls 12 of equal height rising upwardly and outwardly from the perimeter of a bottom wall 13. A peripheral flange of lip 14 extending outwardly from the upper limits of the walls 11 and 12 and an integral portion of said lip 14 along each of the end walls 11 is extended to define handles 15 for engagement by the fingers of a person to facilitate carrying of the container from place to place. The outer edge of said handles 15 and the lip 14 surrounding the upper limits of the side and end walls of the container are rolled downwardly and inwardly to define a continuous rounded bead 16.

The lid, designated generally by the reference numeral 17 is preferably formed of transparent synthetic resin composition such as molded styrene or acrylic resin. It will be seen that the lid has a relatively flat border por-

tion 18 which registers with the lip 14 and handles 15 of the container when the lid is in closed position. It will also be noted that the area of the lid within said border 18 is offset upwardly to define a dome 19 in overhead relation to and coextensive with the area of the container within the confines of the upper limits of the side and end walls of the container. An integral flange 20 extending downwardly from the outer periphery of the border portion 18 of the lid encompasses the bead 16 at the outer rim of the container. Relative movement between the container 10 and the lid lengthwise of the side and end walls of the container when the lid is in closed position is prevented by inwardly offset areas 21 formed on the inner surface of the flange 20 which have positive engagement with the surfaces of the bead 16 opposite thereto at spaced apart positions lengthwise of the container side walls 12. A detent 22 at the lower limits of said areas 21 have upward engagement with the underside of the bead 16 opposite thereto to provide a catch for obstructing unintentional removal of the lid from a closed position. Due to the flexible character of the material of the lid, the flange 20 is sufficiently pliable to allow its expansion in a direction to free the bead from engagement with the areas 21 and the detents 22 when removal of the lid is desired. Thus the flexibility of the flange 20 permits snap-on engagement of the lid so that the bead may be re-engaged by the areas 21 and detents 22 when it is desired to position the lid in closing relation to the container.

In order to facilitate removal of the lid from a closed position, the lid is provided with an opening 23 which intersects the flange 20 as well as a border portion of the lid in overhead relation to the flange or lip 14 of the container. A portion of the lip 14 as well as the bead 16 bridging said opening 23 is thus exposed so as to render the same available for engagement by the thumb of the operator's hand while the fingers of the same hand are positioned underneath the flange of the lid at opposite sides of the opening. Accordingly, downward pressure on the portion of the lip 14 engaged by the thumb while upward pressure is applied by the fingers against the flange of the lid is effective to expand the flange of the lid and thereby free the lid for removal from a closed position. As shown in FIG. 3 the portion of the bead 16 bridging the opening 23 is pressed from a full line position to a dotted line position while the flange 20 of the lid is moved in a direction away from the bead 16 to permit the lid to be freed from a closed position.

What is claimed is:

1. A container and lid assembly including a container having a bottom wall and means enclosing the area occupied by said bottom wall to define the mouth of said container including a side wall having an outstanding bead along the upper limits of said side wall, a one-piece semi-rigid lid of such size as to close the mouth of said container, a flange extending downwardly from the peripheral limits of said lid adapted to encompass said bead of the container when said lid is in closed position relative to the mouth of said container, said flange having container bead engaging surfaces confined to portions of the flange offset inwardly of the area bounded by said flange and spaced apart lengthwise of said lid and a lip extending inwardly from the lower edge of said inwardly offset areas with which said container bead has

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a snap-on fit to releasably secure said lid in closed position relative to the mouth of said container, said lid having an opening intersecting an area of the flange and a portion of the lid extending inwardly from said area of the flange centrally of positions occupied by a pair of said bead engaging surfaces of the flange, said opening providing access to a portion of the container bead bridging said opening for the application of pressure against said latter portion of the bead in a direction bottomward of said container to release said container bead from said latter pair of bead engaging surfaces of the flange and the lip associated with said surfaces.

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2. A container and lid assembly according to claim 1, wherein said lid is of transparent synthetic resin composition.

5 3. A container and lid assembly according to claim 1, wherein a peripheral flange extends outwardly from the upper limits of the side walls of said container and said bead is confined to an outer edge portion of said flange.

No references cited.

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