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R. S. HURTT

3,474,928

CONTAINER HAVING SNAP FASTENING MEANS

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FIG. 1

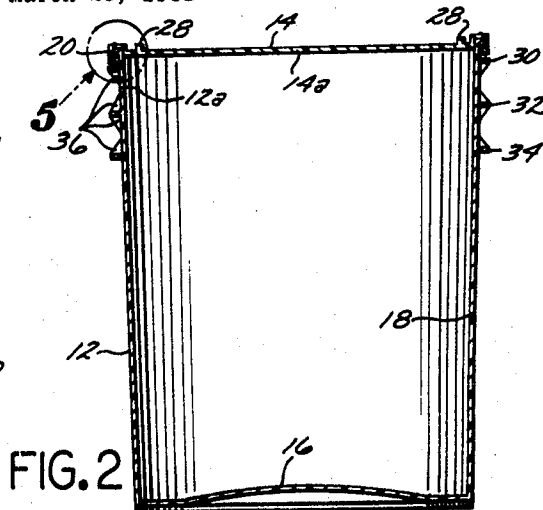
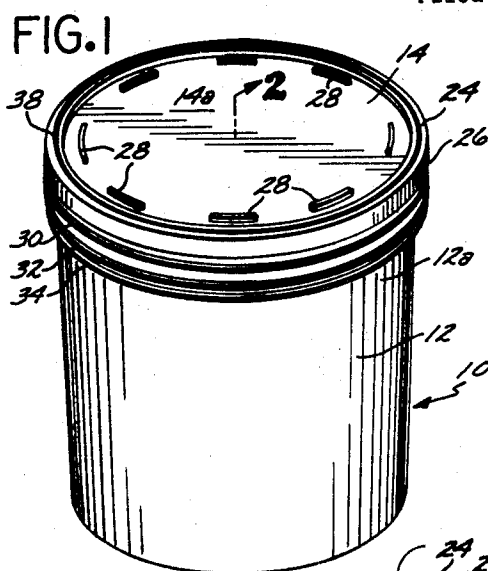


FIG. 3

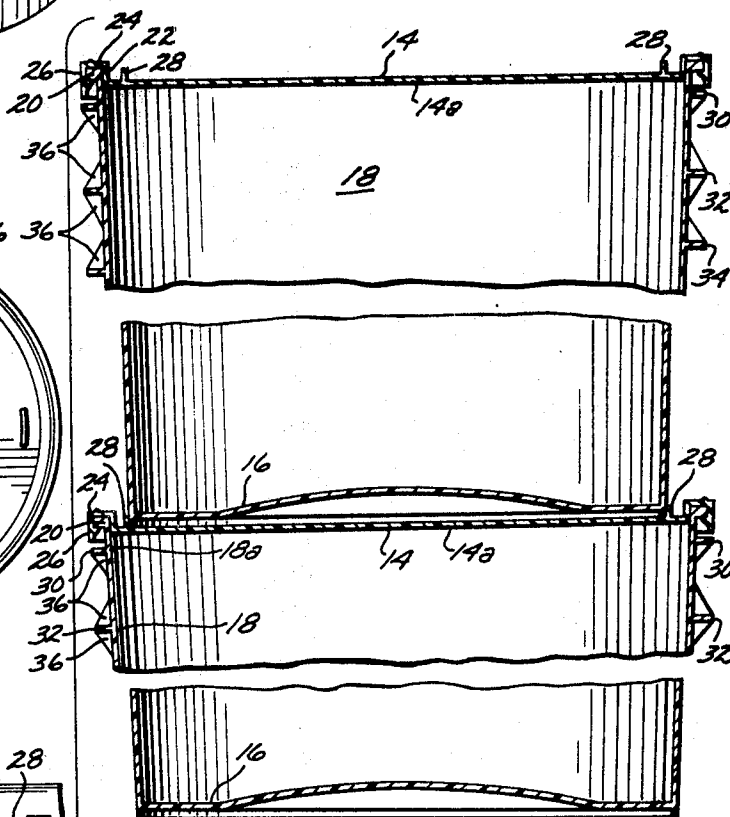
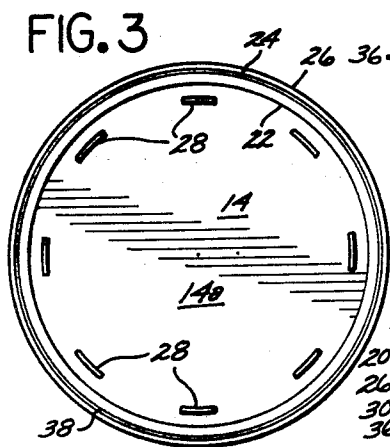


FIG. 5

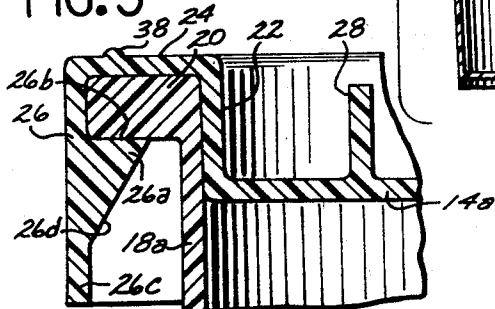


FIG. 4

INVENTOR

ROBERT S. HURTT

BY

Nancy C. Hurtt

ATTORNEY

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CONTAINER HAVING SNAP FASTENING MEANS

Robert S. Hurtt, 103 Shore Cliff Road,
Corona del Mar, Calif. 92625

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7 Claims

ABSTRACT OF THE DISCLOSURE

This invention pertains to a container having a cup-shaped body and a cover therefor, both formed of plastic and comprising certain unique details.

The body member of the container is formed with several annular ribs about the open upper end thereof, such ribs having gussets for positioning and strengthening thereof. The ribs not only strengthen the body of the container but afford means for receiving and retaining a line for tying several such containers together.

The bottom of the container is laterally offset to strengthen it, and the upper marginal edge of the body is provided with an annular offset to be engaged by a generally U-shaped marginal edge on the cover to provide the desired seal. The central portion of the cover is depressed or offset to fit within the continuous side wall of the body to thereby strengthen it when the cover and body are in assembled relation. Also, there are locating ribs on the top of the cover for enabling a plurality of containers to be stacked one on top of the other.

The present invention relates generally to containers for foodstuffs and the like, and more particularly to plastic containers having certain specific advantages.

Today, containers of various different sizes and descriptions are available for enclosing virtually any type of article. They are formed of metal, paper, plastic and other materials.

However, prior devices have failed to satisfy all of the needs encountered in housing certain types of articles, and to provide functional advantages peculiar thereto. Containers today must satisfy a myriad of functions not only to house the given article or commodity during transporting and use thereof, but also to perform additional functions long after the original commodity has been removed therefrom.

It is an object of the present invention to provide an improved container formed of plastic and wherein the cover or lid firmly fits on the body of the container to provide the desired seal therebetween.

A further object of the present invention is to provide a container as characterized above wherein the cover can be easily and quickly removed without the need for special tools or equipment.

Another object of the present invention is to provide a container as characterized above wherein the body and cover therefor are formed exclusively of plastic by use of inexpensive mass production methods.

A still further object of the present invention is to provide a plastic container as characterized above, wherein certain strategically located reinforcing ribs are provided for strengthening the upper portion of the body.

An even further object of the present invention is to provide locating tabs on the cover of each of a plurality of containers according to the present invention, such locating tabs enabling a series of containers to be stacked one on top of the other.

Another further object of the present invention is to provide positioning means around the sides of the containers for holding a fastening line in proper position

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to enable a group of such containers to be tied together in assembled relation.

Another object of the present invention is to provide a container as characterized above which is simple and inexpensive to manufacture and which is rugged and dependable in use.

The novel features which I consider characteristic of my invention are set forth with particularity in the appended claims. The device itself, however, both as to its organization and mode of operation, together with additional objects and advantages thereof, will best be understood from the following description of specific embodiments when read in connection with the accompanying drawings, in which:

FIGURE 1 is a perspective view of a container according to the present invention;

FIGURE 2 is a cross-sectional view of the container of FIGURE 1, taken substantially along line 2—2 of FIGURE 1;

FIGURE 3 is a top plan view of such container;

FIGURE 4 is a fragmentary sectional view of several containers one on top of the other; and

FIGURE 5 is a fragmentary sectional view, taken in the area 5 of FIGURE 2.

Like reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to FIGURE 1 of the drawings, there is shown therein a container 10 made in accordance with the present invention. It comprises a cup-shaped lower section of body 12 and a cover or lid 14 therefor.

As shown more particularly in FIGURE 2 of the drawings, the body 12 comprises a bottom wall 16 and a continuous side wall 18 which may be generally circular in cross-section. The bottom and side walls are formed integrally to provide a unitary structure with other elements to be hereinafter described.

The cover 14 engages the annular upper open end 12a of the container. To enable this, as shown most particularly in FIGURE 5 of the drawings, the upper marginal edge 18a of side wall 18 is formed with an annular radially outwardly projecting extension 20. Such extension may be generally rectangular in cross-section as shown in said FIGURE 5, or it may be circular or three-sided as will hereinafter become more apparent.

Cover 14 is formed with a central portion 14a which is substantially coplanar. At the marginal edge of such central portion there is provided a generally vertical upstanding shoulder 22, at substantially right angles to said central portion. Connected to the shoulder 22 is a radial extension 24 which is substantially coplanar in a plane offset from the plane of the central portion 14a of cover 14. Attached to the end of extension 24 is a depending outer shoulder 26 having inwardly projecting locking means 26a providing an annular locking surface 26b. An annular depending finger operated tab 26c is provided to enable the cover to be removed from the container body 12 as will hereinafter become more apparent.

The frusto-conically shaped surface 26d forms an acute angle with locking surface 26b and affords sufficient flexibility for removing the locking element from beneath the annular extension 20 and for guiding the locking surface 26b beneath such extension when the cover is being attached to the body.

Fixed to the top of cover 14 or formed integrally therewith, as desired, is a plurality of locating tabs or ribs 28 which are equi-angularly disposed about the cover, a fixed or constant distance from the center thereof.

Three reinforcing ribs 30, 32, and 34 are positioned about the upper end 18a of the body 18 in vertically spaced relation as shown in FIGURES 1, 2 and 4 of the drawings. Such reinforcing ribs are generally annular in

construction and extend radially outwardly from the body 18. They may be formed integrally with the container body 18, and gussets 36 are provided at various locations thereabout between the various ribs and the side wall of the body to afford rigidity and strength to such ribs.

Although the ribs 32 and 34 are uninterrupted about the entire container, the rib 30 is preferably interrupted for a predetermined distance, on the order of one and one-half inches, at several diametrically opposite locations. The latter construction enables a person to quickly and easily grip the depending locking portion 26 of the cover 14 to remove the same.

As shown most particularly in FIGURES 2 and 4 of the drawings, the bottom wall 16 is laterally offset upwardly to afford additional strength thereto. Thus, heavier loads within the container will not tend to depress and thus deform such bottom wall.

A strengthening bead 38 is provided on the extension 24 of the cover 14. This adds additional strength so that the locking means 26 will not be readily loosened.

In use, the cover 14 is pressed downwardly onto the open upper end of the body 12 after the latter has been filled. Such downward pressure on cover 14 causes the inclined plane or frusto-conical surface 26d to force or cam the locking member 26 outwardly so as to permit the locking surface 26b to ultimately abut the underside of extension 20. The inherent resiliency of the plastic of which the body 12 and cover 14 are formed enables the locking member 26 to return to its locking position as shown in FIGURE 5. The cover is thus firmly secured in place providing the desired seal with the container body.

It should be noted that the contour of the bottom wall 16 of the container enables considerably heavier loads to be carried therewithin.

While thus assembled, a plurality of such containers can be stacked one on top of the other as clearly shown in FIGURE 4 of the drawings. To accomplish this, the bottom of the upper container is placed within the area outlined by the arcuate locating tabs 28, which tabs thus maintain the centers of gravity of the various containers in vertically aligned relation to prevent tipping and the like. Also, such tabs have an interlocking effect to maintain the several vertically aligned containers in generally unitary relation.

While in such stacked relation, or if arranged in only single layers, a group of these containers can be tied together as for instance when they are placed upon a pallet to be moved about by power equipment and the like. To enable such containers to be tied together in groups, a line or rope can be positioned between the various strengthening ribs 30, 32, and 34, the gussets 36 therebetween forming recesses wherein the line or rope is caused to remain. Thus, many such containers can be firmly tied together, in spite of the fact that there is a slight taper to the bodies thereof.

The lid 14 can be removed by pulling upwardly and outwardly on the depending marginal edge 26c of the locking means 26. This can be easily accomplished at the locations where the upper strengthening rib 30 is interrupted as above explained.

Once the locking surface 26b is disengaged from the underside of extension 20, a further upward pull on the cover completely disengages the cover 14 from the body of the container.

It should be noted that the locking means not only provides a firm tight seal, but also causes the coplanar central portion of the cover to be positioned within the container. Thus, the cover assists the reinforcing ribs 30, 32, and 34 in strengthening the opening end of the body of the container.

It is thus seen that the present invention provides a container for foodstuffs and the like which is formed of plastic and which is provided with various details of construction for providing a stronger lightweight container

and one which can be stacked in vertical rows and tied together in a horizontal plane to form desired groups of containers. Further, the subject container affords a strong reinforced container body and a cover which can be quickly and easily removed but which affords a desirable seal when firmly attached to the container body.

Although I have shown and described certain specific embodiments of my invention, I am fully aware that many modifications thereof are possible.

I claim:

1. A container for foodstuffs and the like comprising in combination, a cup-shaped main body having a bottom wall and a continuous side wall connected thereto, a cover for said main body, and fastening means for said cover comprising an annular radial projection about the continuous side wall of said main body and a generally U-shaped marginal edge on said cover for engaging said radial projection on said main body to provide a firm seal therebetween, and wherein the upper end of said side wall is provided with at least one reinforcing annular rib projecting outwardly therefrom, and gussets are provided between said rib and said side wall at predetermined locations thereabout.

2. A container for foodstuffs and the like according to claim 1, wherein said side and bottom walls and said radial projection and reinforcing rib with gussets therefor are formed as a unitary structure of plastic material.

3. A container for foodstuffs and the like comprising in combination, a cup-shaped main body having a bottom wall and a continuous side wall connected thereto, a cover for said main body, and fastening means for said cover comprising an annular radial projection about the continuous side wall of said main body and a generally U-shaped marginal edge on said cover for engaging said radial projection on said main body to provide a firm seal therebetween, and wherein the marginal edge of said cover is offset upwardly from the central portion thereof to cause said central portion to firmly support said side wall of said main body when said cover is positioned thereon, and wherein the central portion of said cover is provided with arcuately shaped locating tabs aligned on said cover to center thereon the bottom end of the main body of another container for vertical stacking of a plurality of such containers, and wherein said bottom wall of said main body is laterally offset to reinforce said bottom wall, and wherein the upper end of said side wall is provided with at least one reinforcing annular rib projecting outwardly therefrom, and gussets are provided between said rib and said side wall at predetermined locations thereabout.

4. A container for foodstuffs and the like according to claim 3, wherein said side and bottom walls and said radial projection and reinforcing rib with gussets therefor are formed as a unitary structure of plastic material.

5. A container for foodstuffs and the like according to claim 3, wherein at least two reinforcing ribs are formed on said lower member in vertically spaced relation, the gussets on said ribs forming locating means for a fastening line to be tied about several such containers to hold them in assembled relation.

6. A container for foodstuffs and the like comprising in combination, a cup-shaped main body having a bottom wall and a continuous side wall connected thereto, a cover for said main body, and fastening means for said cover comprising an annular radial projection about the continuous side wall of said main body and a generally U-shaped marginal edge on said cover for engaging said radial projection on said main body to provide a firm seal therebetween, and wherein the marginal edge of said cover is offset upwardly from the central portion thereof to cause said central portion to firmly support said side wall of said main body when said cover is positioned thereon, and wherein the central portion of said cover is generally coplanar and said marginal edge thereof is formed with an upstanding annular shoulder at substantially right

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angles to said central portion, a radially outward extension is provided on said shoulder in a plane generally parallel to but offset from said central portion, an outer shoulder is provided generally parallel to said annular upstanding shoulder but in depending relation from said extension, and annular locking means is provided projecting inwardly from said outer shoulder in a plane substantially parallel to the plane of said central portion, and wherein said locking means is formed with a generally coplanar surface and a depending marginal edge spaced from the side wall of said main body to provide finger means for pulling said coplanar surface from engagement with said radial projection on said side wall to effect removal of said cover.

7. A container for foodstuffs and the like according to claim 6, wherein said container is formed of deformable

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plastic to enable said depending marginal edge of said cover to be pulled so as to disengage said coplanar surface of said locking means from said radial extension.

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GEORGE T. HALL, Primary Examiner

U.S. Cl. X.R.

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