

## SPACE-SAVING RECTANGULAR CONTAINER HAVING CHILD RESISTANT LID ASSEMBLY

### BACKGROUND OF THE INVENTION

Child resistant lid assemblies for open head cylindrical containers are disclosed in Applicant's U.S. Pat. Nos. 4,967,926 and 5,125,538, wherein a threaded connection is provided between the container and lid and at least one resiliently biased locking member is pivotally connected to the lid which cooperates with locking teeth on the container to secure the lid to the container.

While these child resistant lid assemblies have been satisfactory for their intended purpose, the construction and arrangement of the lid and associate locking member resulted in the lid being connected directly to the upper edge of the container thus being liable to damage by an adjacent abutting container during transportation and storage.

Furthermore, the open head containers upon which the lids and associated locking members are connected are cylindrical, thereby requiring more space for pallet loading and storage than would be required if the containers were rectangular. Rectangular containers for maximizing use of pallet space are disclosed in U.S. Pat. Nos. 2,606,586 and 3,307,739; however, these containers do not include child resistant lid assemblies.

### SUMMARY OF THE INVENTION

In order to maximize use of pallet space for transportation and storage, the rectangular container and associated child resistant lid assembly of the present invention have been devised, wherein the container is provided with a rectangular closure snapped onto the upper rectangular edge of the container. The closure is provided with a central circular opening surrounded by a pair of spaced annular walls each having threads formed thereon for engagement by cooperating threads on a lid having a resiliently biased locking member pivotally connected to the lid which engages teeth on the inner surface of the outer annular wall, of the pair of annular walls, to secure the lid to the container closure. By this construction and arrangement, the lids and associated locking members are positioned inwardly of the peripheral edges of the containers so that, when placing the containers in side-by-side relationship, or when stacking the containers, the lid and associated locking member on each container are spaced inwardly from the side wall of the adjacent container thereby preventing damage to the lid and associated locking member by the adjacent container during shipment and storage.

Short diagonal side webs are provided along the peripheral edge portion on the bottom of each container for centering the container on top of the lid on the next adjacent lower container when stacking.

Hand grips are integral with two side walls of the container which are tapered to facilitate nesting of plural containers when empty, the two side walls also having longitudinally extending recesses to facilitate removing the container from the nested position.

### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the container and lid assembly of the present invention;

FIG. 2 is a side elevational view of the container and lid assembly shown in FIG. 1;

FIG. 3 is an exploded, fragmentary, sectional view showing the top edge portion of the container, the con-

tainer closure, the lid and associated locking member, and the bottom of another stacked container;

FIG. 4 is a fragmentary, top elevational view of the container and lid assembly shown in FIG. 1.;

FIG. 5 is a cross-sectional view taken substantially along line 5—5 of FIG. 4;

FIG. 6 is a top plan view of the container with the closure and lid assembly removed therefrom;

FIG. 7 is a fragmentary longitudinal cross-section view, partly in side elevation, and showing containers, in phantom, in nested relationship; and

FIG. 8 is a fragmentary, longitudinal sectional view through the handle of a container, taken substantially along line 8—8 of FIG. 6.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings in greater detail, and more particularly to FIGS. 1 and 3, the container and lid assembly of the present invention comprises, a rectangular container 1 having a rectangular closure 2 provided with a central circular opening 3 surrounded by a pair of radially spaced annular walls 4 and 5. The closure 2 is provided with a depending skirt portion 6 extending around the periphery thereof and a depending peripheral wall 7 spaced inwardly from the skirt portion 6 to provide a tapered channel 8 for receiving the upper edge portion 9 of the container 1, as shown in FIG. 5.

The skirt portion 6 of the rectangular closure 2 is provided with a plurality of peripherally spaced resilient fingers 10, FIGS. 1, 2 and 5, having hook-like ends 10' depending below the lower edge of skirt portion 6, and adapted to engage within a groove 11, FIGS. 3 and 5, formed between the container 1 and the upper edge portion 9 thereof, whereby the closure 2 is tightly and releasably snapped onto the container 1. Thin vertical cuts 6' through skirt portion 6 separate the sides of fingers 10 from the skirt portion 6 and render the fingers resilient. Slot openings 6'' are provided in the top of rectangular closure 2 to accommodate a mold part for forming the hooklike ends 10' on resilient fingers 10, during the molding process for rectangular closure 2.

The annular walls 4 and 5 are provided with radially outwardly extending coordinated threads 12 and 13 which cooperate, respectively, with a pair of inwardly extending coordinated threads 14 and 15 provided on a lid 16. The teeth 14 and 15 are contained in downwardly extending radially spaced channels 7 and 18 formed in the lid 16, which receive the radially spaced annular walls 4 and 5 on the closure 2 when the lid 16 is threaded onto the closure, as shown in FIG. 5.

As will be seen in FIGS. 4 and 5, a resiliently biased locking member 19, of the type disclosed in my aforementioned patents, is positioned in the space 20 between the channels 17 and 18, and pivotally connected as at 21 to the lid 16. The locking member 19 includes a lever arm 22 biased by an arcuate spring member 23, and extending through an aperture 22' in the inner side wall of channel 18 into engagement with a plurality of teeth 24 provided on the inner surface of the outer wall 5, to thereby lock the lid 16 onto the closure 2. The locking lever 19 is also provided with a thumb engaging portion 25 for moving the lever arm 22 in a counter-clockwise direction away from engagement with the teeth 24, whereby the lid 16 can be manually unscrewed from the closure 2.