United States Patent

Neitzke et al.

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[54] **MEANS FOR LOCKING A LID TO A CONTAINER**

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[22] Filed: **Dec. 18, 1970**

[21] Appl. No.: **99,385**

[52] **U.S. Cl.** **229/45**

[51] **Int. Cl.** **B65d 5/68**

[58] **Field of Search** 229/45

[56] **References Cited**

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2,041,021	5/1936	Quagliotti	229/45 X
117,349	7/1891	Tuttle	229/45
2,370,927	3/1945	Anderson	229/45
2,711,282	6/1955	D'Esposito	229/45

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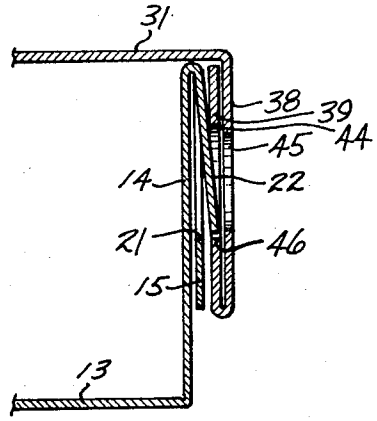
[57] **ABSTRACT**

A container having a downwardly extending locking tab on a downwardly extending flap of the container body. The tab fits into an aperture in the sidewall of the lid to hold the lid on the container body. The lid sidewall may be double layered. The locking aperture would be in the inner layer, and another aperture would be in the outer layer aligned with and providing access to the tab, allowing the tab to be pushed inwardly to unlock the lid.

3 Claims, 7 Drawing Figures



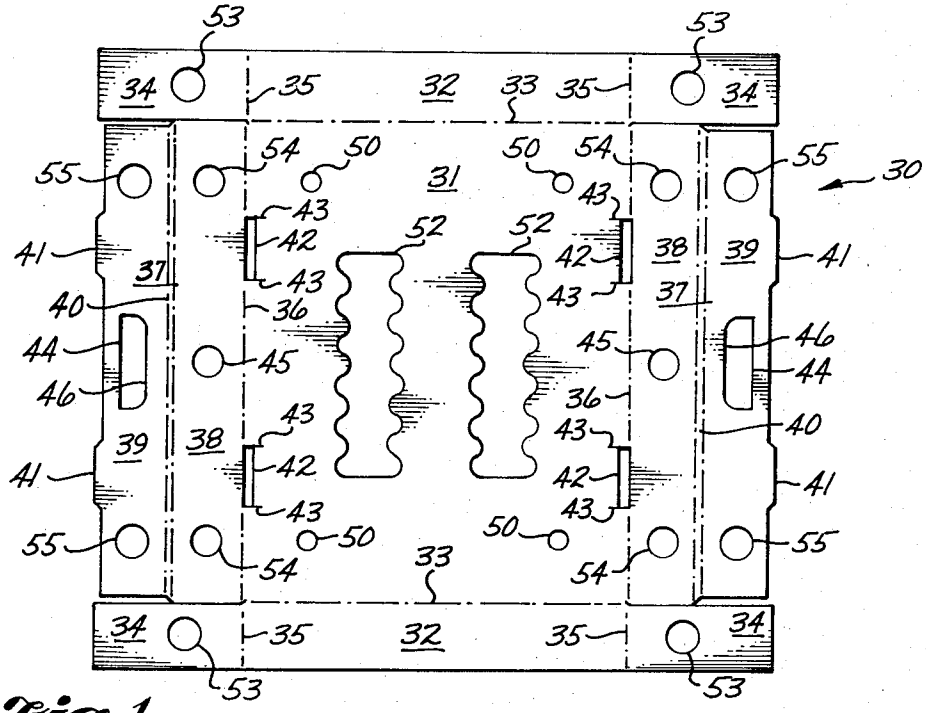


Fig. 1

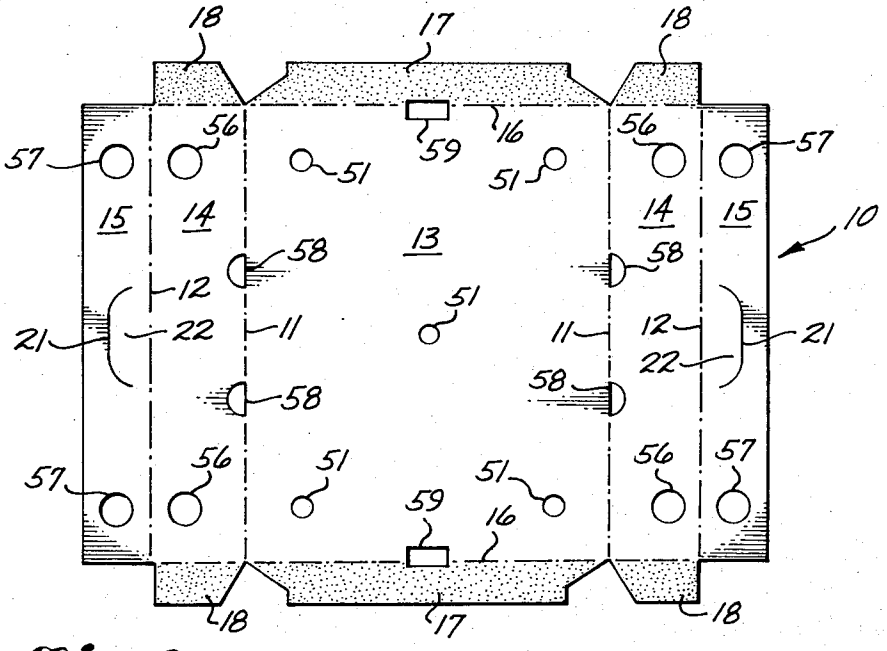
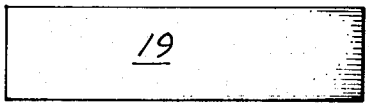


Fig. 2

Fig. 3



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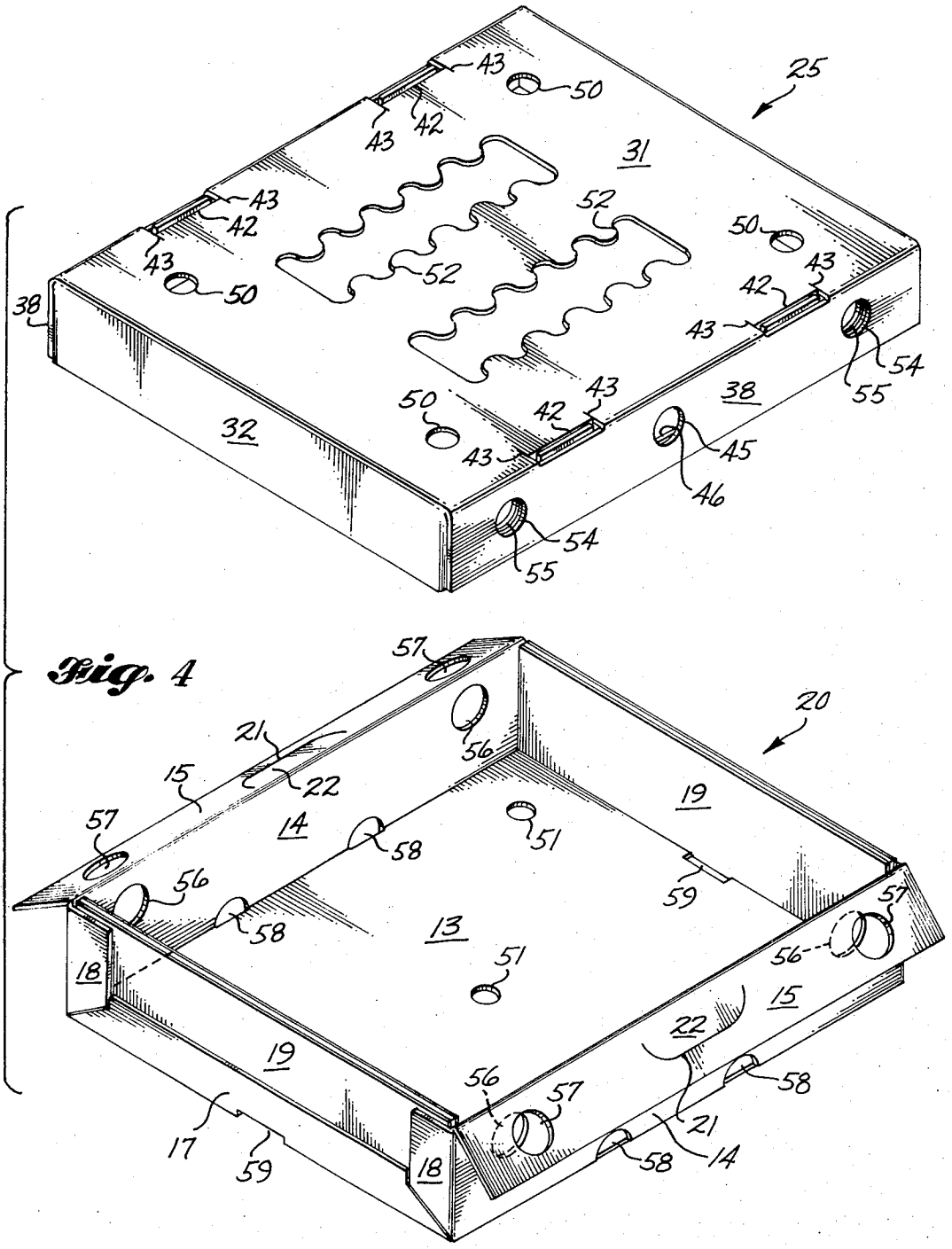

Fig. 4

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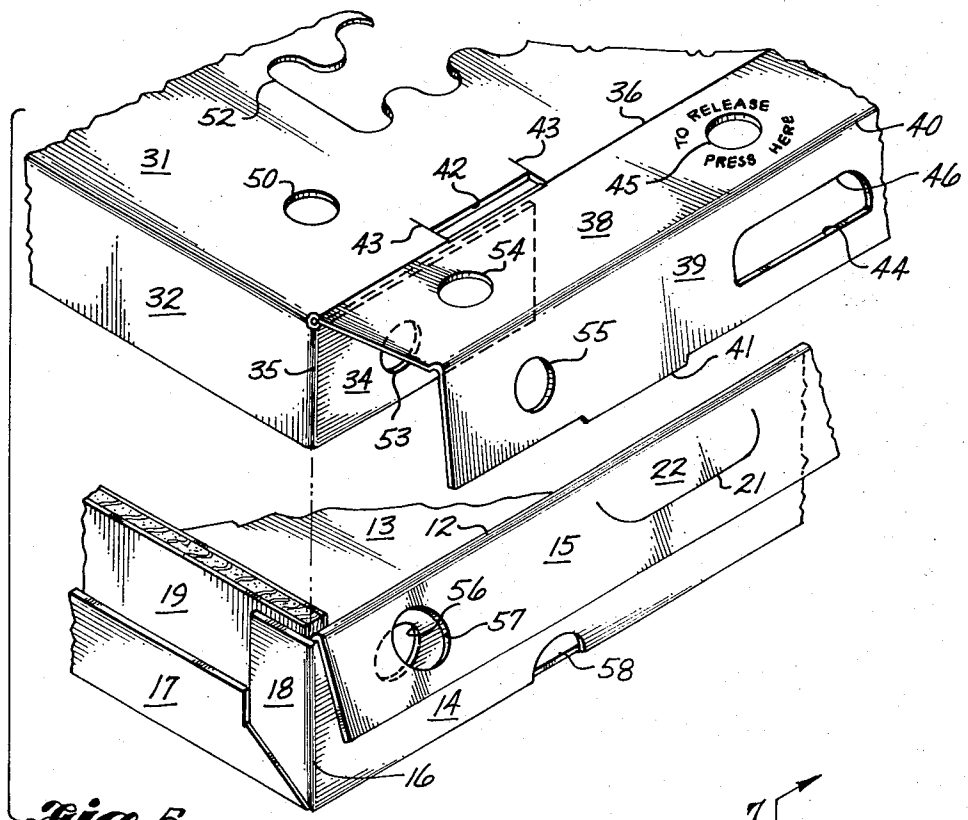


Fig. 5

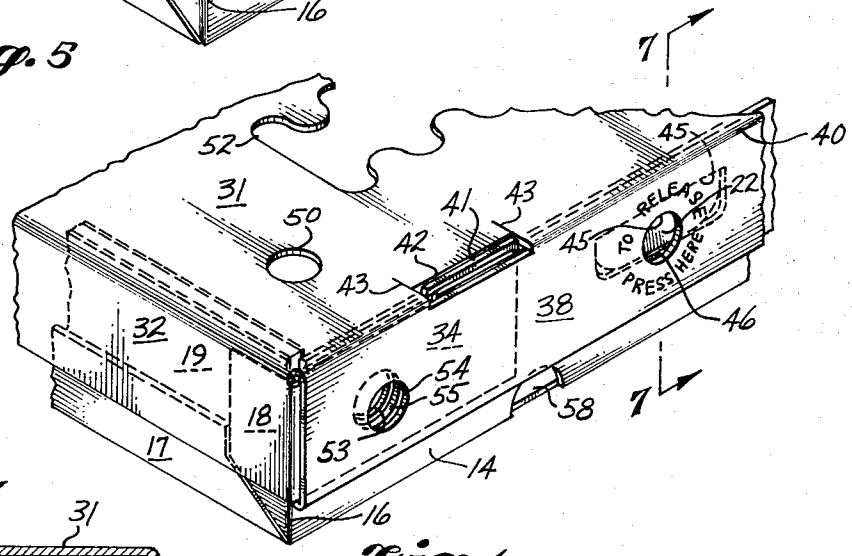
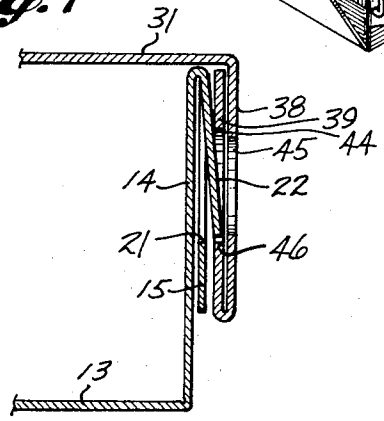


Fig. 6

Fig. 7



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MEANS FOR LOCKING A LID TO A CONTAINER

BACKGROUND OF THE INVENTION

1. Field of the Invention

A telescoping container having means for locking the lid onto the container body.

2. Description of the Prior Art

Tuttle U.S. Pat. No. 117,349 which issued July 25, 1871 discloses a telescoping container in which the lid is locked to the body by an outwardly extending projection on the body which fits into an aperture in the sidewall of the lid. The patent indicates that the projection may be held outwardly to lock the lid by covering the inner face of the aperture in the body sidewall with paper and placing stuffing between the projection and the paper. The lid is unlocked by pushing the projection inwardly. This is done easily because there is no covering over the aperture in the lid.

Anderson U.S. Pat. No. 2,370,927 which issued Mar. 6, 1945 also discloses a telescoping container in which the lid is locked to the body. The locking mechanism is best shown in FIG. 4 of that patent. A downwardly extending flange on each of the end walls of the body pushes against an upwardly extending flange on each of the end walls of the lid to lock the lid in place. The lid is unlocked by pushing the downwardly extending flange inwardly of the upwardly extending flange. Aperture 32 in the end wall is provided for this purpose.

D'Esposito U.S. Pat. No. 2,711,282 which issued June 21, 1955 again discloses a locking mechanism for the lid of a telescoping container. It is best shown in exploded view in FIGS. 2 and 3 and as a cross-section in FIG. 10. Again the locking tabs 24 on the sidewalls fit into locking apertures 43 in the lid. The tabs 24 may be pushed inwardly through aperture 42 when the lid is to be removed.

BRIEF SUMMARY OF THE INVENTION

A telescoping container in which the lid is locked to the container body. A downwardly extending locking tab fits into a locking aperture on the lid. The locking tab is on a downwardly extending flap hinged to the upper edge of the container side wall. The aperture may be in the inner face of the side wall of the lid. Another aperture in the outer face of the lid side wall is aligned with and connects with the first aperture. The second aperture allows the locking tab to be pushed inwardly of the first aperture, unlocking the lid.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top plan view of the blank for the lid of the container.

FIG. 2 is a top plan view of the blank for the bottom and side walls of the container.

FIG. 3 is a top plan view of the blank for the end wall of the container.

FIG. 4 is an exploded isometric view of the assembled lid and container body.

FIG. 5 is an exploded isometric view of the container and body showing details of the locking construction. The lid is partially formed to show additional details.

FIG. 6 is an isometric view of the assembled lid and container body.

FIG. 7 is a cross-sectional view taken along line 7—7 of FIG. 6.

DETAILED DESCRIPTION OF THE INVENTION

The illustrated embodiment is a Bliss style container body in which a body blank containing the bottom wall and side walls is attached to separate end panels. However, it will be apparent that other styles, such as a half-slotted container having downwardly extending flaps from two opposite sidewalls could also be used.

In the container illustrated the body panel 10, FIG. 2, is divided by inner longitudinal score lines 11 and outer longitudinal score lines 12 into a bottom panel 13, a pair of sidewalls 14, and a pair of upper flaps 15. A pair of transverse score lines 16 hinge the lower glue flaps 17 to the bottom panel 13 and the side glue flaps 18 to the sidewalls 14. These glue flaps attach to the end wall 19, shown in FIG. 3, to form the container body 20 shown in FIG. 4.

The bottom wall 13 and sidewalls 14 wrap around the end walls 19 and are glued to the end wall by the glue flaps 17 and 18. The upper flaps 15 extend downwardly from the upper edge 12 of the sidewalls 14. An arcuate cut 21 in the upper flaps 15 defines the lid locking tab 22.

The lid 25 is telescoped over the container body. It is formed from the blank 30 shown in FIG. 1. The lid has an upper panel 31. End panels 32 are hinged to the upper panel 31 along score line 33. End flaps 34 are hinged to the end panels 32 by score lines 35 and are bent inwardly until aligned with side edges 36 of the upper panel 31. The side panels 37 are hinged to the top panel 31 along the score line defining side edge 36. The sidewall 37 is divided into an outer panel 38 and an inner panel 39 by the double score line 40 which forms the bottom edge of the sidewall.

In forming the lid the inner side panel 39 is bent around score lines 40, wrapping it around end flaps 34. Locking tabs 41 on the outer edge of the inner panel 39 extend into the locking apertures 42 in the top panel 31. Side slits 43 extend inwardly of the apertures 42 for ease of locking. An arcuate locking aperture 44 is provided centrally of panel 39, and a smaller aperture 45 is provided centrally of panel 38 in alignment with the aperture 44. When the lid is closed, the lower edge of locking tab 22 fits against the lower edge 46 of aperture 44 to lock the lid on the container body. The panel 15 bends outwardly against the lid sidewalls 37, and the locking tab extends into the locking aperture.

When it is desired to remove the lid from the container body, the locking tab 22 is pushed inwardly by use of the aperture 45. This unlocks the lid from the container body.

If the container is used for produce, then it is necessary to allow air to enter it. A number of air holes 50 and 51 are provided in the top and bottom panels respectively. Two larger holes 52 are also provided in the upper panel 31. Air holes are also provided in the side walls — holes 53 in panels 34, 54 in panels 38, and 55 in panels 39 of the lid, and 56 in panel 14, and 57 in panel 15 of the body. These are aligned. Additional air holes 58 are also provided in panel 14.

Apertures 59 are also provided in the bottom panels 13 for the reception of stacking cleats.

The container may be manufactured from corrugated material, and the end walls may be paper coated wood veneer, as shown, or single or double wall corrugated material.

What is claimed is:

1. Means for locking a lid onto a container comprising

a downwardly extending flap attached to a wall of the container,

a downwardly extending locking tab formed in said flap,

a sidewall on said lid having a fixed relationship to the upper wall of said lid,

an aperture in said sidewall,

said locking tab extending into said aperture to lock said lid to said container body.

2. The construction of claim 1 in which

said lid telescopes onto said body and said locking means is provided on opposing sides of said lid and container body.

3. The construction of claim 1 in which

said lid sidewall has two layers and

said aperture is in said inner layer, and

said outer layer defines an aperture aligned with, smaller than and opening into said first aperture.

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