

[54] **LOCKING CONSTRUCTION FOR
TELESCOPING CONTAINER
ELEMENTS**

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[51] Int. Cl.B65d 45/04

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

[56] **References Cited**

UNITED STATES PATENTS

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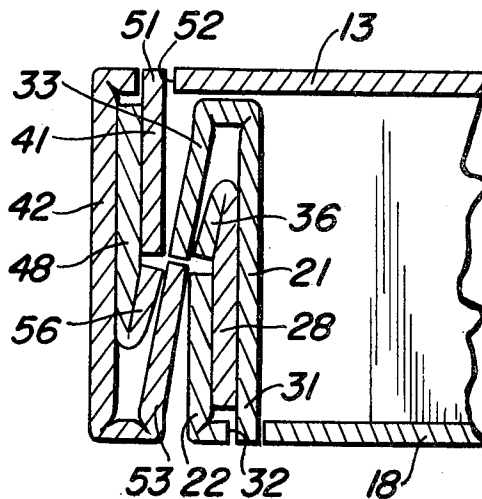
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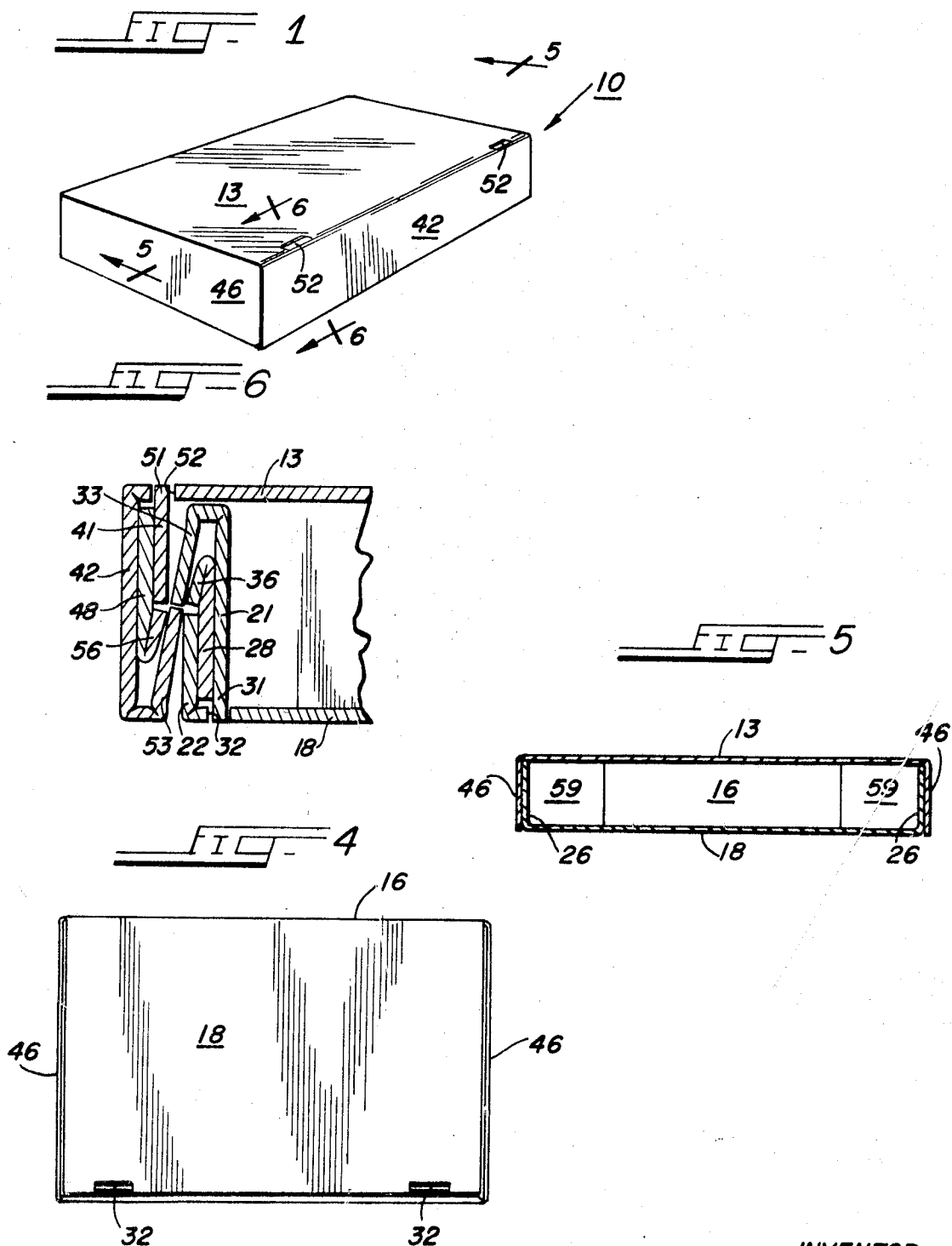
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[57] **ABSTRACT**

A locking construction for telescoping container sections, each of which comprises a pair of end panel portions in folded facing relationship with a side flap panel extending therebetween. The inner of the end panel elements is Walker-locked to a main panel. A locking tab is formed by a perforated score in either the inner or outer panel element, and a forcing tab is formed in the flap, it being folded out of the plane thereof and forcing the locking tab out of the plane of the panel portion in which it is formed.

5 Claims, 6 Drawing Figures





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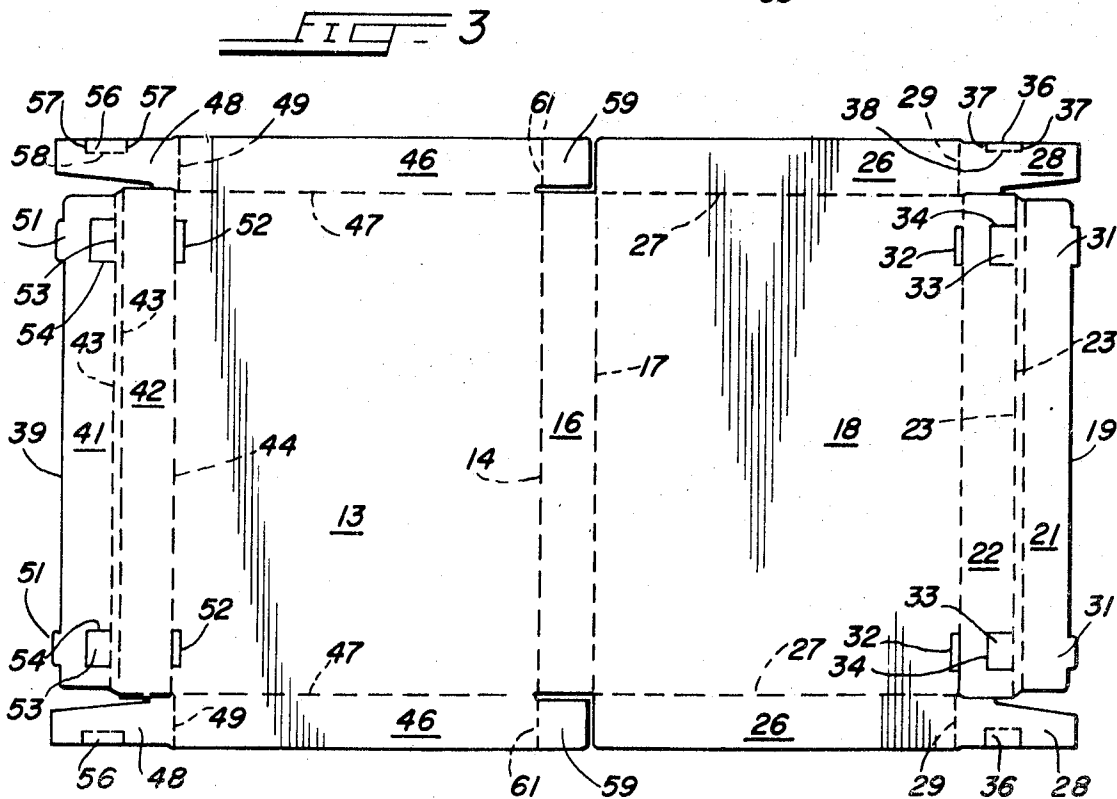
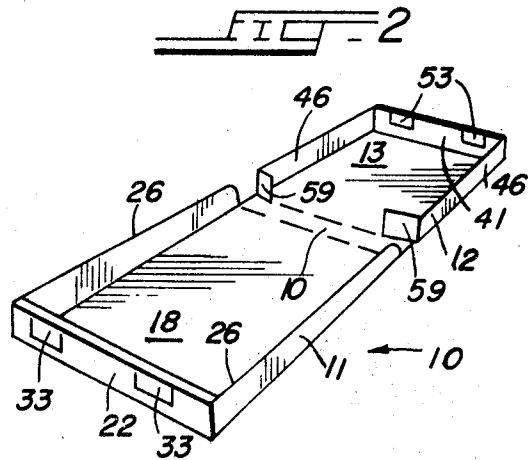
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LOCKING CONSTRUCTION FOR TELESCOPING CONTAINER ELEMENTS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to telescoping containers having structure for locking the container top to the bottom thereof. It is particularly directed to a locking structure for a container having double thickness folded end panels with a flap extending therebetween, one of the panels being provided with a locking tab forced into locking position by a forcing tab extending from said flap.

2. The Prior Art

D'Esposito U.S. Pat. No. 2,711,282 is an example of a container body formed with a locking tab cooperating with an opening in the container cover. The locking engagement may readily be released by pressing the fingers at the openings to move the locking tab to release position.

SUMMARY OF THE INVENTION

The structure according to the present invention comprehends a container having a telescoping lid or closure which is self-locking, or a one-piece telescoping container with structure enabling the telescoping halves to be locked together.

THE DRAWING

FIG. 1 is a perspective view showing a container and locking structure in accordance with the present invention;

FIG. 2 is a perspective view showing the container in setup condition;

FIG. 3 is a plan view of a blank for constructing the container of FIG. 1;

FIG. 4 is a bottom view of the container of FIG. 1;

FIG. 5 is a section taken along the line 5—5 of FIG. 1 looking in the direction of the arrows; and

FIG. 6 is a section taken along the line 6—6 of FIG. 1 looking in the direction of the arrows.

The improved locking construction according to the present invention is embodied in a container seen in FIG. 1 and denoted by the reference numeral 10. The same is formed from a blank 10A seen in FIG. 3, which when folded forms a telescoped bottom or body section 11 and a telescoping top or cover section 12 as seen in FIG. 2. Blank 10A seen in FIG. 3 comprises a main cover panel 13 connected by a score line 14 to a back panel 16. The main bottom panel 18 is connected by a fold line 17 to the back panel 16.

The construction of the telescoped or bottom section 11 will first be described, and such telescoped section 11 comprises a bottom end panel 19 consisting of an inner end panel portion 21 and an outer end panel portion 22, the two end panel portions 21 and 22 being foldably connected along spaced fold lines 23. A fold line 24 foldably connects the outer end panel portion 22 to the main bottom panel 18.

The main bottom panel 18 has a pair of opposed side panels 26 extending therefrom, these being foldably connected thereto along fold lines 27.

Each side panel 26 has flap 28 extending therefrom, flap 28 being foldably connected to the side panel 26 at a fold line 29.

The two panel portions 21 and 22 are adapted to be folded upon themselves along fold lines 23, and inner end panel portion 21 is locked into position with respect to the bottom panel 18 by means of panel locking tabs 31 entering Walker slots 32 formed in bottom panel 18.

The outer end panel portion 22 is provided with a cover locking tab 33 defined by cut lines 34 to give locking tab 33 an essentially rectangular configuration, locking tab 33 being also defined by one of the fold lines 23.

The flaps 28 are each adapted to enter between the two end panel portions 21 and 22, and each tab 28 is provided with a forcing tab 36 defined by spaced cut lines 37 intersecting the edge of the flap 28, and by a perforated score line 38 parallel to the edge of the flap 28.

Prior to locking the outer end panel portion 22 within the Walker slot 32, forcing tab 36 is first folded out from the plane of the flap 28. Forcing tab 36 is thus adapted to swing the cover locking tab 33 out of the plane of the outer end panel portion 22, as seen more particularly in FIG. 6.

The telescoping or cover section is constructed in a manner similar to the telescoped or bottom section 11. Main cover panel 13 thereof is provided with a cover end panel 39. The latter consists of an inner end cover panel portion 41 and an outer end cover panel portion 42, the two panel portions 41 and 42 being foldably connected along spaced fold lines 43. Fold line 44 foldably connects outer end cover panel portion 42 to the main cover panel 13.

Main cover panel 13 has opposed side panels 46 which are foldably connected thereto along fold lines 47. Each side panel 46 has a flap 48 extending foldably with respect thereto along a fold line 49. The two end panel portions 41 and 42 are foldable with respect to each other along the spaced fold lines 43 into facing relationship, and the inner end cover panel portion 41 is provided with a pair of panel locking tabs 51, each being adapted to be locked with a Walker slot 52 formed in the cover panel 13.

Inner cover panel portion 41 is provided with bottom locking tabs 53 defined by a cut line 54 and one of the score lines 43 to define an essentially rectangular lock tab.

As with the telescoping body section 11, previously described, the flaps 48 are adapted to extend between the inner and outer cover panel portions 41 and 42 when the same are in side by side relationship. Each of the flaps 48 are provided with a forcing tab 56 defined by spaced cut lines 57 intersecting the edge of the tab 48 and a perforated score line 58 parallel to the edge of such flap 48. The forcing tabs 56 are each folded with respect to the tab 48 and extend from the plane of tab 48 and bear against the bottom locking tab 53 to cause the latter to fold out of the plane of the inner end cover panel portion 41, as seen more particularly in FIG. 6.

The opposed side panels 46 are each provided with a flap 59 foldable with respect thereto along a fold line 61, each of the flaps 59 being folded against the back panel 16 during assembly of the container shown.

It will be seen with particular reference to FIG. 6 that the bottom locking tab 53 moves into an abutting relationship with cover locking tab 33 when the parts are assembled in the manner described.

The construction just described results in a container having telescoping container elements with a locking device thereby insuring against unintended separation of the top and bottom sections thereof.

I claim:

1. A telescoping container having
 - a. an inner telescoped section;
 - b. an outer telescoping section;
 - c. each of said sections comprising:
 - i. a main panel;
 - ii. opposed side panels;
 - iii. at least one end panel;
 - d. said end panel being formed of
 - i. inner and outer panel portions foldably connected and foldable upon themselves;
 - ii. each of said opposed side panels having a flap hingedly connected thereto and foldable to position between said inner and outer end panel portions;
 - iii. a locking tab in one of said end panel portions extending out of the plane of such end panel portion;
 - iv. a forcing tab in at least one of said flaps foldable to position to engage said locking tab to force the same to a position out of the plane of such end panel portion.
2. A telescoping container according to claim 1 wherein said inner panel portion is provided with means for locking the same to its main panel.
3. A telescoping container according to claim 1 wherein the locking tab of the telescoped section extends from the outer end panel portion thereof, and the locking tab of said

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telescoping section extends from the inner end panel portion thereof to be in locking engagement with the other locking tab.

4. A locking construction for telescoping containers comprising:

- a. a main panel;
- b. an end panel hingedly connected to said main panel;
- c. said end panel consisting of inner and outer end panel portions foldably interconnected and foldable upon themselves;
- d. a side panel foldably connected to said main panel and having,

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- i. a flap foldably connected thereto and foldable to position between said inner and outer panel portions;
- e. a locking tab in one of said end panel portions extending out of the plane thereof;
- f. a forcing tab in at least one of said flaps and foldable to engage said locking tab to force the same to a position out of the plane of such end panel portion.

5. A locking construction according to claim 4 wherein said inner panel portion is provided with means for locking the same to said main panel.

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