Jan. 26, 1960 W. J. RODERICK ET AL 2,922,565

TOP-OPENING PAPERBOARD CONTAINER

Filed Dec. 23, 1957

FIG.1

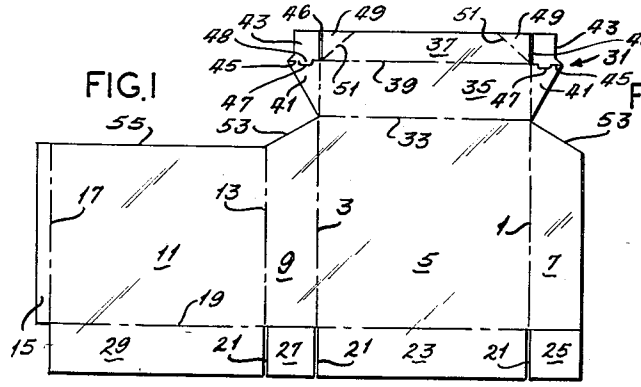


FIG.2

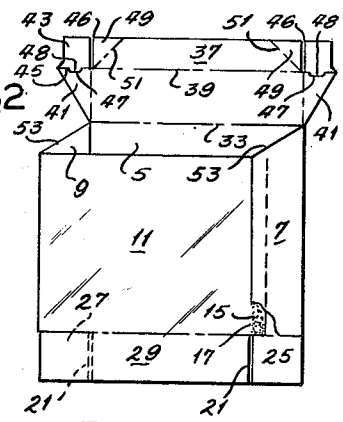


FIG.3

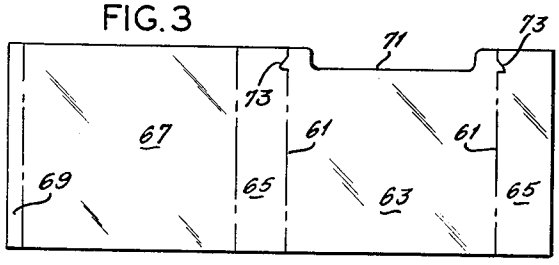


FIG.4

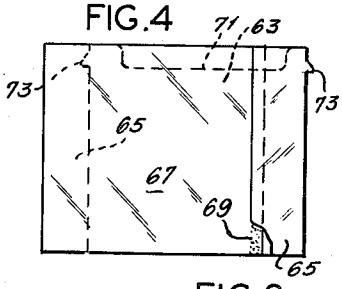


FIG.5

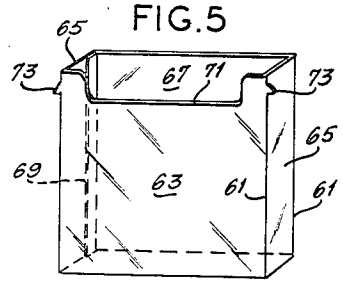


FIG.6

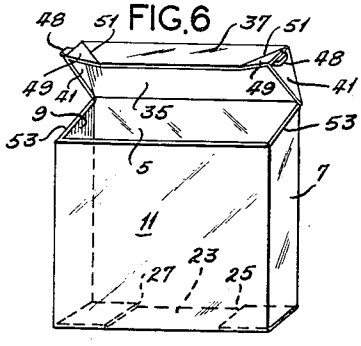


FIG.7

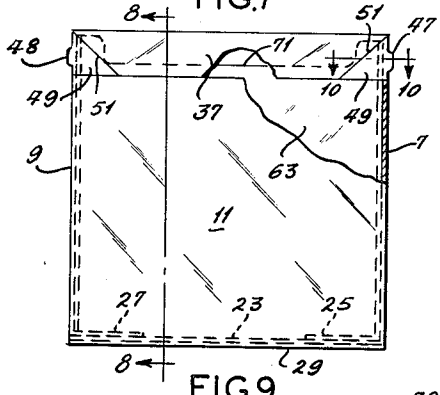


FIG.8

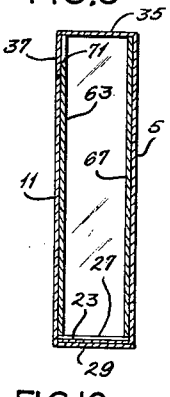


FIG.9

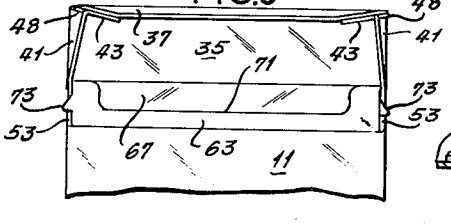


FIG.10

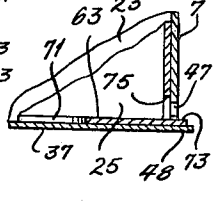
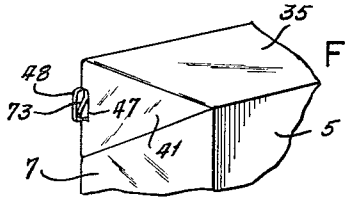


FIG.11



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2,922,565

# TOP-OPENING PAPERBOARD CONTAINER

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Application December 23, 1957, Serial No. 704,695

2 Claims. (Cl. 229—44)

This invention relates to paperboard containers having reclosable top closures, and more particularly to a paperboard container especially adapted for filing letters and the like.

Among the several objects of the invention may be noted the provision of a letter file container of simple inexpensive construction; the provision of a container having a hinged top closure panel which is readily opened and reclosed; the provision of a container of this type wherein the top closure panel automatically locks upon closure and which lock is readily released; and the provision of a container of the character disclosed which is substantially dust-tight.

Although other features of the invention will be apparent from the detailed description, briefly, the container of this invention comprises an outer body with front, back and end panels joined together as a tube and with bottom closure flaps. A top closure is formed by a top panel hinged to the back wall, the top panel then having depending front and end flanges. The upper edge of the front wall is lower than the corresponding edge of the back wall by an amount equal to the downward projection of the front flange on the top panel. Angle cuts extend across the end walls from the upper edge of the front wall to the top of the back wall. The end flanges on the top closure are similarly cut on an angle, which corresponds approximately with that of the end walls, although the end flanges may overlap slightly with respect to the end walls, if desired. An inner body section in the form of a tube is telescoped within the outer body, and this inner body extends above the outer front and end walls, at least at the front corners. The inner front wall may be recessed along its upper edge for convenient access to the contents, but more particularly, V-shaped cuts are made in the inner end walls so as to provide locking tabs projecting from the inner front wall laterally beyond the inner end walls. The locking tabs, in turn, engage within openings similarly formed in the end flanges of the top closure, thereby to lock the top panel in its closed position. Preferably, the top end flanges are integral extensions from the top panel and have corner flaps adhesively secured to the top front flange. The end flanges may have U-shaped cuts, which form end openings when the corner flaps are folded inwardly for attachment to the front flange. As such, the top closure has projecting members extending endwise on the inner body, which outer projections overlie and protect the locking tabs.

Preferably, angled scores are made across the top front flange, and the corner flaps are secured only to the resulting triangular end sections of the front flange. The scores are such that the center portion of the front flange tends to bow inwardly, thereby drawing the end flanges toward one another for more convenient locking engagement. The carton is conveniently opened by pressing the outer front wall inwardly, so as to spring the locking members toward one another and release the top closure, which then tends to spring upwardly on its hinge.



Other features of the invention will in part be apparent from and in part pointed out in the following detailed description taken in connection with the accompanying drawings, in which:

Fig. 1 is a plan view illustrating a die cut and scored blank for forming the outer body of the container;

Fig. 2 is a plan view showing how the Fig. 1 blank is formed into a collapsible tube;

Fig. 3 is a plan view showing a die cut and scored blank for forming the inner body of the container;

Fig. 4 is a plan view showing the inner body in its collapsed tube-like condition;

Fig. 5 illustrates the inner body in its opened condition;

Fig. 6 is a view similar to that of Fig. 5 but showing the outer body of the container opened to receive the inner body;

Fig. 7 is a front view, parts being broken away, of the completed container with the top in its closed position;

Fig. 8 is a sectional view taken on the line 8—8 of Fig. 7;

Fig. 9 is a front view similar to that of Fig. 7 but showing the top in its opened condition;

Fig. 10 is a detailed sectional view illustrating the locking tabs; and

Fig. 11 is a detailed perspective further illustrating the locking tabs.

Referring now to the drawings, Fig. 1 illustrates a blank of paperboard or other semi-rigid material for an outer body, which has been die cut and scored. Scores 1 and 3 define a back wall 5 with an end wall 7 hinged along score 1 at one end of the blank. Another end wall 9 is hinged at score 3 and a front wall 11 is then hinged to the end wall 9 along a score 13. The front wall 11 is provided with a marginal flap 15 defined by the score 17, it being understood that the flap 15 at one end of the blank is then adhesively secured to the end wall 7 at the other end of the blank in order to form a tube as shown in Fig. 2.

The bottom portion of the blank, as defined by a score 19 extending the length thereof, is cut at 21 to define end closure flaps 23, 25, 27 and 29 hinged respectively to the back wall 3, end wall 7, end wall 9 and front wall 11. The top portion of the blank is die cut and scored to provide a top closure generally designated 31, the top closure being hinged to the back wall.

More particularly, there is a score 33 defining the upper edge of the back wall 3 and by means of which a top panel 35 is hinged to the back wall. This top panel is of a dimension such as to extend completely across the top. A marginal strip portion 37 is then hinged along score 39 to the front edge of the top wall 35, thereby to form a front flange as shown in Figs. 6 and 7. The top panel 35 also has end marginal or flange portions 41 of a triangular outline, these end portions, in turn, having corner flaps 43 defined by scores 45, U-shaped cuts 47 and cuts at 46. The flaps 43 are adapted to be adhesively secured to triangular end sections 49 of the front flange 37. It will be noted the front flange has angular scores 51 extending thereacross in convergent relationship so as to define the triangular end sections 49. The scores 51 are indented inwardly with reference to the finished container so that the front flange has a tendency to bow inwardly.

In assembly, the flaps 43 are adhesively secured only to the triangular sections 49, with the result that end flanges 41 of the top closure are drawn toward one another a slight amount by the bowed front flange 37. This condition facilitates locking of the top in its closed position.

The end walls 7 and 9 of the outer body are cut at 53 on an angle so as to define forwardly sloping upper edges.

The upper edge **55** of the front wall **5** is then cut so that it lies substantially below the upper edge or hinge line **33** of the back wall **3**.

The Fig. 1 blank is adapted to form an outer body as shown in Fig. 6 with a flip-flop closure. Referring now to Fig. 3, there is shown a second blank for forming an inner body or tube adapted to telescope snugly within the outer body formed from the Fig. 1 blank. The height of the inner body corresponds approximately to the height of the back wall **3**. As shown in Fig. 3, the blank is transversely scored at **61** to define a front wall **63**, end walls **65**, a back wall **67** and a tube-forming flap **69**. The flap **69** at one end of the Fig. 2 blank is adhesively secured to the end wall at the other end to complete the tube.

The front wall **63** of the inner body is recessed along its upper edge, as shown in **71**. Also, locking tabs **73** are formed as end-wise projections or continuations of the front wall **63** by V-shaped cuts **75**, it being understood that the transverse scores **61** are interrupted opposite the tabs so that openings **75** are formed at the end walls when the inner body is opened as shown in Fig. 5.

These tabs are adapted to cooperate with tab-receiving slots defined by the U-shaped cuts **47** in the end portions of the top closure **31**. The scores **45** are interrupted at the cuts **47**, so that tab-like projections **48** extend endwise from the front flange **37** when the corner flaps **43** are folded inwardly, thereby leaving the openings or slots **47**. It will be noted the projections **48** overlie and thereby protect the locking tabs **73** from being inadvertently bent or pushed inwardly.

In setting up this container, the collapsed outer body of Fig. 2 is opened and the bottom closure flaps are adhesively secured as illustrated in Fig. 6. The inner body of Fig. 4 is then opened, as shown in Fig. 5, and is inserted into the outer body through the open top. In assembly, the inner body section projects somewhat above the outer front and end walls. When the top closure is pushed down to its closed position, the locking tabs **73** on the inner body automatically engage within the slots **47** in the end flanges of the top closure, so that the top panel is locked in its closed position. As explained previously, the bowed condition of the front flange draws the end flanges inwardly so as to facilitate cooperation with the locking tabs. It may also be noted that the inner body tends to preclude dust from entering between the lower edge of the top closure and the upper edges of the outer front and end walls.

The closure is conveniently opened by pressing the outer front wall **5** inwardly immediately below the top closure or front flange **37**. When the outer front wall is pressed inwardly, the front wall **63** of the inner body is also sprung inwardly, thereby drawing the end walls **65** and locking tabs **73** toward one another. As the locking tabs **73** are drawn inwardly, they move clear of the associated locking slots **47**, whereupon the top closure tends to spring upwardly, at least a slight amount.



From the foregoing description, it is apparent that those skilled in the art will understand the structure, function and mode of operation of the invention herein disclosed, and appreciate the advantages thereof. Although one embodiment has been disclosed in detail, it is to be understood that the invention is not limited thereto, but the drawings and description thereof are to be understood as being merely illustrative. It is realized that many modifications and variations will present themselves to those skilled in the art without departing from the spirit of this invention or the scope thereof as set forth in the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A container of the character set forth comprising an outer body portion having front, back and end walls, an inner body portion having front and end walls which project at least in part above the outer front and end walls, a top closure having a top panel hinged to the outer back wall, said top closure further having depending front and end flanges adapted to overlie the upper portions of said inner front and end walls and expose the outer front wall, slots formed in said top-closure end flanges, and locking tabs formed to project endwise from said upper projecting portions of the inner front wall for locking cooperation with said slots, thereby releasably to retain the top closure panel in its closed position, said front flange being scored adjacent its ends to produce an inward bow in the front flange, thereby to draw the end flanges toward one another.

2. A container as set forth in claim 1, wherein said scores in the front flange extend in convergent angular relationship from the upper ends of the front flange toward the lower edge thereof, thereby defining triangular sections at the ends of the front flange, and corner flaps extending from said end flanges and adhesively secured only to the triangular sections of the front flange.

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UNITED STATES PATENT OFFICE

# CERTIFICATE OF CORRECTION

Patent No. 2,922,565 January 26, 1960

Wayne J. Roderick et al.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 3, line 5, for "flip-flop" read -- flip-top --.

Signed and sealed this 9th day of August 1960.

(SEAL)
Attest:

KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents