

Nov. 3, 1925.

P. ZALKIND

1,559,834

CONTAINER

Filed July 30, 1921

4 Sheets-Sheet 1

Fig. 1

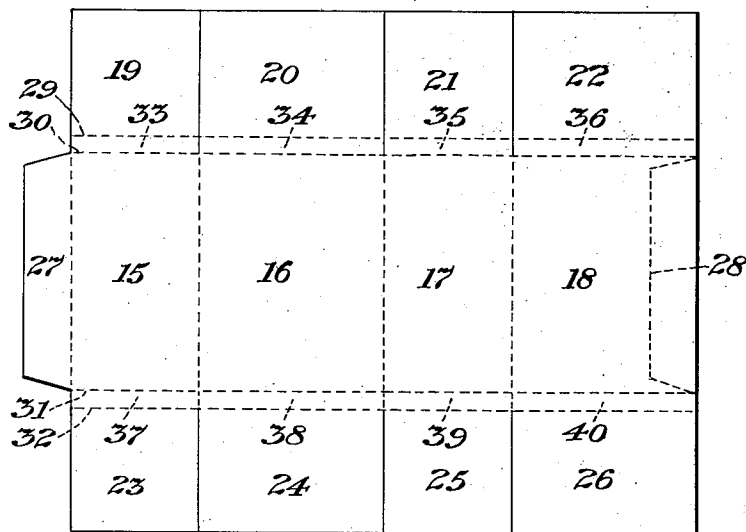


Fig. 2

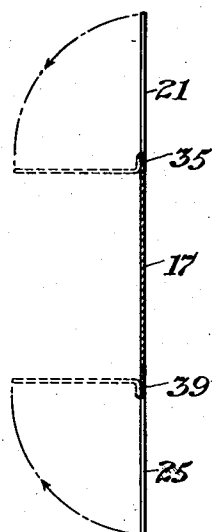


Fig. 3

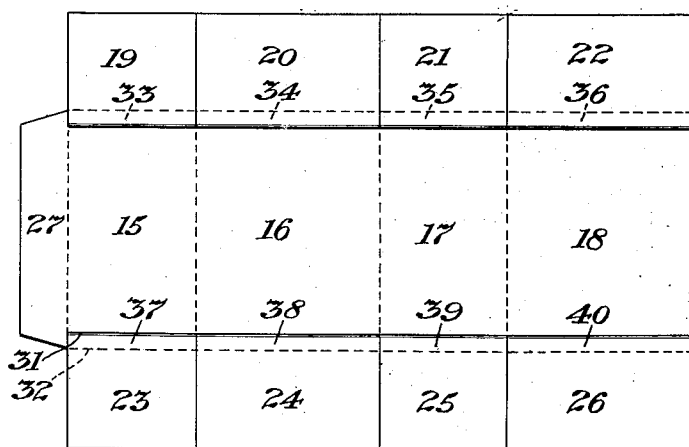


Fig. 4

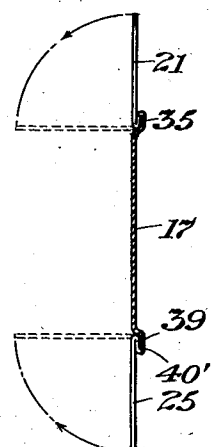
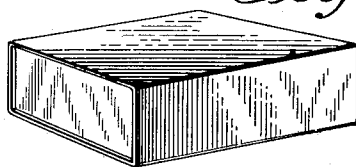


Fig. 5



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4 Sheets-Sheet 2

Fig. 6

Fig. 7

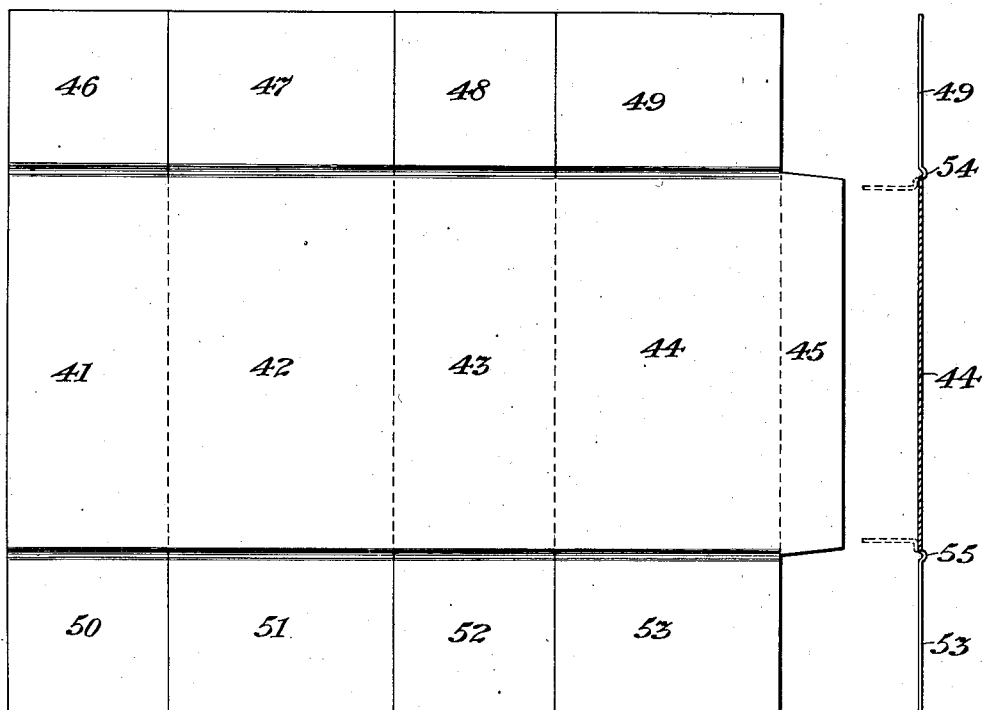
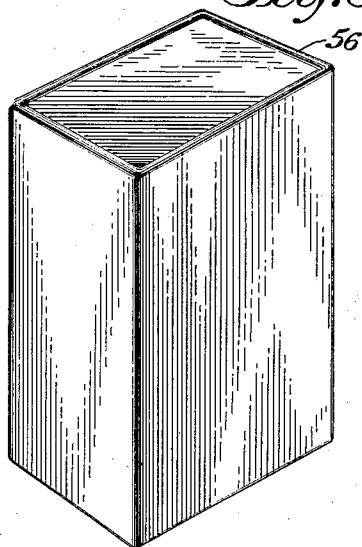


Fig. 8



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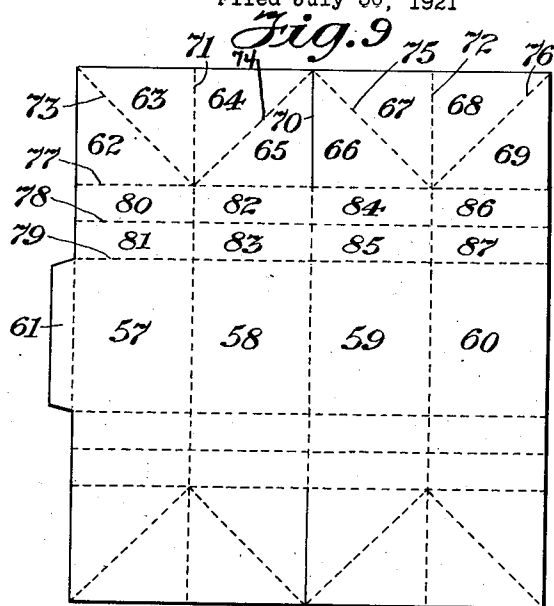
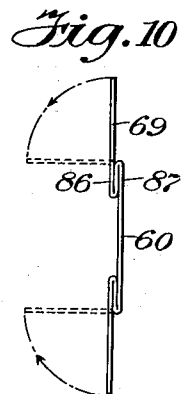
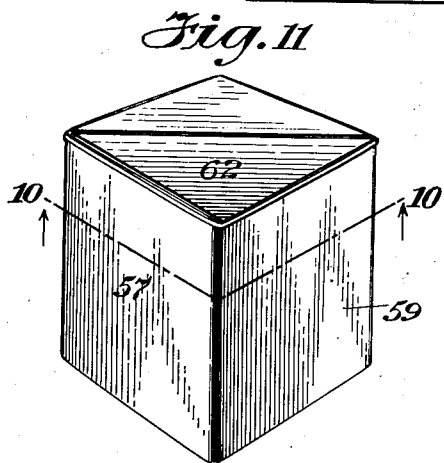
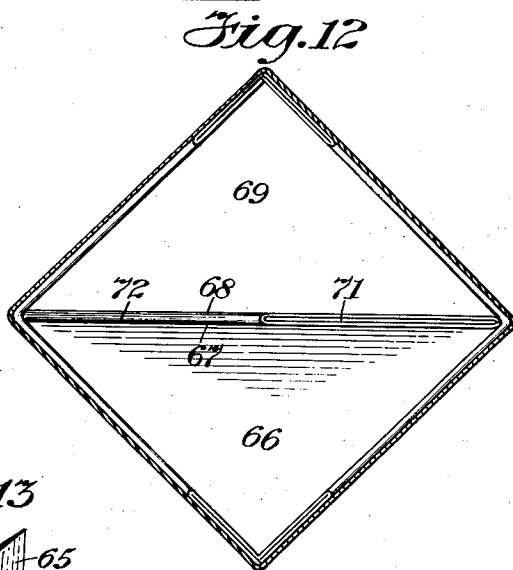
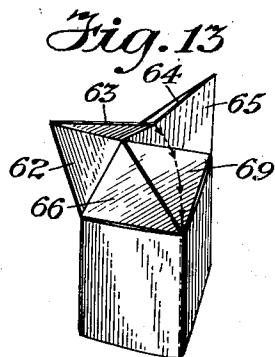
1,559,834

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CONTAINER

Filed July 30, 1921

4 Sheets-Sheet 3



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1,559,834

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CONTAINER

Filed July 30, 1921

4 Sheets-Sheet 4

Fig. 14

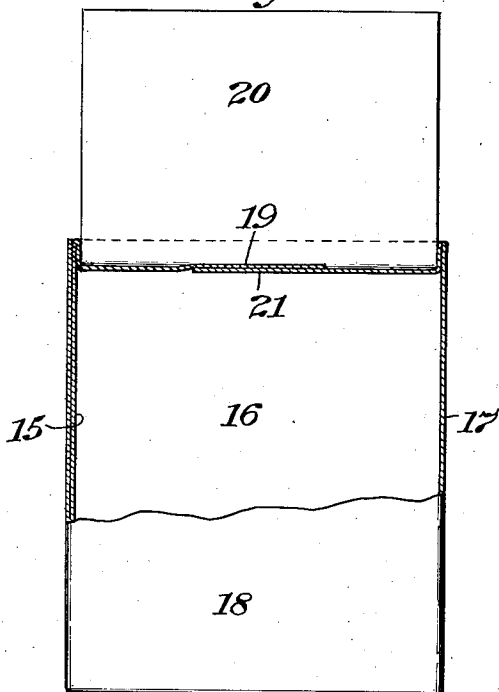


Fig. 15

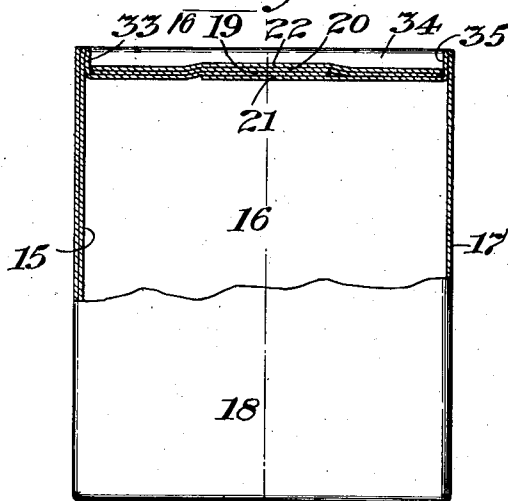


Fig. 16

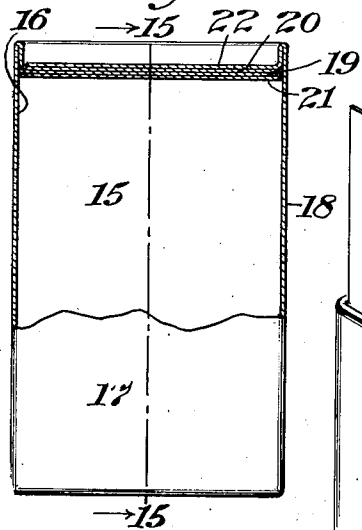


Fig. 17

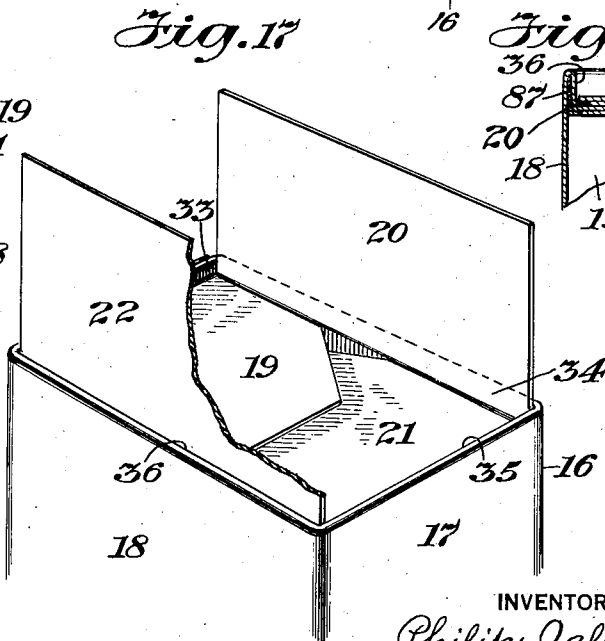
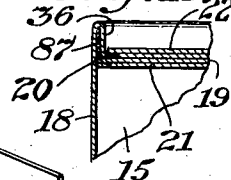


Fig. 18



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Patented Nov. 3, 1925.

1,559,834

UNITED STATES PATENT OFFICE.

PHILIP ZALKIND, OF NEW YORK, N. Y.

CONTAINER.

Application filed July 30, 1921. Serial No. 488,574.

To all whom it may concern:

Be it known that I, PHILIP ZALKIND, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented an Improvement in Containers, of which the following is a specification.

This invention relates to a container and more particularly to that form of container usually made of cardboard or similar material and adapted in use to receive and hold various products, such as cereals and other breakfast foods, as well as numerous forms of more or less flaky or powdered substances which have a tendency to sift through the container if made in the ordinary manner. With this form of container and with the materials to which reference has been made it is more or less customary to employ a liner in the form of a bag within the container, or to provide a wrapper of suitably prepared paper or other material to envelop the container in order to prevent the contents thereof from sifting through the same. The object of the present invention is to provide a container having the ends thereof closed in such a manner as to cause the same to be substantially sift-proof and thus make it possible to dispense entirely with the use of the liner or the envelop for preventing the contents of the container from sifting through, and to prevent extraneous matter from entering the container.

To this end in carrying out the invention the container made in accordance therewith is preferably constructed of cardboard or similar material and so formed as to have the ordinary sides or walls of the container making the same of any preferred shape, while the ends of the container, together with the usual flaps or end panels include inturned set in panels adapted to reinforce the ends of the container and to coact with the end flaps or panels in closing the ends of the container in such a manner as to make the same substantially sift-proof.

The invention will be hereinafter more particularly described in conjunction with the accompanying drawings in which,

Fig. 1 is a plan of a blank from which my improved container is formed.

Fig. 2 is an edge view and section of the same illustrating the manner in which the panels are folded to close the ends of the container.

Fig. 3 is a plan of the blank after the

inturned panels are folded to bear against the inner surface of the walls of the container.

Fig. 4 is an edge view and section of the blank with the parts in the position shown in Fig. 3.

Fig. 5 is a perspective view showing the end of the container made from the blank as illustrated in Figs. 1 to 3.

Fig. 6 is a plan of the blank illustrating another form of the invention.

Fig. 7 is a sectional edge view of the same.

Fig. 8 is a perspective view showing the container formed from the blank as illustrated in Fig. 6.

Fig. 9 is a plan view of a blank showing another form of the invention.

Fig. 10 is an edge view of the same showing the inturned panels folded to place.

Fig. 11 is a perspective view illustrating a container made from the blank shown in Fig. 9.

Fig. 12 is an enlarged cross section on line 10—10, Fig. 11, and

Fig. 13 is a perspective view showing the manner in which the end panels of the container are folded to the position for use.

Fig. 14 is a partial elevation and central longitudinal section illustrating a step in setting up the container made in accordance with my invention.

Fig. 15 is an enlarged elevation and partial cross section on line 15—15, Fig. 16.

Fig. 16 is a section taken on line 16—16, Fig. 15.

Fig. 17 is a perspective view and partial section illustrating steps in forming the end closure of my improved container, and

Fig. 18 is a partial cross section illustrating a construction at a corner of the container.

Referring to the drawing and particularly to Figs. 1 to 5 inclusive, it will be seen that one form of the container made in accordance with my present invention is formed from a blank as illustrated in Fig. 1. This blank is scored or creased along predetermined lines and cut or severed along predetermined other lines to provide the sides or walls and the end flaps or panels to make the container. The walls or sides of the container are indicated at 15, 16, 17, and 18. The end panels or flaps for one end of the container are indicated at 19, 20, 21 and 22, while the similar parts at the other end of the container are indicated

at 23, 24, 25 and 26. The wall 15 is provided with a flap or an extension 27 adapted in the usual manner to be secured to the wall 18 along the dotted line 28 to form the container, the flap being secured to the wall by a suitable adhesive or in any other suitable manner. The end panels 19 and 22 inclusive are scored or creased along the line 29 which is parallel to and suitably spaced from the line 30 defining the portion between the walls 15 to 18 inclusive and their respective end flaps or panels 19 to 22. Similarly the end panels 23 to 26 inclusive are scored or creased along a line 32 which is parallel to and suitably spaced from the score line 31 defining the walls 15 to 18 inclusive at their other ends and their respective end flaps or panels 23 to 26. There is thus formed a series of panels or plaits adapted to be intumed and secured to the upper surfaces of the walls of the container. The intumed panel or plait between the wall 15 and its flap 19 is indicated at 33, that between the wall 16 and its end flap 20 by 34, that between the wall 17 and its end flap by 35 and that between the wall 18 and its end flap 22 by 36. Similarly the intumed panels or plaits at the opposite end of the container are indicated at 37, 38, 39 and 40.

In this form of the invention the blank, after being cut and scored as indicated in Fig. 1, is first folded along the line 30 and then along the line 31 so as to cause the parts to assume the position shown in Fig. 3. In folding the parts to this position the adjacent surfaces of the intumed panels or plaits 33 to 36 and 37 to 40 and the walls 15 to 18 are caused to contact with each other and may be secured to each other by the use of a suitable adhesive or otherwise. Also in folding the parts to the position in this manner the edge or end portions of the walls may be appreciably outturned as indicated at 40' in Fig. 4 to provide a partial pocket for the intumed panels or plaits. The parts of the container are then folded along the score lines defining the walls thereof and the container set up by securing the flap or extension 27 to the wall 18 as hereinbefore described, and the end flaps or panels folded to position within the closure formed by the walls to provide sunken top and bottom closures for the container. In this structure, whether or not there is a bead at the top and bottom of the container by forcing the edge portions outwardly as indicated at 40', the intumed panels or plaits and the walls of the container cooperate with the closing panels or flaps in such a manner as to make the end of the container substantially sift-proof, it being understood that the end flaps or panels may be connected by a suitable adhesive or otherwise as is common in the art.

By reference to Fig. 1 it will be observed

that the cut lines dividing the flaps 19 to 22 extend to the score line 30 so that in folding the end closure parts of the container to position the panels 33 to 36 may be folded to place independently of each other which, in some instances, is preferable and that the cut lines separating the panels 23 to 26 extend only to the outer score line 32 so that in folding the parts forming the closure member to position the panels 37 to 40 form a continuous strap that is placed in position before any of the other parts of the container are folded to place which is the preferable formation in other instances.

In setting up the container, as illustrated in Figs. 1 to 5 of the drawing, reference may be made to Figs. 14 to 17 inclusive. In this operation the oppositely disposed flaps are preferably intumed in sets or pairs, although, as will be understood, it is not necessary to turn the flaps inward in any particular manner. As illustrated, however, and referring to one end of the container, the flaps 21 and 19 are intumed so that the opposite edges thereof contact with and preferably wedge against the adjacent surfaces of the walls 16 and 18 immediately below the inner edges of the panel members 34 and 36. The other or oppositely disposed set of flaps, namely the flaps 22 and 20 are then intumed so that the opposite edges for example of the flap 20 contact with the outer faces of the panel members 33 and 35, and similarly the opposite edges of the flap 22 bear against and may be wedged with these outer faces of the panels 33 and 35. Furthermore, depending upon which flap is last turned to place, the end of the same is made to contact with and preferably wedge against the outer face of the opposite panel member. For example, if the flap 20 is intumed last it will wedge at its free end against the outer surface of the panel 36, whereas if the flap 22 is turned in last its outer edge will bear against and preferably wedge with the outer surface of the panel member 34.

The form of the invention shown in Figs. 6, 7 and 8 is somewhat similar to that shown in Figs. 1 to 5 inclusive. In this form of the invention the walls of the container are indicated at 41, 42, 43 and 44. The wall 44 is provided with an extension or flap 45 adapted to be secured to the wall 41 in setting up the container for use. The end flaps or panels of the wall 41 are indicated at 46 and 50; those of the wall 42 at 47 and 51; those of the wall 43 at 48 and 52, and those of the wall 44 at 49 and 53. In this form of the invention, however, instead of employing the intumed panels or plaits as shown in Figs. 1 to 5 inclusive the walls of the container along lines dividing the same from their respective end flaps or plaits are provided with a rib and corresponding groove as indicated at

54 and 55, the rib 54 being in the line between the walls of the container and their end flaps or panels 46 to 49 and the rib 55 between the walls of the container and their end flaps or panels 50 to 53. In this form of the invention the parts, after having the walls set up by connecting the flap 45 to the wall 44, are turned to the positions in which the end flaps or panels are indicated in Fig. 7.

In this position, as will now be understood, a portion of the surface of the grooves at the inner sides of the ribs 54 and 55 bears against and may be secured to the adjacent surfaces of the inner surfaces of the walls and may be secured thereto by adhesive or other similar material in the same manner and to perform the same functions in substantially the same way as the intumed panels or plaits shown and described in the form of the invention shown in Figs. 1 to 5 inclusive. By reference to Fig. 8, it will be seen that in this form of the invention, when the container is completed, there is a sunken top and bottom and a rib or bead 56 defining the same at the ends of the container. It will be understood, however, that while I have herein shown and described containers in which the blanks are so shaped that both the tops and the bottoms will be sunken and reinforced, the blank may be so shaped that merely the bottom of the container will be thus constructed, while the top thereof may be made and closed in the ordinary or any suitable manner.

In carrying out the invention, the end or ends of the container may also be so constructed as to be interfolded and interlocked to make a transverse bridge or reinforcing member extending diagonally across the container. Such a structure is shown in Figs. 9 to 13 inclusive. By reference to the blank from which this form of the container is constructed and as shown in Fig. 9, it will be seen that provision is made for the walls as indicated at 57, 58, 59 and 60 and the wall 57 is provided with the usual flap or extension 61 to be suitably connected to the wall 60 in setting up the container. The blank as indicated in Fig. 9 provides for a top and bottom of the container to be similarly constructed and as these parts are alike, but one of them will be particularly described. As illustrated in this figure the end flap for the wall 57 is composed of the panels 62 and 63, the end flap of the wall 58 by the panels 64 and 65, the end flap for the wall 59 by the panels 66 and 67, and the end flap for the wall 60 by the panels 68 and 69. The panels 65 and 66 are separated along a cut line 70, while the panels 63 and 64 and 67 and 68 are divided by score lines 71 and 72 respectively, which lines are continuations of the score lines defining the walls 57 and 58 and

the walls 59 and 60. The end flap comprising the panels 62 and 63 is provided with a diagonal score line 73 defining these panels 62 and 63. Similarly a diagonal score line 74 defines the panels 64 and 65 of the end flap of the wall 58; a diagonal score line 75 defines the panels 66 and 67 of the end flap of the wall 59, and a diagonal score line 76 defines the panels 68 and 69 of the wall 60. A score line 77 and a score line 79 define the adjacent edges of the walls of the container and their respective end flaps, and intermediate of the score lines 77 and 79 there is a parallel score line 78. These score lines 77, 78 and 79 define panels or plaits 80 and 81 and between the wall 57 and its end flap; panels 82 and 83 between the end wall 58 and its end flap; panels 84 and 85 between the end wall 59 and its end flap; and panels 86 and 87 between the wall 60 and its end flap.

In the formation of the container from the blank illustrated in Fig. 9 and as hereinbefore described, the panels 81 and 83 are folded on the score line 79 to contact with the inner surfaces of the walls 57 and 58. The panels 80 and 82 are then folded in the opposite direction so as to contact with the adjacent surfaces of the panels 81 and 83. Similarly the panels 85 and 87 are folded to contact with the walls 59 and 60 and the panels 84 and 86 with the adjacent surfaces of the panels 85 and 87. In this construction the panels when thus folded to position form a complete continuous double reinforcement at the end closure portions of the container. The walls of the container are then set up by suitably securing the flap 61 to the wall 60 and the parts in this position will then assume the form shown in Fig. 10 in which there is a double intumed plait or panel for each wall of the container. The extending end flaps of the walls 59 and 60, for example, may then be folded along the score line 72 causing the panels 67 and 68 to approach one another and to finally have their adjacent faces in contact with each other, in which position the panels 66 and 69 comprise one layer or portion of the end of the container as indicated in Fig. 13. Then, and in a similar manner, the outstanding end flaps of the walls 57 and 58 may be folded along the score line 71 causing the panels 63 and 64 to approach one another and to enter between the panels 67 and 68. The folding of the end flaps of the walls 57 and 58 is continued in this manner until the adjacent faces of the panels 63 and 64 contact with each other when the panels 62 and 65 form the outer members of the end of the container, as clearly indicated in Fig. 11. This, as will be understood, forms a structure in which the panels 67 and 68 are interlocked with the panels 63 and 64, and these parts may be

suitably connected by adhesive or otherwise extend diagonally across the container as clearly indicated in Fig. 12 to form a bridge or reinforcing member. In this particular formation the end of the container is not sunken. It will be readily understood, however, that the panels 80, 82, 84 and 86 may be dispensed with so as to dispense with the double formation of the inturned panels or plaits and the end flaps constructed in substantially the same manner and folded to position in substantially the same way to form the container in which the end is sunken in the same manner as that described in the other forms of the invention.

In all the forms of the invention hereinbefore described, as well as in other equivalent forms thereof, the inturned or set in panels provided at the closure ends of the container form a reinforcing member and if necessary I may also employ an insert strip composed of suitable fabric or wire or other material to lend the necessary strength to this reinforcing strip in instances where the same is required. Furthermore the inturned or set in reinforcing panels may be single, double or multiple in the application as may also be necessary. For example, as shown in Fig. 18, a strip or band 87 of suitable fabric or other material may be placed between the inturned panels and the adjacent wall member and secured thereto by a suitable adhesive or otherwise. This band may be made of fabric or any other substance adapted to serve the purpose of reinforcing the panels formed at the ends of the container.

In the formation of the containers in the class to which my invention relates as ordinarily constructed it is necessary in forming the container to set the same upon a block or equivalent member in order to square or shape the parts thereof, at the same time turning the end flaps to position and so securing them by the adhesive or other similar substance employed. The container constructed in accordance with my invention makes it possible to dispense with the use of this shaping block in the formation of the container, it being apparent that by the insertion of the closure ends or flaps within the walls of the container that the same will be automatically squared or shaped or the walls brought to their proper positions, and that in so doing the corners of the end closure flaps are forced and wedged to position to assist in making the container sift-proof and this condition exists whether adhesive is employed between the end flaps or closure members or not.

I claim as my invention:

1. A container comprising walls, a panel inturned and secured to the inner end portion of each wall, and an end flap extending from the then inner end of each panel,

the flaps being adapted to be turned in whereby the opposite edges of each flap coact with the inner faces of adjacent walls or the outer faces of adjacent panels to form an inset siftless closure in the container.

2. A container comprising walls, an inturned panel secured to the inner face of each wall adjacent the end thereof, and a flap extending from the then inner end of each panel, the flaps being adapted to be inturned in sets whereby the opposite edges of one set of flaps are adapted to bear against the inner surfaces of the next adjacent walls and the opposite edges of another set of flaps are adapted to bear against the outer faces of the panels inturned against adjacent walls to form an inset siftless closure for the container.

3. A container comprising walls, a panel turned in and against the inner face of each wall adjacent the end thereof, and an end flap extending from the then inner end of each panel, opposite end flaps and panels being adapted to contact at their opposite edges with the inner faces of adjacent walls, and the other flaps and panels being adapted at their opposite edges to contact with the outer faces of the panels turned in against the inner faces of adjacent walls to form an inset siftless closure for the container.

4. A container comprising walls, a panel turned in against the inner face of each wall adjacent the end thereof, and an end flap extending from the then inner end of each panel, opposite end flaps and panels being adapted at their opposite edges to wedge against the inner faces of adjacent walls and the opposite edges of the other flaps and panels being adapted to wedge against the then outer faces of the panels inturned against the adjacent walls to form an inset siftless closure for the container.

5. A container comprising walls, a panel turned in against the inner face of each wall adjacent the end thereof, and an end flap extending from the then inner end of each panel, opposite end flaps being adapted at their opposite edges to wedge against the inner faces of adjacent walls and the opposite edges of other flaps being adapted to wedge against the then outer faces of the panels turned in against the adjacent walls while the end edge of one of the said other flaps wedges against the inner face of the oppositely disposed wall and the end edge of the second of the said other flaps wedges against the inturned panel of the said oppositely disposed wall to form an inset siftless closure for the container.

6. A container made from a blank and having walls, a panel which in the blank is continuous and is turned in and secured to the inner faces of the said walls at the end portions thereof, and end flaps extending from the then inner ends of the said

panels, each of the said flaps being adapted to be turned in whereby the edges of each flap coact with the adjacent walls or panels to form an inset siftless closure for the container.

7. A container made from a blank and having walls, a panel which in the blank is continuous and is turned in and secured to the inner faces of the said walls at the end portions thereof, and end flaps extending from the then inner ends of the said panels, each of the said flaps being adapted to be turned in and being of such an extent that when turned in the opposite edges of one flap bear against the inner faces of the next adjacent walls and the opposite edges of another flap bear against the then outer faces of the panels of the next adjacent walls to form an inset siftless closure for the container.

8. A container made from a blank and having walls, a panel which is continuous in the blank and turned in and against the inner faces of the said walls at the end portions thereof, and end flaps extending from the then inner ends of the said panels, each of the said flaps being adapted to be turned in and being of such an extent that when turned in the opposite edges of oppositely disposed flaps bear against the inner faces of adjacent walls and the opposite edges of the other flaps bear against the then outer faces of the panels of adjacent walls to form an inset siftless closure for the container.

9. A container made from a blank and having walls, a panel which is continuous in the blank and turned in against the inner faces of the said walls at the end portions thereof, and end flaps extending from the then inner ends of the said panels, each of the said flaps being of a width substantially coextensive with the width of the wall and its panel from which the flap ex-

tends so that when turned in oppositely disposed flaps wedge against the inner faces of adjacent walls and the opposite edges of the other flaps wedge against the then outer faces of the panels of adjacent walls to form an inset siftless closure for the container.

10. A container made from a blank and having walls, a panel which is continuous in the blank and turned in against the inner faces of the said walls at the end portions thereof, and end flaps extending from the then inner ends of the said panels, each of the said flaps being of a width substantially coextensive with the width of the wall and its panel from which the flap extends so that when turned in oppositely disposed flaps wedge against the inner faces of adjacent walls and the opposite edges of the other flaps wedge against the then outer faces of the panels of adjacent walls, the length of the said other flaps being such that one of them when turned in wedges against the inner face of the oppositely disposed wall and the other wedges against the then outer face of the panel of its oppositely disposed wall to form an inset siftless closure for the container.

11. A container comprising a peripheral wall, an inturned panel which is continuous and is substantially coextensive circumferentially of the said peripheral wall, and members extending inwardly from portions of the said inturned panel to complete the end of the container, there being means provided for maintaining said inturned members in place relatively to each other and to the said portions of the inturned panel.

Signed by me this 20th day of July, 1921.

PHILIP ZALKIND.