July 10, 1956 K. S. ROBERTS 2,754,046

CONTAINER WITH TELESCOPIC COVER

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Fig. 3

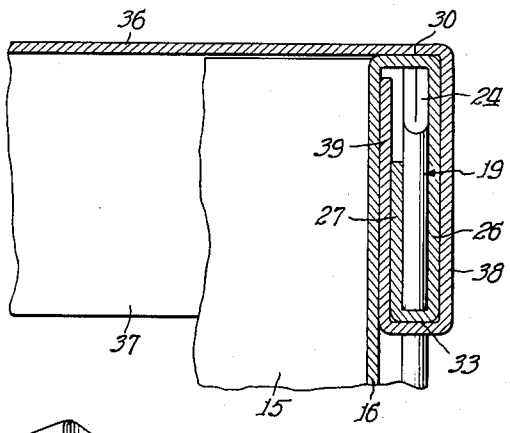


Fig. 1

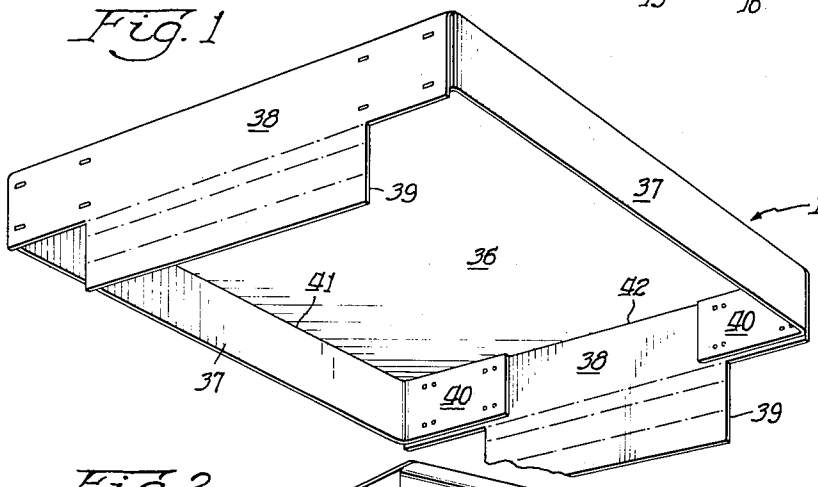
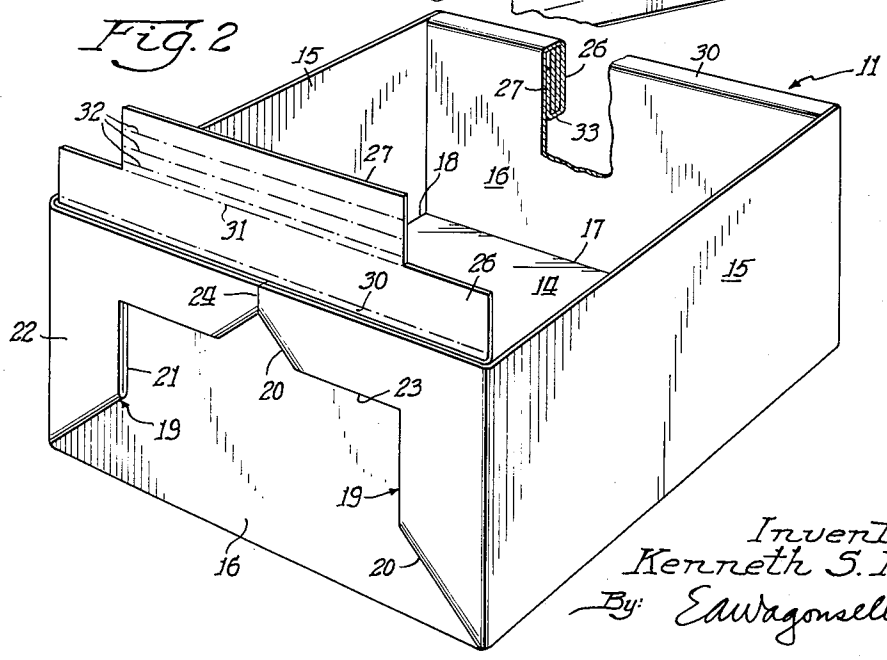


Fig. 2



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Fig. 4

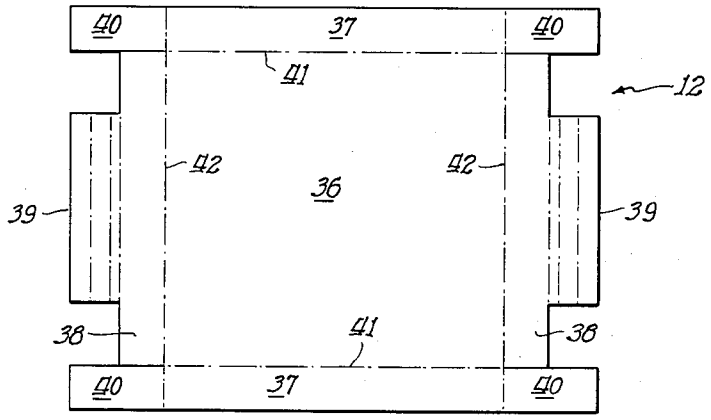
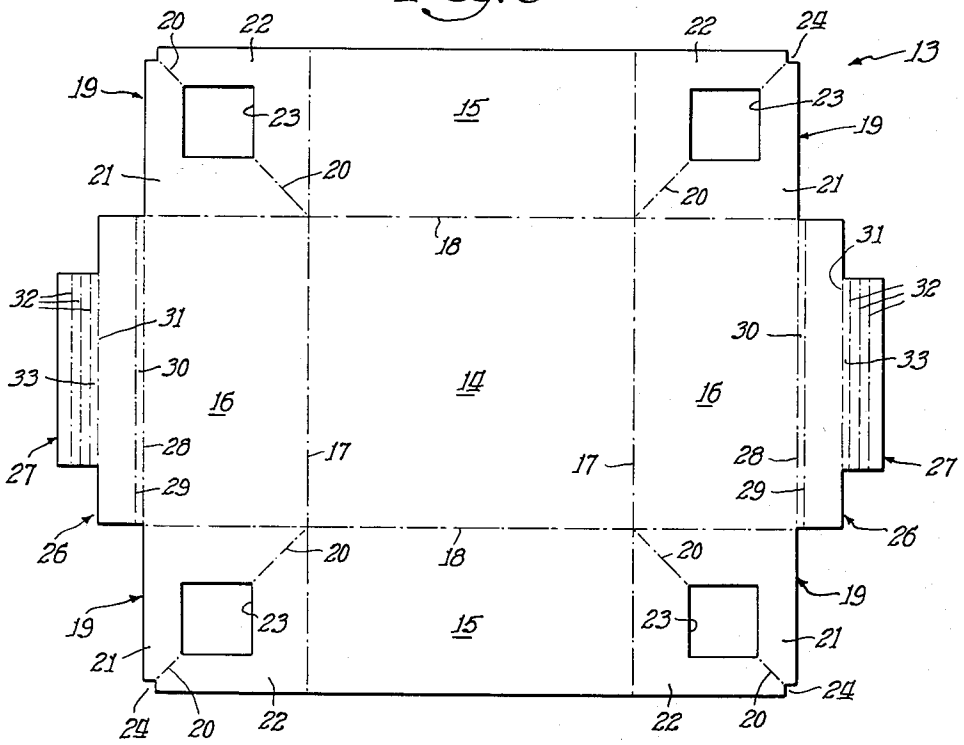


Fig. 5



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CONTAINER WITH TELESCOPIC COVER

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Application August 19, 1953, Serial No. 375,117

1 Claim. (Cl. 229—45)

The present invention relates to shipping containers and more particularly to a form of shipping container which is adapted to be constructed of foldable paperboard and which can be delivered to the user in flat blank form and set up by the user with a minimum of fastening elements.

One object of the invention is to provide a shipping container of efficient and sturdy construction arranged to be closed by a separate telescopic closure part which can be secured on the bottom part of the container by a simple and rapid manipulation.

Another object is to provide a paperboard container having telescopic bottom and top parts in which the bottom part is provided with foldable end portions which both reinforce the ends and at the same time are arranged to accommodate flaps on the telescopic top part to enable it to be quickly and securely locked onto the bottom part.

A further object is to provide a paperboard container having top and bottom parts in which foldable portions on the bottom part end walls are so shaped that when properly folded against the bottom part end wall they cooperate with a flap on the end wall which can be brought over the folded portions and then between the folded portions and the end wall to thereby hold the bottom part of the container in set up condition ready to receive contents.

A still more specific object is to provide a container bottom part with a telescopic top or cover part in which the bottom has suitably shaped corner portions arranged to be folded against the outside of the bottom end walls, and the provision of locking or securing flaps on each of the end walls which are foldable down and around the corner portions and are insertable upward between the corner portions and the end wall, and the further provision of depending flaps on the top part, the free edge portions of which, after the top has been fitted upon the bottom, are insertable upward between the bottom part end walls and the inserted flaps carried by such bottom part end walls to secure the top onto the bottom.

Other objects will become apparent as the description proceeds.

In the drawings, illustrating a preferred embodiment of the invention,

Figs. 1 and 2 are perspective views respectively of the top and bottom parts of the container;

Fig. 3 is an enlarged fragmentary cross-sectional view taken through one end of the assembled container showing in detail how the top and bottom parts are secured together;

Fig. 4 is a plan view of a preferred form of blank from which the top part of the container is constructed; and

Fig. 5 is a plan view of a preferred form of blank from which the bottom part of the container is constructed.

The container is well adapted for packaging food materials such as dressed poultry and other meat products and is particularly advantageous for users who desire to

retain their supply of containers in substantially flat form and have them completed as needed by operations which require no special machinery for the purpose. The bottom part of the box is preferably formed from a blank of foldable corrugated paperboard of generally rectangular shape which provides a bottom panel, four side wall panels, and corner folds at each of the four corners of the blank, there being locking flaps on two opposite walls which are adapted to be interengaged with the corner folds when folded to lie on the outer surfaces of the walls which carry the locking flaps. The top part or cover is also preferably made of corrugated paperboard and, when set up, is in the form of a relatively shallow inverted tray which includes a main panel, side walls, corner flaps on certain of the side walls and cover securing flaps extending downward from two opposite side walls and arranged to have their free edge portions inserted up under the locking flaps on the bottom part, after the top part has been telescoped thereover, to lock the top part onto the bottom part.

Referring more particularly to the drawings, the top or cover part is indicated as a whole at **10** and the bottom part is indicated as a whole at **11**. The top and bottom are formed respectively from blanks indicated at **12** and **13**.

As shown in Figs. 2 and 5, the bottom or tray part comprises a main panel **14** and four walls which for convenience will be termed side walls **15**, **15** and end walls **16**, **16**. It is to be understood that the container may be square or elongated and the relative lengths of the pairs of opposite walls may be considerably varied. The side walls and main panel are defined from each other by fold lines **17**, **17** and **18**, **18** which extend to the edges of the blank. By so extending the fold lines there are formed foldable corner portions **19**, **19** at each of the ends of end walls **16**, **16**.

The corner portions **19**, **19** are each formed with a diagonal fold line **20** extending from the corners of the main bottom panel **14** to the outer corners of the portions **19**. The fold line **20** divides each corner portion into two triangular portions **21** and **22**. For a purpose which will presently be described each of the corner portions preferably has a rectangular cut-out area, indicated at **23**, the corners of which terminate on the fold line **20** which is interrupted by the cut-out area.

The corner portions **19**, **19** are designed, when the bottom part of the container is set up, to be folded so that the triangular portions **21** and **22** are brought into face to face relation after which the folded corner portions are swung around so that each will lie against the outer surface of its attached end wall **16**. In the form of the bottom part illustrated in the drawings the size of the corner portions **19** relative to the width of the end wall would cause these portions to overlap. To avoid such overlapping the corner portions are preferably cut away at their outer corners as indicated at **24**. By cutting the outer corners along lines at right angles to the edges of the blank neatly abutting cut edges will be formed, as best seen in Fig. 2. It is not necessary for the cut edges of the corner portions to abut each other and, if desired, such edges could be somewhat spaced from each other.

Means are provided for holding or securing the folded corner portions **19**, **19** against their end walls. For this purpose an end wall flap extension is formed integral with the upper edge of each of the end walls. Each flap extension is in two parts, namely an end wall flap **26** and a securing flap **27** at the outer edge of the flap **26**. The flap **26** is defined from the end wall **16** by a fold line **28** and another fold line **29**, separated a short distance from fold line **28**, provides a narrow panel **30** ar-

ranged to be disposed flatwise above the folded corner portions 19; see Fig. 3.

A fold line 31 separates the securing flap 27 from the end wall flap 26 and several additional fold lines as shown at 32, 32 are preferably employed to enable flap 27 to assume a curved shape, thus to facilitate the insertion or tucking of this flap in place between the end wall 16 and the corner portions 19 to secure the bottom part in set-up condition. See Figs. 2 and 3. As shown in Fig. 3, the first fold line 32 away from fold line 31 is preferably spaced at such a distance from the fold line 31 to provide a narrow panel 33 that will be disposed horizontally when the flap 27 is in its final position.

Flap 27 is preferably formed of such dimension parallel to flap 26 that the edges of flap 27 will fit snugly between the vertical edges of corner portions 19 formed by the cut out parts 23, 23.

It is to be noted also that the corner portions with their central parts cut away provide relatively narrow, inwardly extending portions disposed along the upper edges of each of the end walls and relatively narrow vertically extending portions disposed along the vertical edges of the bottom part end walls. These portions reinforce the bottom part enabling a number of filled containers to be stacked one upon the other without distortion. Also, due to their particular shape, end wall flaps of relatively short length, measured at right angles to the top edge of the end wall, may be effectively employed to embrace the horizontally extending portions to hold the bottom part set up and at the same time provide a strong and efficient end structure.

When the container bottom part has been set up as described with the respective flaps 27, 27 inserted between the corner portions 19, 19 and the end walls 16 the bottom part will be retained in set up condition ready to receive contents.

The top or cover part of the container is preferably formed of a blank of corrugated paperboard of generally rectangular shape and is suitably cut and creased to provide a main cover panel 36, side panels 37, 37 and end panels 38, 38. Each of the end panels has a securing flap 39 extending from its outer edge. The side panels 37, 37 are formed with corner flaps 40, 40 at their ends. The panels 36, 37 and 38 are defined from each other by crease or fold lines 41, 41 and 42, 42. In setting up the top or cover part the corner flaps 40 will be suitably secured to the inner surface of the end portions of flaps 38 as by means of staples or adhesive. As so constructed the cover part is ready to be fitted telescopically over the set up bottom part.

After the cover has been placed in closing position on the bottom part it will be secured on to the cover by insertion of the respective securing flaps 39, 39 around the inserted flap 27 of the bottom part so that the outer free edge portion of each flap 39 is disposed between the free edge portion of flap 27 and end wall 16 of the bottom part. See Fig. 3.

Due to the resiliency of the corrugated paperboard the inwardly directed end parts of the folded corner portions 19, 19 will be deflected somewhat away from their adjacent wall 16 to accommodate the securing flap 39 which will then be relatively firmly held in place thus fastening the cover part securely onto the bottom part.

From the foregoing it is apparent that the present invention provides a closable container which requires only hand manipulation for the bottom part and only the simplest equipment for securing the corner flaps of the top part, such as a light stapling machine or a glue applying means. The bottom part may thus be left flat until just before it is desired to load it, thus minimizing the storage space necessary for the containers prior to filling. Due to the provision of double thickness corner portions which are folded on the outside of the end walls and the end flap structure that folds around the corner portions, such end walls are extremely sturdy and resist crushing forces even when loaded containers are piled to a considerable height. The infolded end flaps on the cover parts add further strength to the filled and closed containers.

It is also to be noted that the closed containers may be opened with relative ease by removing the tucked-in flaps 39, 39. Also, if desired, the bottom parts, after the contents have been emptied therefrom, may readily be converted back into flattened form simply by pulling out the inserted flaps 27, 27. The container parts may thus be returned to the loading point for reuse.

While the present description sets forth a preferred embodiment of the invention, various changes may be made in the construction without departing from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claim rather than to the foregoing description to indicate the scope of the invention.

I claim:

A paperboard container comprising separate bottom and top parts, the bottom part having a rectangular main bottom panel and two side walls and two end walls integral with the bottom panel, a substantially square corner portion at each of the corners of the bottom panel, each corner portion integrally joining the adjacent ends of a side wall and an end wall, each corner portion having a substantially square opening therethrough with the edges defining the opening disposed in parallel orientation with the respectively adjacent edges of the corner portion and with the diagonal between one pair of opposite corners of such opening disposed substantially coincident with the diagonal extending between the inner and outer corners of the corner portion, each corner portion being folded upon itself along said diagonal and against the adjacent end wall of the container whereby one pair of adjacent edges defining the opening in such corner portion will be in register with one another and substantially parallel with but spaced below the upper edge of the adjacent end wall and in alignment with the corresponding edges defining the opening in the adjacent corner portion at such end of the container, a flap on the top edge of each end wall folded downward in overlying relationship to the parts of the adjacent corner portions which lie above said registering edges of the corner portions at such container end, a supplemental locking flap hinged to the downwardly directed edge of each end wall flap, each such supplemental flap having a plurality of fold lines thereacross parallel with its line of connection with its end wall and having its free edge inserted between said registering and aligned edges defining the said openings of the adjacent corner portions and upward between the said parts of the adjacent corner portions which lie above said registering and aligned edges and the bottom part end wall, the top part of the container telescoped over the bottom part and comprising a top panel having side and end walls and locking flaps on the end walls, the free edge portions of the locking flaps being inserted upward between said parts of the corner portion and the end walls of the container bottom part whereby to retain the top part securely locked to the bottom part of the container.

References Cited in the file of this patent

UNITED STATES PATENTS

536,064	Birley	Mar. 19, 1895
2,040,224	Usinger	May 12, 1936
2,073,272	Wellman	Mar. 9, 1937
2,370,927	Anderson	Mar. 6, 1945
2,373,730	Williamson et al.	Apr. 17, 1945
2,407,463	Williams	Sept. 10, 1946
2,465,588	Hartman	Mar. 29, 1949