Aug. 29, 1933. H. B. WALTER 1,924,222

CONTAINER

Filed Feb. 11, 1931 2 Sheets-Sheet 1

Fig. 2

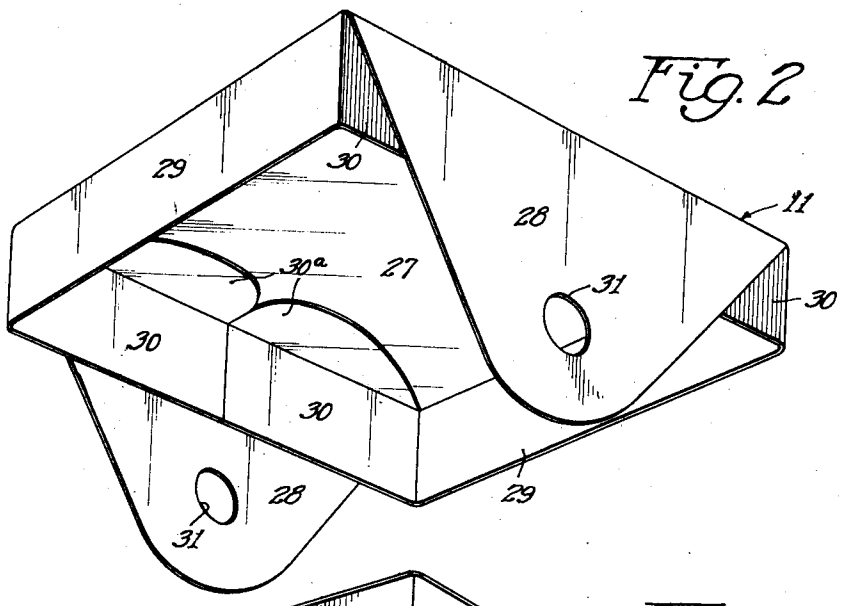
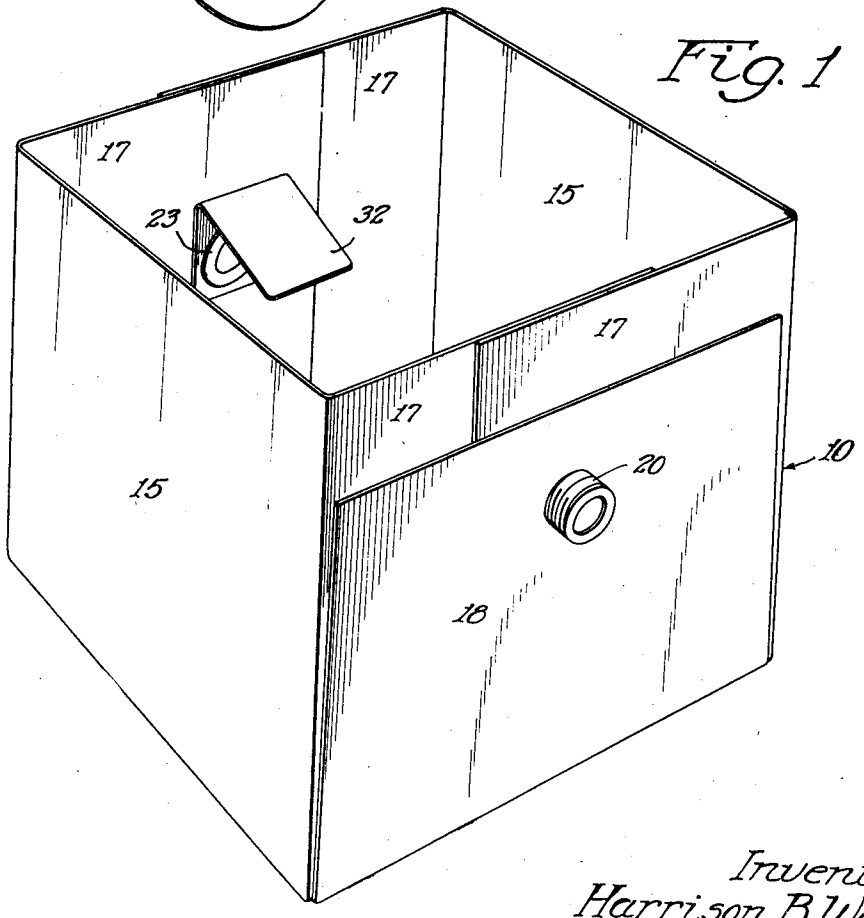


Fig. 1



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Fig. 5

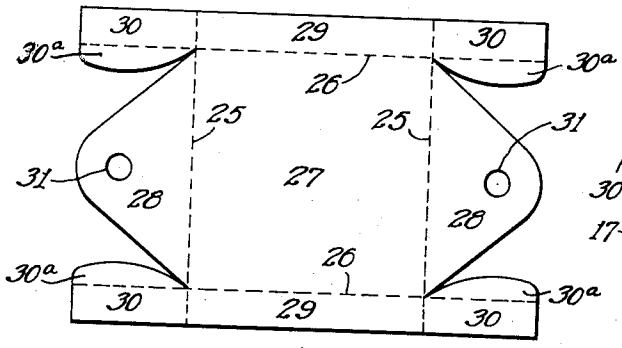


Fig. 3

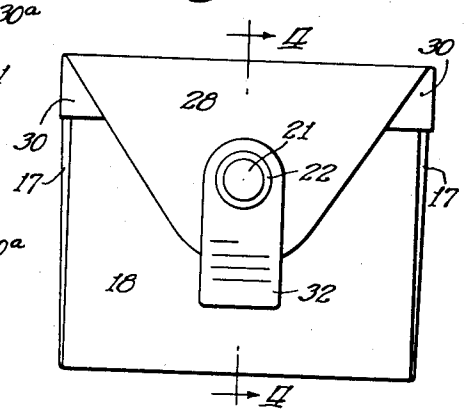


Fig. 6

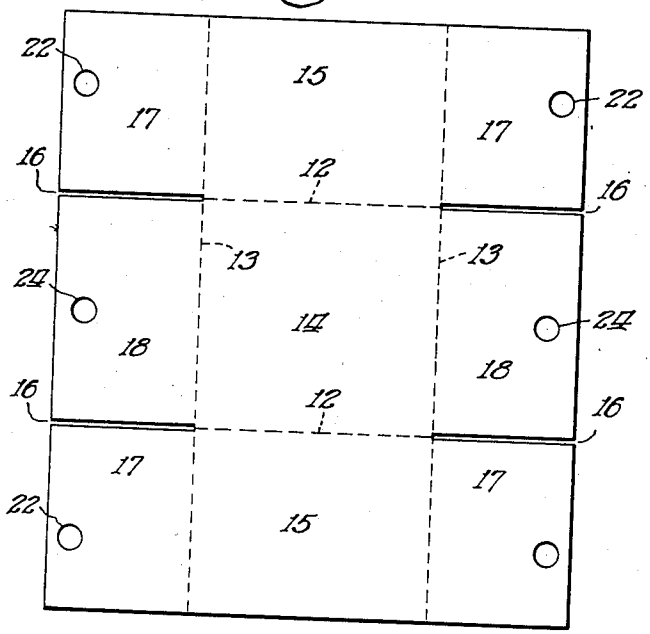
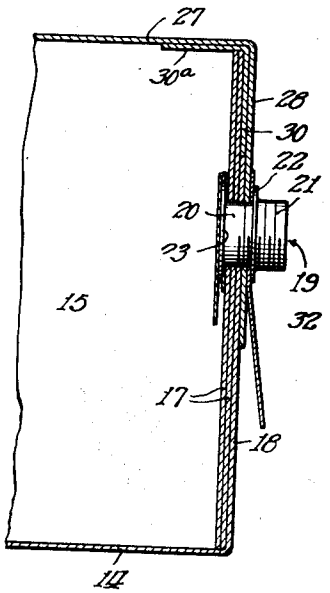


Fig. 4



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UNITED STATES PATENT OFFICE

1,924,222

CONTAINER

Harrison B. Walter, Chicago, Ill., assignor to Container Corporation of America, Chicago, Ill., a Corporation of Illinois

Application February 11, 1931. Serial No. 514,959

9 Claims. (Cl. 229—47)

The present invention relates to containers and has for an object to provide a light, strong container, capable of being collapsed for shipment, and including securing means, cooperating therewith whereby the container may be set up entirely by hand in a speedy and efficient manner.

Another object of the invention is to provide a container including a separable cover member which will materially strengthen and reinforce the container construction.

A further object of the invention is to provide a collapsible container having combined securing and hand hold means comprising separable members adapted to maintain the box in set up relation and capable of being readily separable to permit the box to be collapsed and to combine therewith effective means for preventing contact of the contents with the inner exposed portions of the separable members.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Fig. 1 is a perspective view of the body of the container, set up and ready for assembly with the cover member;

Fig. 2 is a perspective view of the cover member of the container, set up and ready for assembly with the body;

Fig. 3 is a view of one end of the container with a shipping tag assembled with the securing means;

Fig. 4 is a sectional view on line 4—4 of Fig. 3;

Fig. 5 is a plan view of the blank from which the cover member is formed; and

Fig. 6 is a plan view of the blank from which the body is formed.

Similar reference numerals throughout the several views indicate the same parts.

This application is a continuation in part of my copending application, Serial No. 502,918, filed December 17, 1930.

The present invention provides a container which can be efficiently set up and collapsed without the use of any special machinery or equipment, and having particular adaptability for use in the shipment of food products such as butter, where it is desired to ship bulk butter to the creamery for packaging. The construction of the present invention lends itself particularly well to packing and shipping operations in which containers must be employed which are rendered waterproof by means of wax or paraffin.

The present embodiment of the invention, as disclosed, comprises a two piece container formed of blanks of sheet material suitably cut and scored to provide a body portion and a separable cover member.

Referring more particularly to the drawings, the body portion is indicated at 10 in Fig. 1 and the cover member at 11 in Fig. 2. Both of these parts are preferably formed of solid fibre board although obviously any other suitable material may be utilized for this purpose.

The blank from which the body portion is formed is scored along lines 12, 12 and 13, 13 to provide a bottom wall 14 and side walls 15, 15. The blank is slotted, as indicated, at 16, 16 whereby there will be provided flaps 17, 17 in the form of extensions on the side walls 15, 15 and a flap 18 on each end of the bottom wall adapted to cooperate with flaps 17, 17 to form the ends of the container.

The flaps 17, 17 are preferably of a length sufficient to overlap when the body portion of the container has been set up and the flaps 18, 18 are adapted to form reinforcing walls which will preferably be shorter than the side of the container (see Fig. 1) whereby abutment surfaces or edges will be provided for a purpose which will become apparent as the description proceeds.

Means are employed for securing together the end wall flaps 17, 17 and the reinforcing flaps 18, 18 and while this may be done in various ways, there is preferably provided a securing means by which all of the flaps may be held together. To this end, in the present instance, there is provided a two part securing means indicated generally at 19 in Fig. 4, one part 20 of which is engaged with, or suitably secured to, the innermost flap 17 and the other part 21 including a flange 22 adapted to bear against the outside surface of the container. While any suitable arrangement may be employed for engaging the inner securing means 20 to the innermost flap 17, this is preferably done by forming in the flap a suitable aperture 22 through which the projecting part of the securing means may pass and this aperture will preferably be such that the part will snugly fit therein.

All the flaps 17 are preferably provided with apertures 22 as just described. A flange 23 or the equivalent is formed on the inner part 20 of the securing means to maintain it in securing relation to the inner flap.

The securing means 19 may be of any suitable material but is preferably made from light sheet metal, which can be readily formed by stamping.

The male part 20 is preferably used as the inner member and the female part 21 is used as the outer member.

The apertures in the end wall flaps 17, 17 are preferably spaced symmetrically with their centers at a greater distance from the score line 13 than one-half the width of the bottom wall 14 so that when the container has been set up with the apertures 22 in registering relation and the male part 20 of the securing means extended therethrough, the side walls 15, 15 will diverge upwardly from the bottom wall. Apertures 24 are provided in the reinforcing flaps 18, 18 which are preferably located centrally and spaced from the outer edges of said flaps.

The cover member preferably has extended portions thereon, in which are formed suitable apertures adapted to cooperate with the securing means of the body portion and includes a flange disposed against the inner surface of the extended portion and adapted to rest with its lower edge upon the top edge of the reinforcing flap. The cover member is preferably formed of a blank of sheet material, as shown in Fig. 5, scored along lines 25, 25 and 26, 26 to provide a top wall 27, extending portions 28, 28 on two opposed sides of the top wall and flanges 29, 29 on the two remaining sides of said top wall.

While, in the present instance, the extending portions 28, 28 have been shown as having a tapered form, obviously these extending portions may be of any convenient shape. Tabs 30, 30 are provided at each end of the flanges 29, 29 being separated therefrom by score lines 25, 25 and these tabs, when the cover member is assembled with the body portion, are folded in to form reinforcing portions which will abut the upper edge of the reinforcing walls 18 of the body portion.

Means are preferably provided for maintaining the tabs 30 in abutting relation with the upper edge of the reinforcing walls 18 of the body portion and, while this may be accomplished by various methods, in the present instance it is done by providing flaps 30*a*, 30*a* on the tabs 30, such flaps having their free edges extending toward the inside of the box and contacting the top edges of the end wall flaps 17 whereby each flap forms a hook-like member engaging the upper edge of the end wall flaps 17 and preventing downward movement of the tabs 30. Thus the tabs 30 are effectively retained in place under the most extreme conditions due to their being held by flaps 28 against the upper portion of the side wall formed by the flaps 17 and due to the fact that the flaps 30*a* will effectively hook over the upper edge of this side wall. It has been found in practice that the container of the present invention is frequently handled by means of the flanges 29, 29. The flaps 30*a* are of particular value where this is done since, without these flaps, the outward pulling of the flanges 29 will sometimes displace the lower edge of the tab 30 from its abutting relation with the end wall 18 and allow the tab to drop down from its position.

The extended portions 28 are provided with suitable apertures 31, 31 which, when the cover has been placed on the body portion, are adapted to register with the apertures of the body portion.

In the event that it is desired to use the container for the packing of food products, such as butter, the container will preferably be coated on both sides with a relatively heavy coat of wax or paraffin. Containers coated in this manner, while they are waterproof and practically air tight, resist, to a large degree, any efforts to place pencil, ink or crayon marks on their outer surfaces. As it is very important in the case of food products to have each container bear marks indicating grade, date and other convenient memoranda, means are accordingly provided whereby this may be done advantageously. For this purpose a short strip of sheet material, preferably paper, in the form of a tag, is employed. This tag is provided with a suitable aperture adapting it to be received on the end of the male member of the securing means.

The tag 32 may bear suitable lines for the various items which are to be recorded thereon.

For the purpose of preventing contact of the inner flange 23 with the contents of the container, other tags 32 are preferably employed which are similarly formed and have an aperture to receive the male member 20 whereby they may be secured against the inside of the container wall and held in place by the flange 23. After the tag has been secured, the end portion thereof is folded down so as to cover the flange 23 and keep it out of contact with the contents.

While the tag for the inside of the container may be of the same or similar material as the outside tag, this tag is preferably paraffined on at least one side, which is disposed toward the contents. A convenient method is to provide a tag which is adapted for either purpose, in which case the tag would have a paraffin coating on one side and merely be sized in the usual manner on the reverse side, to receive markings.

In the use and operation of the present invention, the blanks are cut to their proper shapes at the box factory and shipped flat to the user, with suitable securing means, as described. The user will first set up the body of the container by placing the male portion 20 of the securing means through the apertures in the flaps 17, 17 and reinforcing wall 18, with the reinforcing wall preferably on the outside. The container may then be lined, if desired, with suitable lining paper, or the material may be placed directly therein. In the latter case, however, if food such as butter is to be packed, there will be a tag 32 arranged over the inner flange 23 of the securing means. If desired, the female member may be fixed in place on the male member while the body portion is being filled or the body portion may be held in any suitable form while filling to prevent the separation of flaps forming the end walls.

After the body portion has been loaded to the desired weight the cover member 11 is then assembled thereon. This is done by folding the flanges 29, tabs 30, flaps 30*a* and extensions 28 in the manner indicated in Fig. 2.

The cover is then placed on the body portion so that the tabs 30, 30 are held between extension 28 and the flaps 17, 17, and the free edges of the flaps 30*a*, 30*a* extend toward the inside of the container to form a hook-like member engaging the upper edge of the end wall flaps 17. The lower edges of the tabs 30 rest upon the tops of the adjacent reinforcing flaps 18. It will be noted that the tabs 30 are held from movement in four directions by the parts as described and they are held from endwise movement due to their attachment to flanges 29. It will also be noted that the tabs 30, together with the flaps 18 form a reinforcing wall substantially covering the entire end of the container.

After the cover has been applied and the extensions secured with the other portions of the container as described, it is then ready for shipment. In case the container material is paraffined, one

or more tags 32 will be employed on the outside of the box to receive the necessary shipping instructions and other memoranda.

When it is desired to unload the container the cover member is removed and the body portion inverted to permit the contents to drop out. In the case of food products such as butter this unloading is facilitated by the fact that two of the side walls diverge outwardly. The securing means greatly facilitates the handling of the container. This is especially true with containers which have received heavy coats of wax or paraffin, due to the fact that the projecting parts of the securing means form a very effective hand hold. A container, which would otherwise be very difficult to handle because of the wax, may thus be handled with comparative ease.

From the foregoing it will be apparent that there is provided a light, strong, easily handled container, having a smooth interior wall adapted for bulk contents such as butter, cheese and lard and constructed so as to be readily assembled and disassembled without destroying any of its parts. The container may be readily handled by the projecting securing means even though the walls of the container are otherwise slippery due to being waterproofed with a wax or paraffin coating.

Due to the cooperation between the flange of the cover member and the reinforcing wall of the body portion, the side walls in which the securing means are placed are strengthened to a considerable extent and the box will effectually resist twisting strains. Further, due to the overlapping construction of the end walls and the reinforcing wall, and the fact that the reinforcing wall is secured to the bottom, the weight of the contents of the container will be uniformly distributed on the securing means when they are used as hand holds.

The container can be very easily opened, without tearing any of its parts, merely by releasing the caps. This feature is extremely important in cases where it is used for shipping food products, such as butter, and it is desired to inspect a certain number of such containers out of every carload.

After the contents of the container have been emptied it may be collapsed into a very small space, since both the top and bottom may be laid out in a single thickness of material and returned for reuse. The metal securing means can be sent back separately or discarded, as desired.

While the present description sets forth a preferred embodiment of the invention, numerous 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 claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A container comprising body and cover portions, the body portion being formed to provide a bottom and four side walls, two opposed side walls of said body portion including a reinforcing wall covering a substantial portion thereof but terminating below the top edges of said walls, the cover portion having flanges on four sides thereof, the width of at least two of the flanges on the sides of said cover being such that, when the cover is in place on the body portion, the flanges will abut respectively the top edges of the reinforcing walls whereby side walls are formed having a plurality of layers throughout, supplemental extended portions on the cover member adapted to depend below the upper edge of said reinforcing walls, and means at opposite sides of the box for securing the extended portion to the adjacent side wall.

2. A container comprising body and cover portions, the body portion being formed to provide a bottom and four side walls, two opposed side walls of said body portion including a reinforcing wall covering a substantial portion thereof but terminating below the top edges of said walls, the cover portion having at least two flanges thereon, of a width such that, when the cover is in place on the body portion, the flanges will abut respectively the top edges of the reinforcing walls whereby side walls are formed having a plurality of layers throughout, supplemental extended portions on the cover member adapted to depend below the upper edge of said reinforcing walls, and means at opposite sides of the box for securing the extended portion to the adjacent side wall.

3. A container comprising body and cover portions, the body portion being formed from a blank of sheet material suitably cut and scored to provide a bottom wall and two opposed side walls, flaps integral with each end of said bottom and side walls adapted to form the end walls of the container, the bottom wall flaps being shorter than the height of the box and constituting a reinforcing wall, the cover portion comprising a blank of sheet material suitably scored to provide a top wall, extending flaps on two opposed sides of said top wall, flanges on the remaining sides of said top wall, tabs on each end of said flanges adapted to be folded to form additional flanges at the remaining sides of the top wall, the lower edges of said tabs adapted to abut the upper edge of the reinforcing wall when the cover has been assembled on the body, the flaps cooperating to form the end walls of the body portion and the extending flaps of the cover portion having registering apertures therein, securing means adapted to extend through such apertures whereby said extending flaps of the cover portion will secure the tabs of the cover portion in abutting relation with the upper edge of the reinforcing wall to strengthen and add rigidity to the container.

4. A container comprising body and cover portions, the body portion being formed from a blank of sheet material suitably cut and scored to provide a bottom wall and two opposed side walls, flaps integral with each end of said bottom and side walls adapted to form the end walls of the container, the bottom wall flaps being shorter than the height of the box and constituting a reinforcing wall, the cover portion comprising a blank of sheet material suitably scored to provide a top wall, extending flap portions on two opposite sides of said top wall, flanges on the remaining sides of said top wall, tabs on each end of said flanges adapted to be folded to form additional flanges at the remaining sides of the top wall, the lower edges of said tabs on said flanges adapted to abut the upper edge of the reinforcing wall when the container has been assembled, the flaps adjacent each end of the side walls of the body portion having offset registering apertures therein, the reinforcing walls and the extending flaps of the cover portion having registering apertures therein whereby securing means extended through such apertures will maintain the side

walls of the container in sloping relation to the bottom wall and will maintain the cover assembled with the body portion.

5. A container formed from a blank of sheet material having apertured flaps adapted to be held together by a two part cap member said member comprising male and female parts, each having a flange, the flange of the male part contacting the inner surface of one wall of the container and adapted to be received within the female part, the flange of which contacts the opposed surface of the said wall and means for preventing contact between the contents of the container and the flange on the male part, said means comprising an apertured tag or the like engaged with the male part to hold a portion of the tag against the side of the container and an extended portion on the tag adapted to be folded over to cover the flange of the male member.

6. A container formed of a blank of sheet material having apertured flaps adapted to be held together by a two part hollow cap member said member comprising male and female parts, each having a flange, the flange of the male part contacting the inner surface of the container and adapted to be received within the female part the flange of which contacts the outer surface of the container, and means for preventing contact between the contents of the container and the flange on the male part, comprising an apertured tag or the like engaged with the male part to hold a portion of the tag against the side of the container and an extended portion on the tag adapted to fold over and cover the hollow portion of the male member and its flange.

7. A container comprising body and cover portions, the body portion being formed to provide a bottom and four side walls, two opposed side walls of said body portion including a reinforcing wall covering a substantial portion thereof but terminating below the top edges of said walls, the cover portion being formed to provide a top wall, extending flaps on two opposed sides of the top wall, flanges on the remaining sides of the top wall, tabs on each end of said flanges adapted to be folded to form additional flanges at the remaining sides of the top wall, the lower edges of said tabs adapted to abut the upper edge of the reinforcing wall when the cover has been assembled on the body, means on each tab for engaging the upper edge of the adjacent side wall to prevent downward displacement of the tab when the cover is placed on the container and means located below the upper edge of the reinforcing wall for securing the extending flaps of the cover portion to the adjacent side walls of the container whereby said extending flaps of the cover portion will retain the tabs of the cover portion in contact with the upper portion of the adjacent side wall above the edge of the reinforcing wall to strengthen and add rigidity to the container.

8. A container comprising body and cover portions, the body portion being formed to provide a bottom and four side walls, two opposed side walls of said body portion including a reinforcing wall covering a substantial portion thereof but terminating below the top edges of said walls, the cover portion being formed to provide a top wall, extending flaps on two opposed sides of the top wall, flanges on the remaining sides of the top wall, tabs on each end of said flanges adapted to be folded to form additional flanges at the remaining sides of the top wall, the lower edges of said tabs adapted to abut the upper edge of the reinforcing wall when the cover has been assembled on the body, flaps on the tabs adapted to have their free edges extending toward the inside of the container to form hook-like members engaging the top edges of the side walls of the container whereby said tabs will be held from downward displacement, and means located below the upper edge of the reinforcing wall for securing the extending flaps of the cover portion to the adjacent side walls of the container whereby said extending flaps of the cover portion will retain the tabs of the cover portion in contact with the upper portion of the adjacent side wall above the edge of the reinforcing wall to strengthen and add rigidity to the container.

9. A cover adapted to cooperate with the body portion of a rectangular container, said cover comprising a blank of sheet material suitably scored to provide a top wall, extending flaps on two opposed sides of the top wall adapted to be secured to the adjacent side walls of the body portion, flanges on the remaining sides of the top wall, tabs on each end of the flanges adapted to be folded to form additional flanges at the first mentioned sides of the top wall and means on the tabs adapted to engage the adjacent upper edges of the body portion to prevent downward displacement of the tabs when the cover is in position on the body portion.

HARRISON B. WALTER.