

Sept. 20, 1971

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3,606,078

CONTAINER AND BLANK THEREFOR

Filed Aug. 1, 1968

2 Sheets-Sheet 1

Fig. 1.

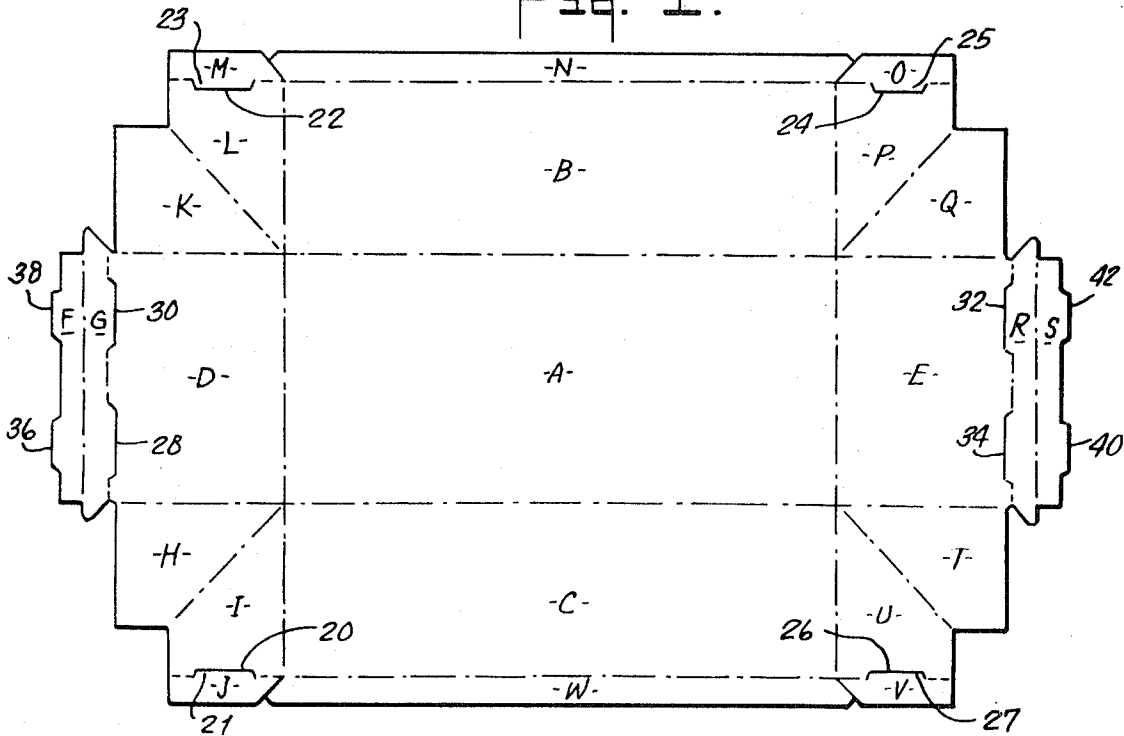


Fig. 2.

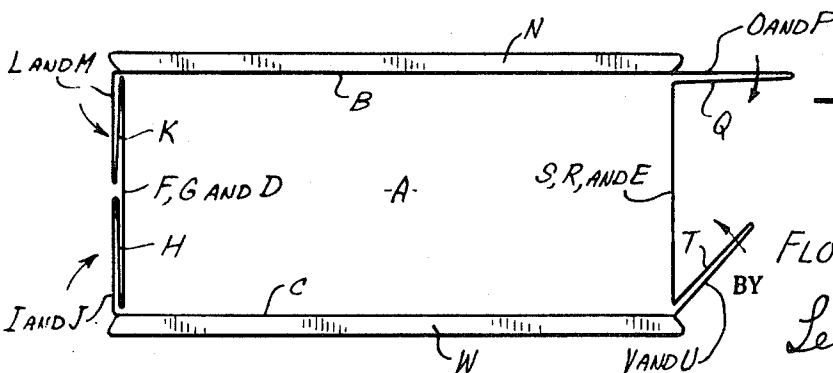
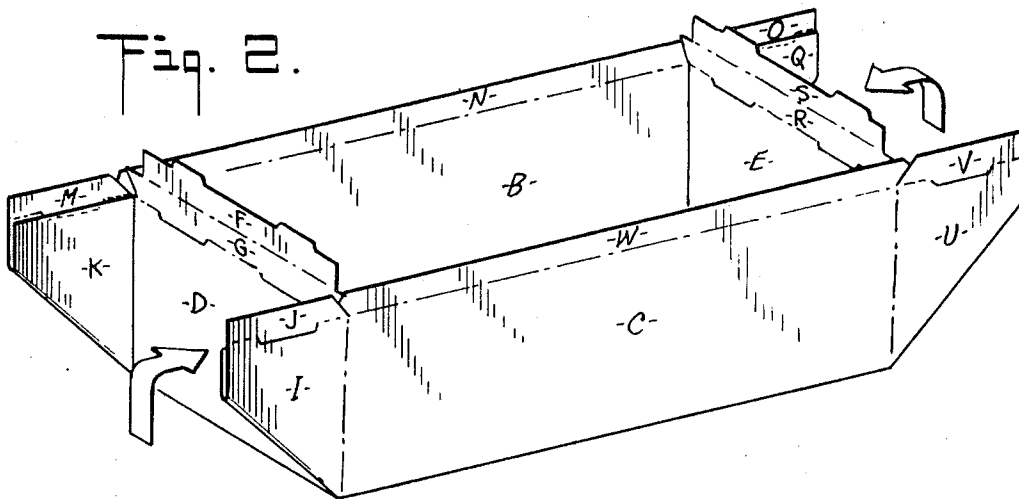


Fig. 3.

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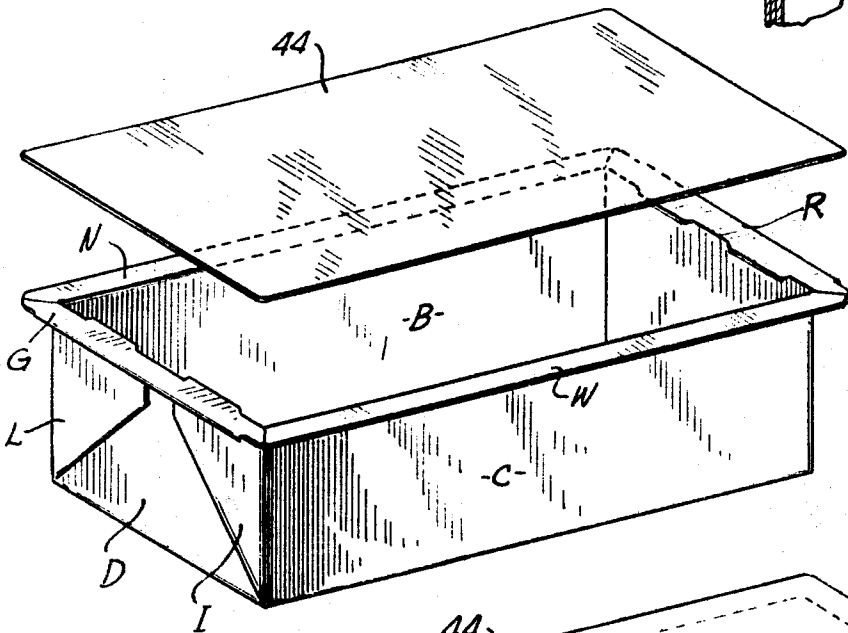
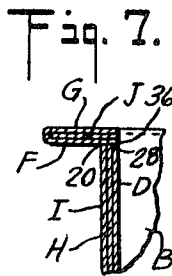
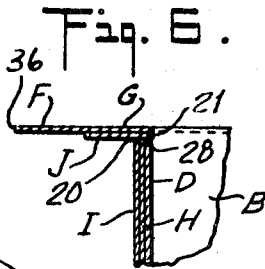
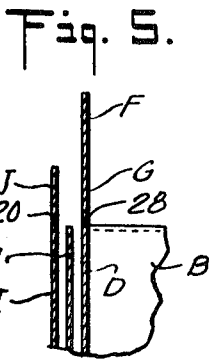
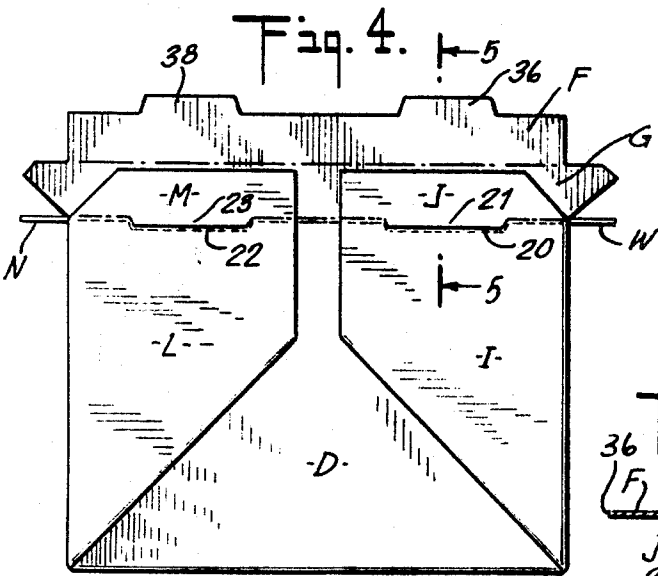
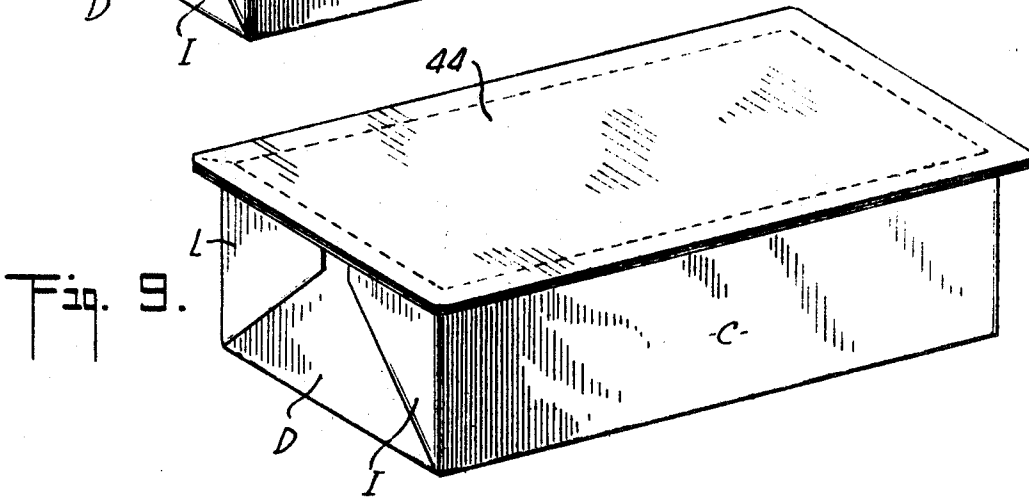


Fig. 8.



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CONTAINER AND BLANK THEREFOR

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8 Claims

ABSTRACT OF THE DISCLOSURE

A container and a blank for a container. The container is flanged at the tops of the sides and ends thereof. The flange at each end of the container is formed from extensions of the end panel of the container which have sandwiched therebetween locking flange panels that form extensions of the panels joining the end to the sides of the container.

BACKGROUND OF THE INVENTION

This invention relates to a container and a blank for the container. The invention has particular application to a flanged container suitable for holding a product therein, typically to be baked within the container.

In the past containers for holding a food product suitable for baking of the product therein have been fabricated from thin aluminum sheeting which is corrugated for strength. As a result, the sides and ends of the container have not been suitable for the inclusion of printed matter thereon, and the location of printed matter has been limited to the top of the container, a flat sheet of material such as foil-lined paperboard. The present invention provides a container for holding a food product, typically to be baked within the container, in which the container is formed from a flat blank of sheet material. A corrugated structure is not employed, so that when the blank is set up in the form of a container, printed matter can be included on the sides and ends as well as the top of the container.

BRIEF DESCRIPTION OF THE INVENTION

The present invention utilizes a flat blank of sheet material which is set up to form a flanged container with the flange extending about the tops of the ends and the sides of the container. The flange structure at each end of the container is of a sandwich construction adapted to engage locking flanges forming extensions of panels which join together the end and the sides of the container so as to lock the container in set-up condition. The flange provides a continuous surface to which the cover of the container may be easily sealed.

An object of the present invention accordingly is to provide a flanged container and a container blank therefor utilizing flat blank material.

A further object is to provide a flanged container in which the flange structure involves a locking of container panels to form the flange and to maintain the container in set-up condition.

A more complete understanding of the invention will be developed from the following detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of a container blank in accordance with the invention.

FIG. 2 is a perspective view of the blank of FIG. 1 partially set up in the formation of a container.

FIG. 3 is a plan view looking downwardly at the partially set-up container of FIG. 2 showing the completion of further steps in the formation of a container.

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FIG. 4 is an end view of the partially set-up container of FIG. 3.

FIG. 5 is a sectional view of the partially set-up container of FIG. 4, taken along section line 5—5 in FIG. 4.

FIGS. 6 and 7 are views similar to FIG. 5 showing the steps completed in forming a flange in accordance with the invention.

FIG. 8 is a perspective view of the completed container prior to the addition of a cover thereto.

FIG. 9 is a perspective view of the container of FIG. 8 with the cover affixed thereto.

DETAILED DESCRIPTION

Referring to FIG. 1, a container blank in accordance with the invention is suitably scored so as to form a bottom receptacle panel A, two side receptacle panels B and C, and two end receptacle panels D and E. Side flange panel N forms an extension of side panel B, and similarly side flange panel W forms an extension of side panel C. Panels F and G are extensions of the end panel D and constitute first and second end flange panels. R and S are similar end flange panels forming an extension of the end panel E. Panels H and I are joining panels that join together the end panel D and the side panel C. Panels H and I may be considered an extension of side panel C. Similar joining panels K, L and P, Q and T, U are formed in the blank so as to join all the side panels to the end panels. Panels M, O, J, and V are locking flange panels forming extensions of joining panels L, P, I, and U. Taking the locking flange panel J as an example, which constitutes an extension of joining panel I, a slit 20 is included in the joining panel I substantially along the score line that separates the locking flange panel J from the joining panel I. The slit 20 produces a tab 21 that is part of the locking flange panel J. Similar slits 22, 24, and 26 are included in the joining panels L, P, and U to produce corresponding tabs 23, 25, and 27 that are parts of the locking flange panels M, O, and V. The end receptacle panels D and E also are slit substantially along the score lines separating these end panels from the extensions thereof, as at 28 and 30 (in the end panel D) and at 32 and 34 (in the end panel E). Additionally, the flange panels F and G include tab members for locking purposes, i.e., tab members 36 and 38 that are part of the flange panel F and tab members 40 and 42 that are part of the flange panel S.

Referring to FIG. 2, a container is formed from the blank of FIG. 1 by raising the side panels B and C and the end panels D and E. Next the joining panels are bellows-folded about the score line therein in the forming of the ends of the container. For example, the joining panels H and I are bellows-folded about the score line therebetween, and the sandwich structure produced thereby is folded against the end panel D, as shown in FIG. 3. This is done for all of the joining panels K, L, and P, Q and T, U at the ends of the container, as shown in FIG. 3. At the same time the side flange panels N and W constituting extensions of the side panels B and C are folded about the score lines separating these panels from the side panels so that flanges N and W substantially perpendicular to the sides of the container are formed, as shown in FIGS. 3 and 4.

FIGS. 4 to 7 show the sequence of folding to complete the end of the container. The sectional view of FIG. 5 shows the panels at one end of the container prior to folding. As a first step, the flange panels F and G constituting an extension of the end panel D are folded outwardly and downwardly to a horizontal position, as shown in FIG. 6. During the downward folding of these two flange panels (about the score line separating these panels from the end panel D) the locking flange panels J and

M are bent downwardly (to horizontal positions) about the score line separating these panels from the associated joining panels I and L. The tabs 21 and 23 forming parts of the locking flange panels J and M extend through the slits 28 and 30 in the end panel D (see FIG. 6 in connection with tab 21). Next the flange panel F is bent 180° about the score line joining that flange panel with the flange panel G, as shown in FIG. 7. During this bending of the flange panel F, the locking flange panel J is sandwiched between the two flange panels F and G. In addition, the two tabs 36 and 38 forming a part of the flange panel F extend through the slits 20 and 22 in the joining panels I and L. In FIG. 7 tab 36 is shown extending through the slit 20. In addition, the tabs 36 and 38 also extend through the corresponding slits 28 and 30 in the end panel D. In FIG. 7 the tab 36 is shown extending through the slit 28.

It will thus be noted that at the ends of the container the flange panels (for example, F and G) form a sandwich with the locking flange panels (for example, J and M) therebetween. The sandwich provides a flange at the end of the container to be used for sealing a cover of the container. Additionally, since the locking flange panels J and M are "locked" in position, the end of the container cannot be easily opened. To this extent the tab members (for example, 21, 23, 36, and 38) constitute a locking or maintaining means that maintains in place the sandwich structure of the end flange and maintains the joining panels I, H and L, K in their sandwich configurations against the end panel D of the container.

FIG. 8 shows a completed container ready to receive a product and to be closed by a cover 44. The product is placed in the container and the cover applied thereto, as shown in FIG. 9.

As explained above, one of the principal advantages of the invention is that it provides a container which may be formed from a flat blank of stock. The blank stock may be any suitable material such as paperboard, plastic, metal or any combination of these materials, in any convenient thickness. Typically for baking purposes the blank material would be paperboard coated with metal foil. The lid or cover 44 may be attached by any means, such as through the use of an adhesive, a blend of plastic coatings, a shrink film constituting an overwrap of the entire container, and snap-on or slide-on paperboard configurations, to name a few examples. In any event, the sides and ends of the container are free from corrugations and may be used to contain printed matter thereon. The container of FIG. 9 therefore is not limited to the positioning of printed matter solely on the top of the container, as in corrugated designs in the past. It will also be noted that by virtue of the bellows-folds at the corners of the package a completely waterproof structure is provided, and the container is capable of holding both solids and liquids.

The closed container of FIG. 9 includes the flanged surfaces N, R, W, and G around the top edges of the sides and ends of the container essentially for sealing of the container. Typically the cover 44 is adhesively secured to the flanged surfaces, and no overwrap is needed. However, an overwrap, such as a film of heat shrinkable material, may be employed if desired. It will be noted that the corners of the flanged surface about at mitred joints. The corners need not be mitred, and any corner joint will suffice. What is desired, however, is a virtually continuous flange about the entire top edge of the container to provide an effective seal.

I claim:

1. A flanged container construction comprising a first receptacle panel, first and second flange panels constituting an extension of the first receptacle panel, a joining panel adjacent the first receptacle panel, a locking flange panel constituting an extension of said joining panel, said locking flange panel being sandwiched between said first and second flange panels, and means maintaining said

first and second flange panels against said locking flange panel when the sandwich of said first and second flange panels and locking flange panel is oriented substantially perpendicular to said first receptacle panel in order to form a flange for the container and to maintain the joining panel adjacent the first receptacle panel, and wherein said maintaining means comprises a tab member forming a part of one of the first and second flange panels which passes through a slit in said joining panel, and wherein said tab member extends also through a slit in the first receptacle panel.

2. A flanged container construction as defined in claim 1, wherein the slit in the joining panel produces a tab that is a part of said locking flange panel and which extends through the slit in the first receptacle panel to form a part of said maintaining means.

3. A flanged container construction comprising a first receptacle panel, first and second flange panels constituting an extension of the first receptacle panel, a joining panel adjacent the first receptacle panel, a locking flange panel constituting an extension of said joining panel, said locking flange panel being sandwiched between said first and second flange panels, and means maintaining said first and second flange panels against said locking flange panel when the sandwich of said first and second flange panels and locking flange panel is oriented substantially perpendicular to said first receptacle panel in order to form a flange for the container and to maintain the joining panel adjacent the first receptacle panel, wherein said first flange panel adjoins said first receptacle panel along a first score line, and said second flange panel adjoins said first flange panel along a second score line, and wherein said maintaining means comprises a tab member forming a part of the second flange panel which passes through a slit in said joining panel substantially along a score line separating said locking flange panel from said joining panel, and wherein said tab member extends also through a slit in the first receptacle panel substantially along said first score line.

4. A flanged container construction as defined in claim 3, wherein the slit in the joining panel produces a tab that is a part of said locking flange panel and which extends through the slit in the first receptacle panel to form a part of said maintaining means.

5. A container comprising two end panels and two side panels, each end panel being joined to each side panel by two joining panels that are bellows-folded so that one of the joining panels is sandwiched between the other joining panel and the end panel, first and second flange panels constituting an extension of each end panel and which are folded to sandwich therebetween a locking flange panel that constitutes an extension of one of each of said two joining panels, and means maintaining the first and second flange panels against the locking flange panels sandwiched therebetween when the sandwich of these panels is oriented substantially perpendicular to the end panel in order to form a flange for the container end and to maintain the joining panels in position against the end panel, wherein said maintaining means comprises tab members forming parts of one of the first and second flange panels which pass through slits in the joining panels, and wherein the tab members also extend through slits in the end panel.

6. A container as defined in claim 5, wherein the slits in the end panel to form a part of said maintaining said locking flange panels and which extend through the slits in the end panel to form a part of said maintaining means.

7. A blank for a container comprising a side panel and an end panel, the end panel including two flange panels constituting an extension thereof adapted to form a flange at the end of the container produced from the blank, a joining panel structure joining together the side and end panels, the joining panel structure including a locking flange panel adapted to be sandwiched between

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the two flange panels in the container formed from the blank, one of the two flange panels including tab means adapted to maintain the locking flange panel in said sandwich when the container is formed so as to lock the flange in position and to maintain the container in set-up condition, wherein said tab means comprises a tab and the joining panel structure is slit to receive said tab when the container is formed, and wherein the end panel is also slit to receive said tab when the container is formed.

8. A blank for a container as defined in claim 7, 10 wherein the slit in the joining panel structure produces another tab that is part of said locking flange and is adapted to extend through the slit in the receptacle panel when the container is formed.

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U.S. Cl. X.R.

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