

[54] COLLAPSIBLE CONTAINER

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229/51 TS, 426/112

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[58] Field of Search..... 206/46 R, 46 F; 229/1.5 B,
229/31 R, 51 TS, 51 AS, 41 C

[56] References Cited

UNITED STATES PATENTS

927,537	7/1909	Hothersall	229/31 R
1,446,014	2/1923	Lodge	229/1.5 B
1,490,909	4/1924	Bowerman	229/1.5 B
1,649,088	11/1927	Tinsley	229/34 R
2,758,771	8/1956	Bauer	229/1.5 B
3,119,494	1/1964	Rosenstiel	206/46 R
3,176,900	4/1965	Ciganenko	229/31 R
3,204,849	9/1965	Vinney	229/51 AS
3,423,007	1/1969	Christensson	229/31 R

3,423,008 1/1969 Mykleby 229/31 R
3,739,905 6/1973 Ward 229/23 BT

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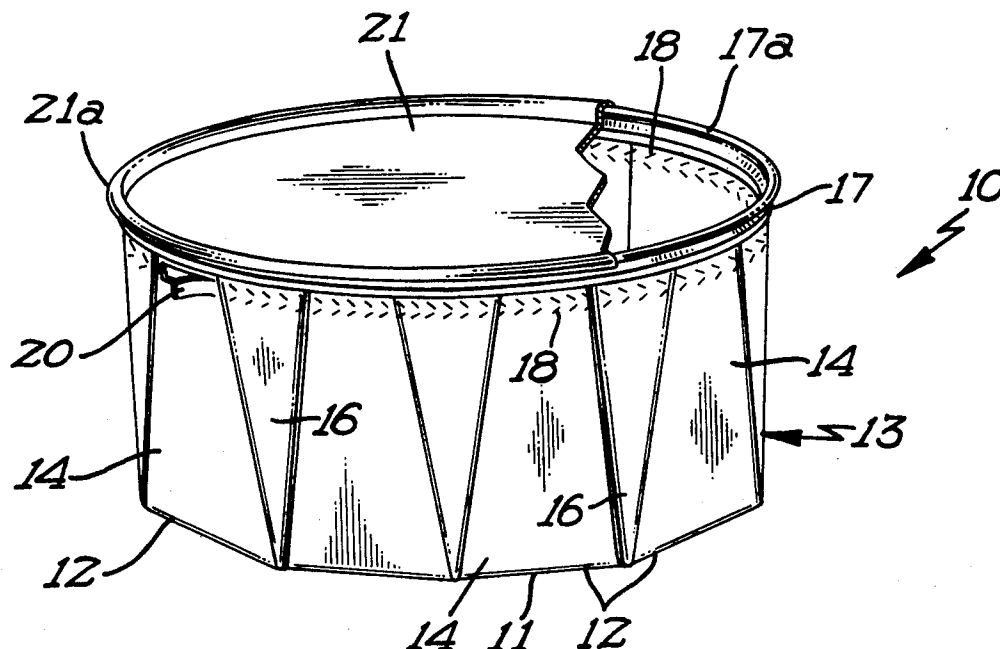
Attorney, Agent, or Firm—Williamson, Bains & Moore

[57]

ABSTRACT

A disposable collapsible container adapted to contain a food product, such as a sandwich or the like, and being formed of an impervious non-metallic material, such as paperboard. The container includes a bottom wall having an upstanding peripheral wall secured thereto and the container is of generally cylindrical configuration. The peripheral wall is made up of wall sections interconnected by pairs of flaps which are normally folded together. In one embodiment, a tear strip is provided for the peripheral wall and when removed allows the peripheral wall to be collapsed and expanded to form the container into a plate-like receptacle. In another embodiment, removal of the cover member allows collapsing of the container into a plate-like receptacle.

3 Claims, 7 Drawing Figures



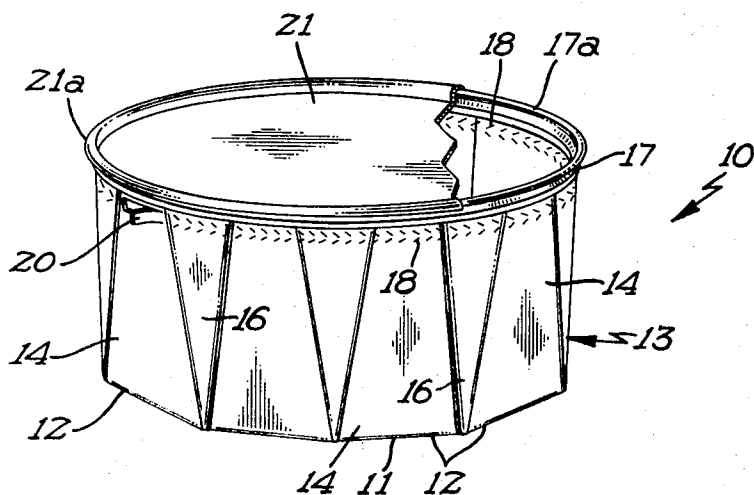


FIG 1

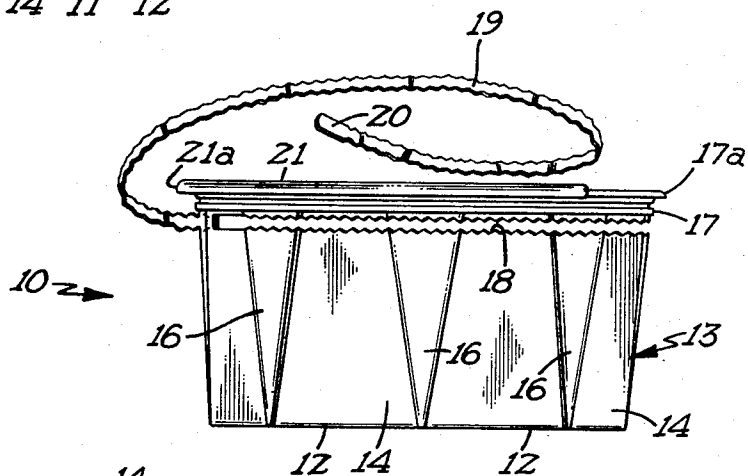


FIG 2

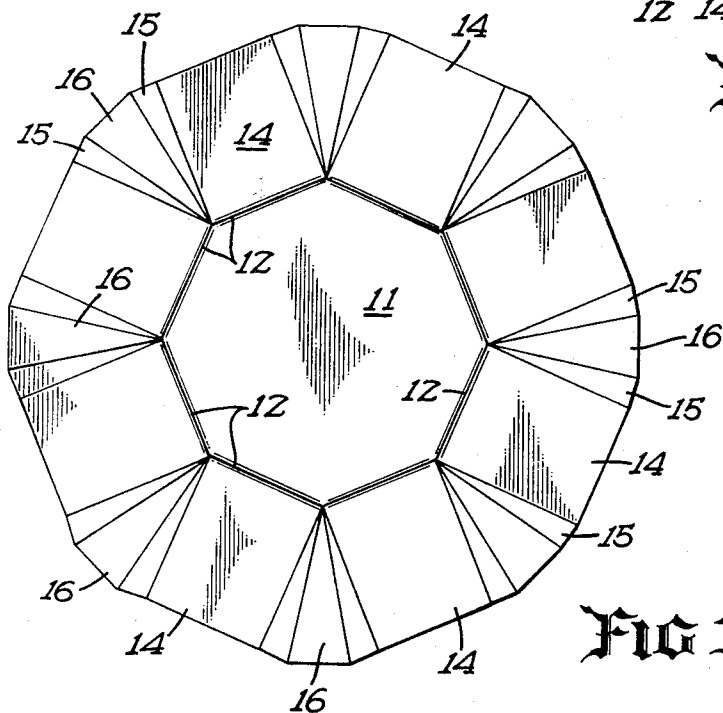
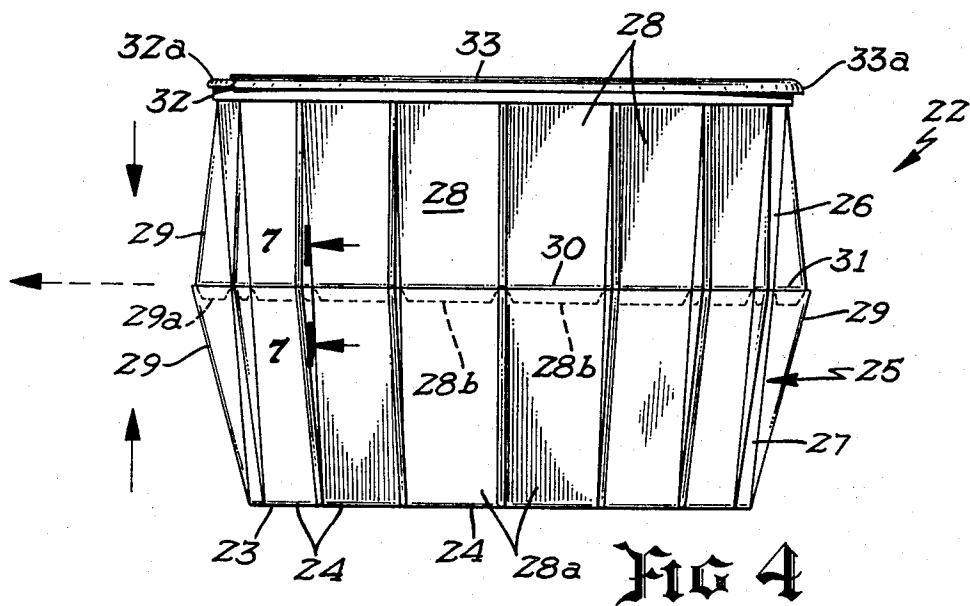
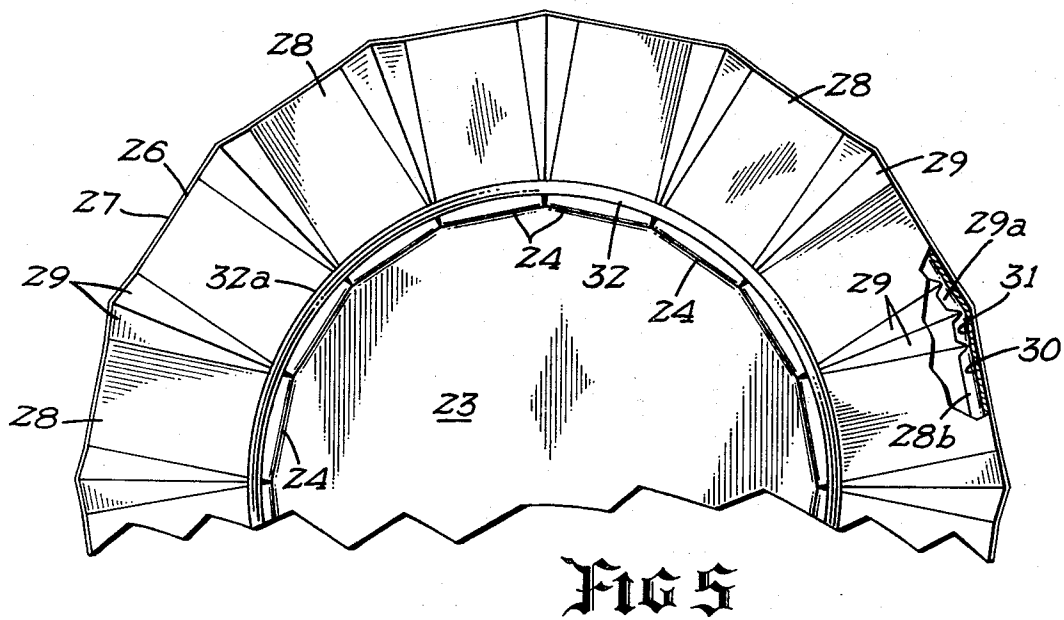
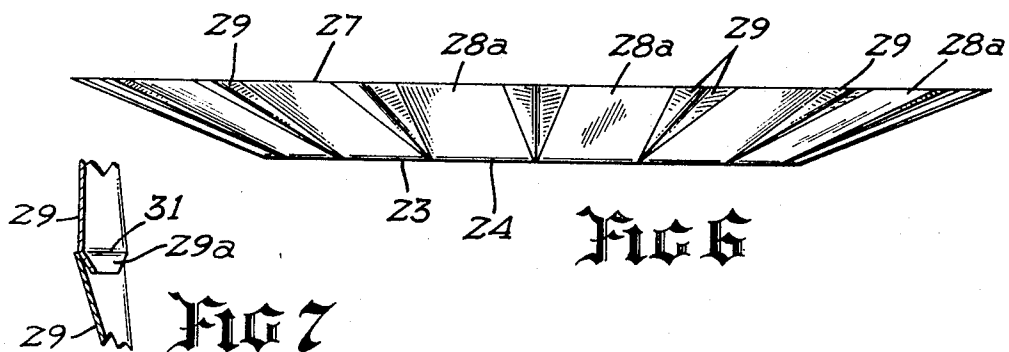


FIG 3



COLLAPSIBLE CONTAINER

SUMMARY OF THE INVENTION

In most drive-in type dining establishments, items of food are usually dispensed in a paper bag or a paper wrapping. In some establishments, sandwiches are dispensed in small cardboard boxes, which must be assembled and which are not air impervious and are therefore ineffective as an insulator. Further, in most of these establishments, no plate-type receptacles are provided upon which the food may be placed as it is eaten.

It is therefore a general object of this invention to provide a novel disposable collapsible impervious container, adapted to contain a food product, such as a sandwich, and which is readily collapsible into a plate-type receptacle upon which the food may be placed as it is eaten.

The novel disposable container is formed from a non-metallic material, preferably paperboard, and includes a bottom wall having an upstanding peripheral wall secured thereto. The peripheral wall includes a plurality of wall sections interconnected by pairs of flaps which are foldable and allow the peripheral wall to collapse into an expanded condition so that the container may be readily formed into a plate-type receptacle. In one embodiment, a tear strip is provided for the peripheral wall and when removed permits collapsing of the container. In another embodiment, a cover member retains the receptacle in an erect position, but when removed from the container allows collapsing thereof into a plate-type receptacle when the container contains a sandwich or the like. The present receptacles do not have to be assembled as most boxes or receptacles. Thus the present container is structured to receive a sandwich or the like without requiring assembly and thereby especially adaptable for fast food business.

These and other objects and advantages of this invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to the same or similar parts throughout the several views.

BRIEF DESCRIPTION OF THE FIGURES OF THE DRAWINGS

FIG. 1 is a perspective view of one embodiment of the invention;

FIG. 2 is a side elevational view thereof with the tear strip thereof partially removed;

FIG. 3 is a top plan view of the container in the collapsed position;

FIG. 4 is a side elevational view of a different embodiment thereof;

FIG. 5 is a fragmentary plan view of the container illustrated in FIG. 4 in a collapsed position;

FIG. 6 is a side elevational view of the embodiment of FIG. 4 in the collapsed position; and

FIG. 7 is a sectional view taken along line 7-7 and looking in the direction of the arrows.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings and more specifically to FIGS. 1 to 3, it will be seen that one embodiment of the novel disposable container, designated generally by the reference numeral 10 is there shown. The container is preferably formed from a suitable non-metallic material, preferably paperboard, and with the exception of

the cover member, the container is formed from a single blank of material. The container includes a substantially flat bottom wall 11 having substantially straight peripheral edge portions 12. In the embodiment shown, the included angle between adjacent edge portions 12 is obtuse and eight such edge portions are provided.

A peripheral wall 13 is integrally formed with the bottom wall 11 and projects upwardly therefrom. The peripheral wall 13 includes a plurality of substantially identical wall sections 14 which, as best seen in FIG. 3, are of generally rectangular configuration. The peripheral edge portions 12 of the bottom wall actually constitute fold lines between the bottom wall 11 and the peripheral wall sections. Each wall section 14 has a pair of wedge-shaped lateral flaps 15 integrally formed with the vertical edges thereof, and a pair of these wedge-shaped flaps is interconnected by a larger intermediate wedge-shaped flap 16. One vertical edge of each wedge-shaped flap 15 actually constitutes a fold line between the adjacent wall section 14, and the other vertical edge of each flap 15 actually constitutes a fold line with the associated intermediate flap 16. Referring now to FIG. 1, it will be seen that the flaps 15 are positioned against the outer surface of adjacent wall sections 13 and that each intermediate flap 16 overlies its associated pair of flaps 15. It will also be noted that the wall sections 13 when in the erect condition, as best seen in FIGS. 1 and 2, is of generally trapezoidal configuration.

The upper peripheral edge of the peripheral wall 13 has an annular lip member 17 secured thereto by a suitable adhesive. The lip member 17 has an outturned annular lip element 17a secured thereto. The wall sections 14, flaps 15 and flaps 16 are all perforated as at 18, the perforations being arranged in circular fashion along vertically spaced apart lines to define a tear strip 19. It will be noted that the tear strip 19 is located below the annular lip member 17 and is provided with an outwardly projecting tab end 20. A substantially flat cover member 21 is also provided having an annular downturned peripheral lip 21a which is engagable with the annular lip element 17a of the annular lip member. It is pointed out that the cover member and annular lip member 17 are also preferably formed of a paperboard material.

In use, the sandwich or other food product will be placed in the container 10 and the cover member 21 will be applied thereto. Since the container is of substantially impervious construction, the food product will be sealed and substantially insulated from the exterior. The cover, in the preferred embodiment, tightly engages the container so that the cover is actually a part of the container. The tear strip 19 may be quickly torn from the upper peripheral edge portion of the peripheral wall permitting access to the interior of the container and also permitting the container to be collapsed into a plate type receptacle. In this regard, the flaps 15 and 16 fold outwardly and permit the wall sections to also fold outwardly and downwardly. The collapsed container then forms an upwardly concave generally circular plate as best seen in FIG. 3.

It is also pointed out that the included angle between the wall sections 14 is obtuse when the container is in the erect position. Since the peripheral wall is comprised of a relatively large number of wall sections with obtuse angles between adjacent sections, the container 10 has a generally cylindrical configuration when in the

erect condition. Thus the receptacle very nicely accommodates many of the popular sandwich products which are also of generally circular configuration and which could be constructed in the receptacle if desired. The container 10 after use is disposable and since it is formed of paperboard material is readily degradable.

Referring now to FIG. 4, it will be seen that a different embodiment of the container or receptacle is designated generally by the reference numeral 22 and is also formed of a suitable paperboard material. The container 22 also includes a bottom wall 23 also having peripheral edge portions 24. A peripheral wall 23 is integrally formed with the bottom wall 23 and is comprised of an upper wall portion 26 and a lower wall portion 27.

The upper wall portion 26 is formed from a separate blank and is secured to the lower wall portion 27. In this regard, the upper wall portion 26 is comprised of generally rectangular wall sections 28 while the lower wall portion is comprised of generally rectangular wall sections 28a.

The wall sections 28 of the upper peripheral wall portion are interconnected together by a pair of wedge-shaped flaps 29 which are integral with these wall sections. Similarly, the wall sections 28a are interconnected by pairs of wedge-shaped flaps 29a. It will be noted that the vertical edge of the wall sections actually constitutes a fold line between the adjacent wedge-shaped flaps. Similarly, the vertical edges of adjacent flaps also constitute a fold line between these flaps.

In the embodiment shown, the upper wall sections 28a are provided with extension tabs 28b while the flaps 29 are also provided with extensions, 29b. The common edge defined between each extension tab 28b and the associated wall section is a transverse fold line 30. Similarly, the common edge between each flap 29 and its associated extension 29b is also a transverse fold line 31. The fold lines 30 and 31 are disposed in substantially a single transverse plane so that the lower wall section flairs upwardly and slightly outwardly while the upper wall section flairs downwardly and slightly outwardly to the central waist portion of the container.

An annular lip member 32 is secured to the upper peripheral edge portion of the peripheral wall 25 and is provided with an outturned annular lip element 32c. A removable cover member 33 is provided and has a downturned annular flange 33a which is engagable with the outturned lip element 32a of the annular lip member 32. It will be noted that the container 10 is of generally cylindrical configuration and is of imperforate construction. The container is adapted to contain a sandwich or the like in the manner of the embodiment of FIGS. 1 to 3. When the cover member is removed, the container may be collapsed into a plate type receptacle as illustrated in FIG. 6. In this respect, the upper wall portion 26 is moved downwardly in the direction of the arrows, as indicated in FIG. 4, while the lower wall portion 27 is urged upwardly. This collapses the peripheral wall into an expanded condition to form the plate type receptacle. This plate type receptacle actually corresponds in general configuration to a conventional paper plate on which food may be nicely placed.

From the foregoing, it will be seen that the collapsible impervious container discussed hereinabove serves as an effective air tight insulator for foods and is also readily collapsible into a plate type receptacle. These

multi-functional features make the container ideal for use in drive-in dining establishments.

Thus it will be seen that I have provided a novel disposable collapsible receptacle which is not only of simple and inexpensive construction, but one which functions in a more efficient manner than any heretofore known comparable receptacle.

What is claimed is:

1. A disposable container formed of an impervious, non-metallic material and adapted to contain a food product, such as a sandwich, comprising
 - a substantially flat bottom wall having a plurality of substantially straight edge portions of equal length and having an obtuse included angle between adjacent edge portions,
 - a symmetrical peripheral wall integral with said bottom and extending upwardly therefrom, said peripheral wall including a plurality of sections each having a length corresponding to an edge portion of the bottom wall, whereby said peripheral wall is of generally cylindrical configuration,
 - a plurality of pairs of lateral flaps, each pair of flaps interconnecting a pair of adjacent wall sections, a plurality of intermediate flaps, each interconnecting a pair of said lateral flaps, each pair of lateral flaps and each associated intermediate flap being folded adjacent each other whereby adjacent vertical edges of adjacent wall sections are disposed closely adjacent each other, each intermediate flap being substantially longer than each lateral flap, and each intermediate flap overlying the associated pair of lateral flaps and portions of a pair of wall sections,
 - a removable cover member engaging the upper edge of said peripheral wall, said cover member when removed, said flaps when folded outwardly, and said wall sections when folded outwardly permitting said receptacle to be expanded into an upwardly concave plate type receptacle.
2. The container as defined in claim 1 and a tear strip applied to the flaps and wall sections of said peripheral wall and being tearable therefrom to permit collapsing of the peripheral wall.
3. A disposable container formed of an impervious, non-metallic material and adapted to contain a food product, such as a sandwich comprising
 - a substantially flat bottom wall having a plurality of substantially straight edge portions of equal length and having an obtuse included angle between adjacent edge portions,
 - a symmetrical peripheral wall integral with said bottom and extending upwardly therefrom, said peripheral wall including an upper portion and a lower portion, each portion comprised of a plurality of wall sections, each section having a length corresponding to an edge portion of the bottom wall, said lower portion of the peripheral wall extending upwardly and outwardly and said upper portion of said peripheral wall extending downwardly and outwardly, each wall section of the upper portion being connected to the wall section of the lower portion and defining a transverse fold line therebetween, said fold lines between the wall sections of said upper portion and lower portion being disposed in substantially a single plane whereby the upper portion of the peripheral wall may be folded downwardly and the lower wall por-

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tions may be collapsed toward each other to expand the container into a plate type receptacle, a plurality of pairs of flaps, each pair of flaps interconnecting a pair of adjacent wall sections, and being folded adjacent each other whereby adjacent vertical edges of adjacent wall sections are disposed closely adjacent each other,

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a removable cover member engaging the upper edge of said peripheral wall, said cover member when removed, said flaps when folded outwardly, and said wall sections when folded outwardly permitting said receptacle to be expanded into an upwardly concave plate type receptacle.

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