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J. F. PETERS

2,234,193

CONTAINER

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Fig 1

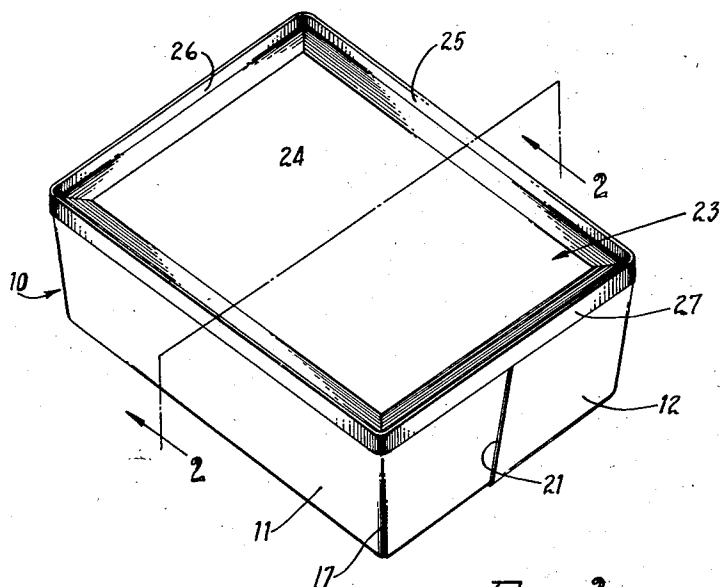


Fig 3

Fig 2

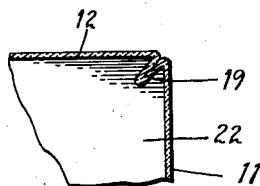
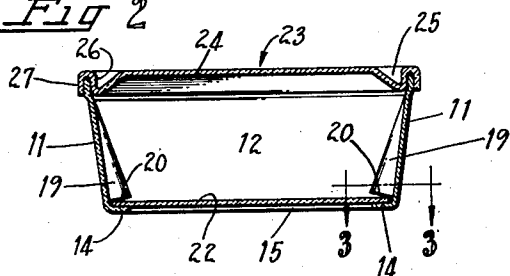
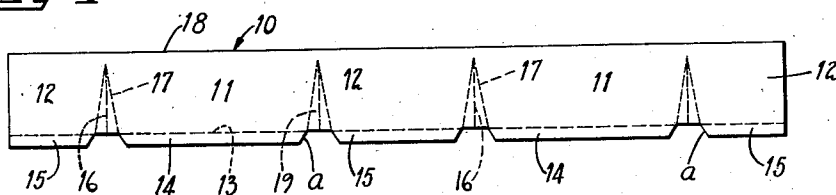


Fig 4



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UNITED STATES PATENT OFFICE

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CONTAINER

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5 Claims. (Cl. 229—23)

The invention relates to fiber or paper containers, particularly designed for comestibles such as frozen foods and the like, and has for its objects to provide certain new and useful improvements in food containers of this character.

A primary object of the invention is to provide a simple economical paper or fiber food container of the character described wherein provision is made for forming the container body of a single strip of material without corner joints and adequately reinforcing the corners of the container by inwardly tucked body wall portions formed integrally with the fiber strip of which the body is constructed.

A further object of the invention is to provide a food container of the character described wherein the integrally formed corner reinforcement means also serves as a locking and positioning abutment to rigidly and permanently locate the bottom wall or disk of the receptacle.

A still further object is to provide a paper or fiber container wherein provision is made for rendering the same liquid and moisture proof and hermetically sealed with its contained product, while at the same time insuring the provision of a completely sterilized container for the reception of such perishable or other product.

A further object of the invention is to provide a paper or fiber container of simple construction and composed of a minimum of parts, the finished container being capable and susceptible of being coated with paraffin or other wax-like material to augment its advantages as an economical and inexpensive receptacle for perishable food products and the like.

By the invention the body wall of the finished container is preferably of slightly tapered formation, such for example as is present in the well known berry box.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

In said drawing—

Fig. 1 is a perspective view of the assembled container showing the cover applied.

Fig. 2 is a transverse vertical sectional view on line 2—2 of Fig. 1.

Fig. 3 is a fragmentary horizontal section on line 3—3 of Fig. 2.

Fig. 4 is a plan view of the fiber or paper

blank which enters into the construction of the container body.

Referring to the drawing, 10 indicates generally the body blank which is formed of fiber or other relatively heavy paper material, said blank including opposite side wall portions 11 and end wall portions 12. The blank may be partially perforated or scored as indicated at 13 adjacent its bottom to define fold lines setting off inwardly foldable side flange portions 14 and end flange portions 15. Vertically disposed fold or score lines 16 are provided to define and set off the corner portions of the blank when the same is folded to constitute the body of the container. As best seen in Fig. 4 the vertically disposed fold or score lines 16 do not extend entirely to the top of the blank. At each corner portion of the body blank there are provided inclined pairs of crease or fold lines 17, extending downwardly from the top of each fold or score line 16 to the bottom of the blank to intersect with the end of each flange portion 13, 14 at a locality where the blank is cut away as indicated at *a* to set off such flange portions. The top edge 18 of the body blank is not flanged, but preferably constitutes an open upper non-flanged end of the container body.

In constructing the body the blank is first folded along the corner fold lines 16 into substantially rectangular form after which the corner portions are again folded along the tapered lines 17 to produce inwardly tucked in corner portions or pleats 19 of double thickness, as best seen in Figs. 2 and 3. This inward tucking in of the corner portions 19 transforms the body blank from a straight wall container body into a container having downwardly and inwardly inclined side and end walls.

The material of the blank which enters into the tucked-in portions or pleats 19 also tapers downwardly and inwardly as best seen in Fig. 2, so as to constitute at its lower end an abutment or shoulder 20 at each corner of the folded container body.

After the inwardly tucked pleats are formed and provided at the corner portions of the blank, the wall members 12 at one end of the blank are lapped over one another and suitably secured, as by staples, adhesive or both, so as to constitute a secure imperforate and hermetic side seam 21. The invention also contemplates if desired forming the pleat members 19 after the meeting ends of the body blank are lapped over one another and suitably secured together.

A bottom wall member or disk 22 is provided

and may be formed of similar relatively stiff paper or fiber material. Said bottom wall member is inserted into the open lower or bottom end of the formed container body until it seats
5 against the lower shoulder portions 20 of the inwardly tucked corner pleats 19. The side and end flange portions 14 and 15 are then folded inwardly along the fold or score lines 13 and are adhesively secured, as by a suitable preapplied
10 thermoplastic adhesive, to the marginal edges of the bottom wall member 22. From this construction it will be apparent that the bottom wall member is securely attached around its periphery to the inwardly turned flange portions 14
15 and 15 of the body blank, and are pressed thereby tightly against the inwardly tucked pleats 19 at each corner of the inwardly and downwardly tapered container body.

A fiber or paper cover member 23 is provided and preferably includes a central raised rectangular panel portion 24 defined by an annular groove or channel 25. The marginal edges of the cover are suitably formed or pressed into U-shape, defined by an upstanding inner wall
25 portion 26 terminating in an outwardly and downwardly extending marginal flange or outer portion 27. After the container is filled with its product, the cover is applied over the upper ends of the straight or non-flanged side walls of the
30 body as best seen in Fig. 2, and as in the instance of a slip cover.

The open end of the container body enters into the annular recess defined by the spaced marginal walls 26 and 27 of the cover. A suitable thermoplastic adhesive, for example a vinylacetate cement, is preferably pre-applied to both
35 sides of the upper open end of the container body or to the recessed portion of the cover member with which said body wall is engaged. A suitable squeezing head or die is employed to firmly and adhesively secure the cover to the
40 body so as to form an hermetic sealed joint to protect the contents of the container against contamination and contact with the atmosphere. The annular channel 25 of the cover permits the squeezing head to be applied in the manner described to form the sealed union between the
45 container and cover at the upper end of the former. By terminating the corner pleat construction short of the upper edge of the body wall blank member, as best seen in Fig. 4, there is no undue thickness provided at the open end
50 of the body, which otherwise might tend to prevent a complete hermetically sealed union between the container and its cover.

The invention contemplates if desired first applying and adhesively securing the cover to the
60 body and then filling the container from the bottom before the latter is applied and secured in position, also in the manner above explained.

From the foregoing description it will be apparent that the invention provides a very simple
65 but rigid inexpensive fiber or paper container for hermetically sealing perishable food products therein such for example as frozen foods, which it is desired to protect and maintain in frozen
70 condition until the container is opened for consumption of its contents. The provision of the inwardly tucked corner portions or pleats 19 not only provides a container body of slightly tapered configuration, but also serves as an abutment
75 against which the bottom wall of the container is securely clamped by the inwardly turned body

flange portions 14 and 15 adhesively secured thereto.

It will be further observed that the improved container body construction provides a one-piece
5 body wall having no joints at the corners which might be apt to leak, and there is no necessity for reinforcing the corners of the body other than the adequate reinforcement which is provided by the inwardly tucked pleats 19 formed
10 integrally with the one-piece body wall member or strip.

Prior to filling the container with its product and closing the same, the latter and its cover are preferably completely coated with paraffin on its
15 inner and outer surfaces, as by passing the container parts through a bath of melted paraffin or other wax-like material, to the end that the container will be completely sterilized for the reception of a perishable food product, and also
20 rendered more completely liquid and moisture proof.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent
25 that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being
30 merely a preferred embodiment thereof.

I claim:

1. A container for comestibles and the like, comprising a folded rectangular body member secured together at its meeting edges in a side
35 seam joint, said body member including inwardly turned bottom flange portions, the corner portions of said body member each having an inwardly tucked tapered reinforcing pleat member formed integrally with the body wall material,
40 the greatest width of said pleat members being adjacent the bottom of the box, and a bottom wall member enclosed within the body walls and clamped between said inwardly turned bottom flange portions and the lower ends of said pleat
45 members.

2. A fiber container for frozen foods and the like, comprising a folded rectangular body member formed of a single strip of material secured
50 together at its meeting edges in a side seam joint, said body member including integrally formed inwardly turned bottom flange portions, the corner portions of said body member each having an inwardly tucked tapered reinforcing pleat member formed integrally with the body wall material and
55 terminating in said body wall below the upper end thereof to constitute a container body of tapered configuration, and a separate bottom wall member enclosed within the body walls and clamped between said inwardly turned bottom flange portions and the lower ends of said pleat
60 members and secured to the former.

3. A fiber container for frozen foods and the like, comprising a folded rectangular body member formed of a single strip of material adhesively
65 secured together at its meeting edges in a side seam joint, said body member including integrally formed inwardly turned bottom flange portions, the corner portions of said body member each having an inwardly tucked tapered reinforcing pleat member formed integrally with the body
70 wall material, a separate bottom wall member enclosed within the body walls and clamped between said inwardly turned bottom flange portions and the lower ends of said pleat members and adhesively secured in position, and a cover
75

member having a peripheral channel for receiving the upper portion of said walls at the open end of said body member and secured thereto, whereby to provide an hermetic seal for the container.

- 5 4. A fiber container for frozen foods and the like, comprising a folded rectangular body member formed of a single strip of material secured together at its meeting edges in a side seam joint, said body member including integrally formed
10 inwardly turned bottom flange portions, the corner portions of said body member each having an inwardly tucked tapered reinforcing pleat member formed integrally with the body wall material and terminating in said body wall be-
15 low the upper end thereof to constitute a container body of tapered configuration, a separate bottom wall member enclosed within the body walls and clamped between said inwardly turned bottom flange portions and the lower ends of said
20 pleat members and secured to the former, and a slip cover member having a peripheral channel for receiving the upper portion of said walls at the open end of said body member and hermetically secured thereto.

5. A fiber container for frozen foods and the like, comprising a folded rectangular body member formed of a single strip of material adhesively secured together at its meeting edges in a side seam joint, said body member including
5 integrally formed inwardly turned bottom flange portions, the corner portions of said body member each having an inwardly tucked tapered reinforcing pleat member of double thickness formed integrally with the body wall material
10 and terminating in said body wall below the upper end thereof to constitute a container body of tapered configuration, a separate bottom wall member enclosed within the body walls and clamped between said inwardly turned bottom
15 flange portions and the lower ends of said pleat members and adhesively secured to the former, and a slip cover member having a peripheral channel for receiving the upper portion of said walls at the open end of said body member and
20 adhesively secured thereto, whereby to provide an hermetic seal for the container.

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