

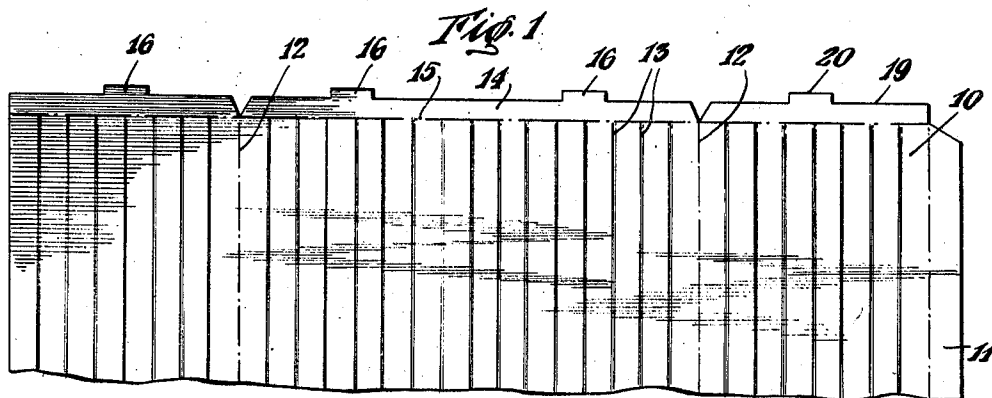
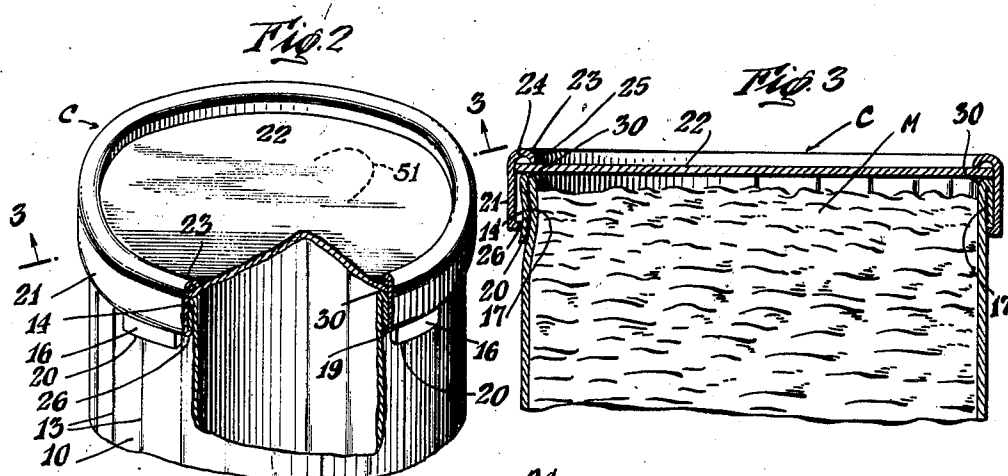
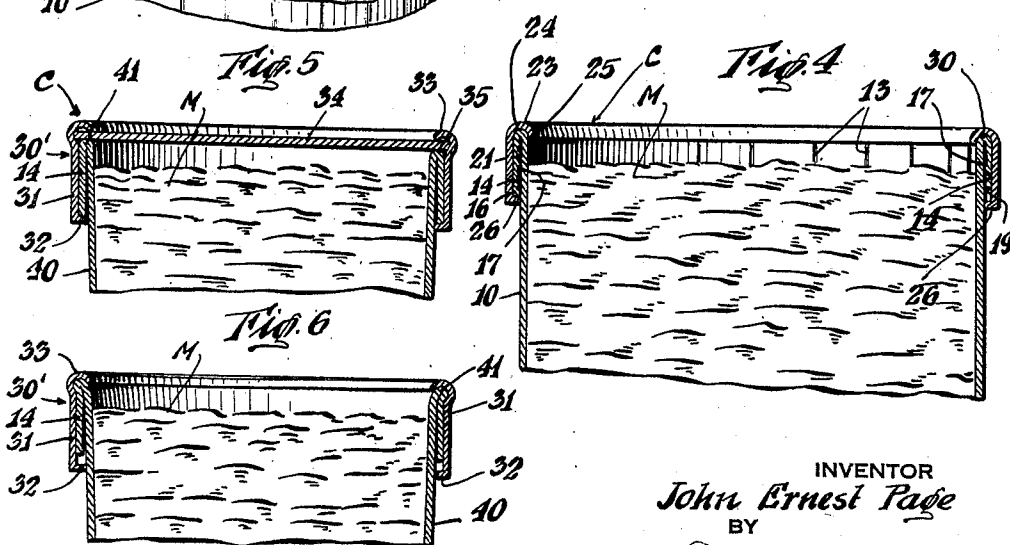
Nov. 1, 1938.

J. E. PAGE

2,134,984

CONTAINER COVER

Filed May 20, 1936



INVENTOR
John Ernest Page
BY
Albert M. Austin
ATTORNEY

UNITED STATES PATENT OFFICE

2,134,984

CONTAINER COVER

John Ernest Page, Sydney, Australia, assignor to President and Directors of the Manhattan Company, a corporation of New York, as trustee for Gibson-Patent Containers, Ltd., a corporation of New South Wales, Australia

Application May 20, 1936, Serial No. 80,686

5 Claims. (Cl. 229—5.7)

This invention relates to container covers and more particularly to an improved cover adapted to be securely locked to the container body to reinforce and strengthen the same against inward collapse. This application is a continuation in part of my copending application Serial No. 600,843, filed March 24, 1932, now Patent No. 2,053,679, issued September 8, 1936.

In containers having bodies made of flexible or collapsible material, such as paperboard, it is often desirable to provide the top thereof with a strong and relatively rigid rim which will reinforce the top edge of the body and maintain the body in the desired rigid shape. For example, it has become customary to package ice cream in containers having cylindrically shaped bodies formed of paperboard material suitably scored to permit collapse thereof in a substantially flat condition during shipment and storage. The bottom closure is then assembled to the container body and the container set up for use by the packer as required.

Covers for such containers have heretofore been provided comprising a metal rim and a removable paperboard end piece. The fully assembled cover is applied and locked to the container body when the contents have been inserted. The container with the liquid or semi-liquid cream therein is then stored in the freezing room where the cream is frozen prior to delivery to the retailer or consumer. Access to the contents is had by removing the paperboard end piece, the rim being left upon the container body to reinforce the same while the contents are being removed.

Paperboard containers for ice cream are generally made in two and one-half gallon or five gallon sizes, although containers holding anywhere from one to ten gallons are sometimes used. In dispensing the individual portions of ice cream from these paperboard containers, they are often subjected to rough handling with the result that the upper ends of the containers collapse inwardly by reason of the fact that the upper ends of the paperboard bodies become released from the shape-maintaining rim.

In accordance with this invention the cover flange and the container body is so constructed that the cover will firmly grip and engage the container body when the completed cover, including the shape-maintaining rim and the removable end piece, is applied thereto. When access to the contents is desired the end piece is torn loose and irreplaceably removed. The cover assembly is so constructed that the cover cannot be removed except by tearing out the end piece, thus leaving glaring evidence that access to the contents has been had. When the end piece has been removed the cover rim can be forced into firm gripping and locking engage-

ment with the upper end of the container body by a quickly executed downward pressure exerted on the rim. When the cover rim has thus been forced into position the container body cannot be forced inwardly without taking the rim with it. The cover rim is preferably made of metallic or other relatively rigid material so that considerable force is required to change its shape.

An object of this invention is to provide an improved container and cover assembly in which the cover rim firmly grips the upper end of the container body to maintain its predetermined shape and prevent inward collapse thereof when the paperboard end piece has been removed.

Another object of this invention is to provide an improved container and cover assembly wherein access to the container is achieved by removing the top portion of the cover, the rim or flange portion of the cover remaining on the container body to reinforce the same and positively maintain the desired predetermined shape thereof.

Still another object of this invention is to provide an improved cover construction particularly adapted for use in association with a flexible or collapsible container body.

Another object of this invention is to provide an improved cover which can be economically and inexpensively produced, which can be easily and quickly applied to the container body, which is provided with an end portion quickly removable to permit unobstructed access to the container contents, the rim portion of the cover firmly remaining on the container body in firm gripping engagement therewith, to positively and rigidly maintain the container body in the desired predetermined shape and against inward collapse as the contents are removed.

Other objects of this invention and advantages possessed by my improved construction will become apparent as the disclosure proceeds.

Although the novel features which are believed to be characteristic of this invention will be particularly pointed out in the claims appended hereto, the invention itself, as to its objects and advantages, and the manner in which it may be carried out, may be better understood by referring to the following description taken in connection with the accompanying drawing forming a part thereof, in which:

Fig. 1 is a plan view of a fragmentary portion of a paperboard blank from which my improved containers may be formed;

Fig. 2 is a perspective view of my improved cover and body assembly, certain parts being broken away to illustrate certain features of the construction;

Fig. 3 is a vertical cross-sectional view through

the container and cover assembly, this view being taken on line 3—3 of Fig. 2;

Fig. 4 is a transverse cross-sectional view through the container, this view showing the paperboard end piece removed and the cover rim firmly locked to the upper end of the container body to reinforce the same and rigidly maintain the shape thereof;

Fig. 5 is a vertical cross-sectional view through a container and cover assembly in which the cover rim having a somewhat modified cross-sectional shape is shown; and

Fig. 6 is a cross-sectional view of the container and cover assembly shown in Fig. 5 with the end piece removed, leaving the cover rim locked to and in gripping engagement with the upper end of the container body.

Similar reference characters refer to similar parts throughout the several views of the drawing and specification.

I have shown my improved cover construction as applied to a container body formed of flexible paperboard as is now commonly used in the assembly of containers for the packaging of ice cream. It is understood, however, that my improved cover construction can be applied to other container bodies than the body illustrated in the drawing. For the purpose of illustration only, therefore, I have shown in Fig. 1 the upper portion of a container-forming blank 10 having a tab portion 11 which may be glued, stitched, stapled, or otherwise secured to the opposite vertical side edge of the blank to provide a container body of generally tubular form. The container body may be provided with a pair of diametrically spaced fold lines 12 which permit the tubular body to be collapsed into substantially flat condition during shipment and storage. The container body may be provided with a plurality of intermediate crease lines 13 which facilitate the shaping of the blank into generally cylindrical form. The crease lines 13 also permit a certain degree of lateral expansion of the container body when material such as ice cream which expands upon freezing is packed therein. It is understood, however, that this invention is not limited to paperboard bodies formed from blanks such as shown in Fig. 1, but is also admirably adapted for use with container bodies formed from spirally wound paperboard and other fibrous, composition or metallic materials which may be either cylindrical or conical in form, or circular, arcuate or polygonal in cross-section.

The upper end of the container body 10 is provided with an outwardly projecting element, such as a rim or flange 14 to which the cover rim may be locked. In the form shown in Figs. 1, 2 and 3 the flange 14 is formed as an integral part of the body forming blank 10, being hinged thereto along the transverse score line 15. In some instances, it may be desirable to secure the integrally formed flange 14 to the body wall, as by adhesive 17, as shown in Figs. 3 and 4. To permit convenient bending of the flange portion 14 when formed integrally with the body wall, it may be found desirable to provide V-cuts or slots 18 at spaced intervals therein, as shown in Fig. 1, to facilitate the bending of the flange 14 over the body wall. It is understood, however, that the flange or rim 14 may be separately formed and suitably secured to the outside surface of the body walls as by staples or adhesive 17. The flange portion 14 extends down along the outside face of the body wall a distance cor-

responding to the depth of the cover flange when the assembled cover is in closed position on the container. The rim portion 14 is also provided with spaced lug elements 16 with which the cover flange interlocks when the paperboard end piece of the cover is removed, as will hereinafter be described.

The container cover C, as shown more particularly in Figs. 2, 3 and 4, comprises generally a cover rim which is preferably made of relatively strong, rigid material, such as metal, and a removable paperboard end piece 22 which seats within a bead portion 23. The end piece 22 is preferably of such size as to seat on the top edge 30 of the container body, as shown in Fig. 3, the inturned bead portion 23 of the cover flange preventing unauthorized removal of the paperboard end piece when the cover rim is locked to the container body. The side wall portion 21 of the cover rim is provided with an inwardly projecting lip portion 26 which is so positioned and arranged that it will seat under and engage the lower edge 19 of the flange portion 14 of the container body. It should be here noted that the projecting lugs 16 associated with the body flange 14 are of such size and so spaced as to give the lip portion 26 of the cover rim ample opportunity to grip the lower edge 19 of the flange 14 at points between the lug portions 16. The outward expansible pressure of the contents M forces the body outwardly so as to retain the lower edge 19 of the flange 14 in firm locking engagement with the lip portion 26 when the assembled cover is applied thereto, the container body adjacent the lugs 16 buckling inwardly to a slight degree, as shown in Fig. 3. Thus the cover assembly C is secured and locked in position during the shipment and storage of the packed contents. If desired, the inturned lip 26 of the cover rim may be turned upwardly at a slight reentrant angle, as shown in Figs. 3 and 4.

When the contents of the container are to be removed, the paperboard end piece is pulled out from the cover assembly by an upward pull on the same. The cover 22 may be provided with a break-in perforated portion 51 which can be broken by the hand or with a suitable instrument and the paperboard end piece 22 thus grasped and removed.

The upper end of the body may now be held in the desired predetermined shape, prevented from collapsing or buckling inwardly, by forcing the cover rim downwardly until the inturned lip portion 26 thereof snaps into interlocking engagement with the free edges 20 of the projecting lugs 16 of the body flange. When thus forced into position the lip portion 26 will engage the free edge 20 of the lug projection 16 and the inner surface 24 of the bead portion 23 of the cover will seat over the top edge 30 of the container body. The inside surface 24 of the bead 23 is preferably so shaped as to smoothly conform to the contour of the upper edge 30 of the container body, in which position the downturned edge portion 25 of the cover rim will engage the inside face of the body wall. The downturned portion 25 of the cover rim is held closely seated against the inside face of the body wall 10 when the lip portion 26 is in interlocking engagement with the free edges 20 of the lugs 16 of the body flange. It is thus seen that the cover rim firmly holds the upper end of the container body in its proper predetermined shape and positively prevents inward collapse or separation thereof from the

stiff reinforcing and shape-maintaining cover rim.

This improved cover construction is highly desirable in the packaging of ice cream and like materials in containers having collapsible bodies which require a reinforcement at the top thereof to prevent inward collapse when the contents are being removed. When the cover rim and container body is thus constructed the cover flange positively retains the upper end of the container body in the desired shape no matter how flexible the body and no matter how many collapsing score lines are provided therein. The container body may be provided with any desired form of bottom closure, which forms no part of this invention and need not be further described.

There is shown in Figs. 5 and 6 a body and cover assembly of slightly modified form. The body portion 40 of the container is shown slightly conical in shape and the flange portion 14 of the container body is in this form preferably left unsecured to the body side wall. The cover member C comprises a rim piece 30' which is preferably made of relatively strong rigid material, such as non-corroding metal. The rim piece comprises a side wall portion 31, an inturned lip portion 32 at its lower edge, and an inturned bead portion 33 at the top edge thereof. A removable cover piece 34, which may be made of relatively stiff, strong fibreboard material, has a peripheral edge 35 thereof fitted within and gripped by the inturned bead portion 33 to form a complete assembled cover. It will be noted that the bead portion 33 of the cover rim is so contoured as to engage the upper edge 41 of the container body, thus reinforcing the same and preventing inward collapse thereof. In this form the bead 33 is pressed into gripping position with the upper edge 41 of the container body when the paperboard end piece 34 is removed, and the friction exerted between the flange portion 14 and side wall portion 31 of the cover rim and other parts of the cover rim and body retain the cover rim in place. The position of the cover rim when the paperboard end piece 34 is removed, is fully shown in Fig. 6.

It is now seen that there has been provided a cover and body assembly for containers in which the relatively rigid cover rim remains on the container body when the paperboard end piece has been removed, the cover rim and body being so complementarily constructed as to firmly interlock together and prevent inward collapse or buckling of the body. The bead portions 23 and 33 of the cover rims are shaped to closely fit the top edges 30 and 41 of the respective container bodies and do not project into the bodies in a manner which will interfere with the efficient removal of the contents. The construction herein shown is economical to manufacture and can be associated with container bodies of any shape or form and made from any suitable material.

While certain novel features of the invention have been disclosed and are pointed out in the annexed claims, it will be understood that various omissions, substitutions and changes may be made by those skilled in the art without departing from the spirit of the invention.

What is claimed is:

1. A container of the character described including, a collapsible body member and a cover member adapted to telescope over one end of said body member, said cover member including

a relatively stiff rim portion adapted to grip the body member, a removable cover piece associated with said rim permitting access to the contents, said rim having a bead portion retaining said end piece in container-closing position, said bead being so shaped that when the cover piece is removed said bead may be forced into gripping engagement with the upper edge of the container body to prevent inward collapse thereof, and cooperating projections associated with said rim and body member for retaining said bead in fixed gripping engagement with said upper edge.

2. An improved container including, a collapsible body member having an outturned flange formed at one edge thereof, lug portions projecting from said flange, a cover member including a relatively stiff rim portion and a removable end piece, said rim portion having an inwardly extending lip adapted to interlock with said flange when said end piece is in container-closing position, said lip being arranged to be forced into interlocking engagement with said lug portions when said end piece has been removed.

3. A container and cover combination including, a container body and a cover member adapted to telescope over the end of said body, said cover member including a relatively stiff rim piece and a paperboard end piece, said rim piece having a bead portion normally overhanging the peripheral portion of said end piece when the end piece is in container-closing position, said end piece being removable from the rim piece when access to the contents of the container is desired, said container body and rim piece having cooperating means to lock said rim piece and end piece in container-closing position, said rim piece and container body having additional cooperating locking means associated therewith to lock the bead portion of said rim piece firmly to the upper edge of the body when the paperboard end piece has been removed.

4. A container and cover combination including, a container body and a cover member adapted to telescope over one end of the container body, said cover member including a relatively stiff rim piece and a paperboard end piece, said container body and rim piece having cooperating means to lock said rim piece and end piece in container-closing position, said rim piece having means to grip the upper edge of the container body preventing inward collapse or flexure thereof when the paperboard end piece has been removed to permit access to the contents, and interlocking means associated with said rim and body adapted to fixedly retain said gripping means in gripping engagement with the upper edge of the container body.

5. An improved container including, a body member having an outturned flange formed on one end thereof, a cover member including a relatively stiff rim portion and a removable end piece adapted to telescope over said container body and engage said outturned flange, said rim portion having a bead formation at the upper edge thereof adapted to seat over and grip the upper edge of the container body when the end piece has been removed, and cooperating projections associated with said rim and container body operative to fixedly retain said bead formation in gripping engagement with the upper edge of the container body.

JOHN ERNEST PAGE.