Feb. 9, 1943. A. E. COLE 2,310,398

COVER CONSTRUCTION

Filed Sept. 16, 1940 2 Sheets-Sheet 1

Fig. 1

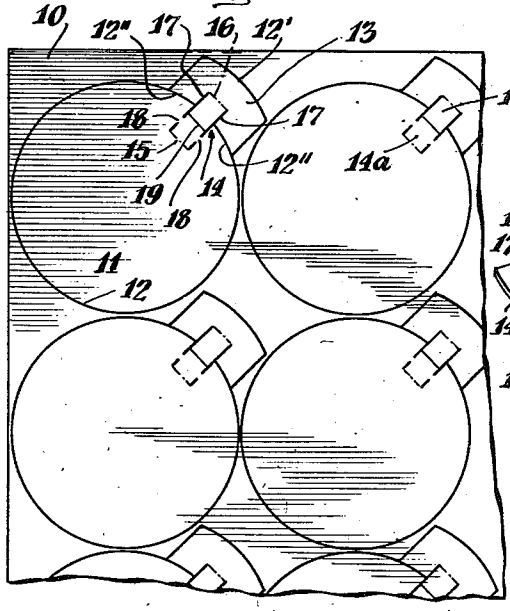


Fig. 2

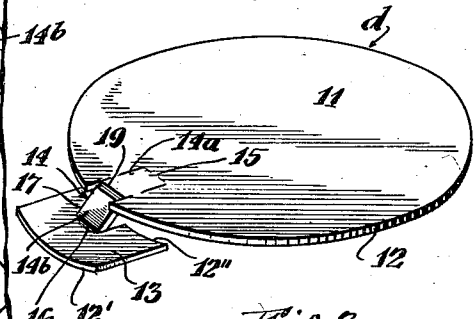


Fig. 3

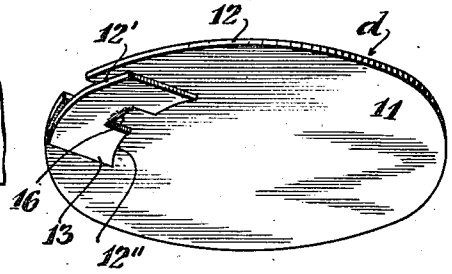
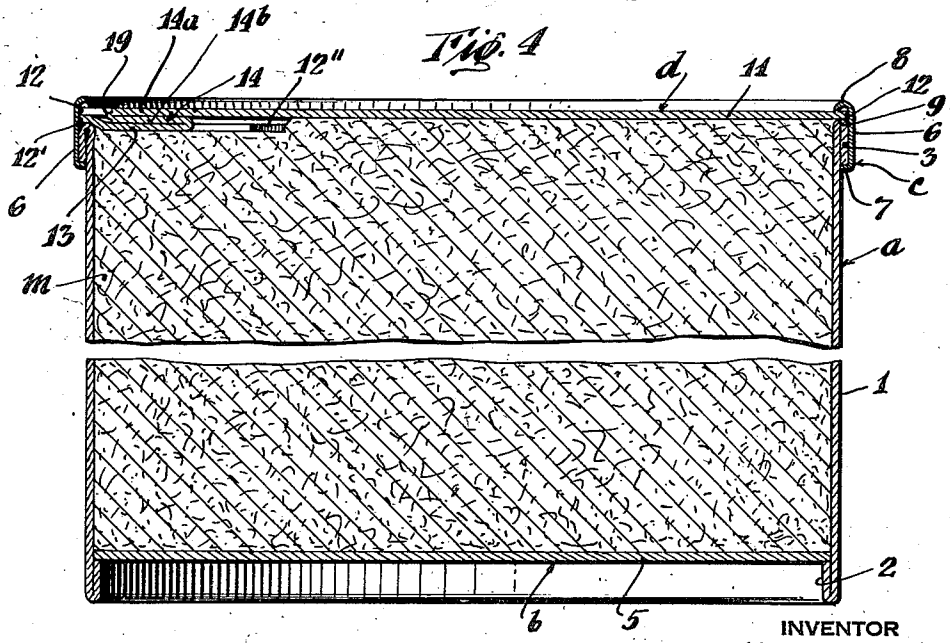


Fig. 4



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Fig. 5

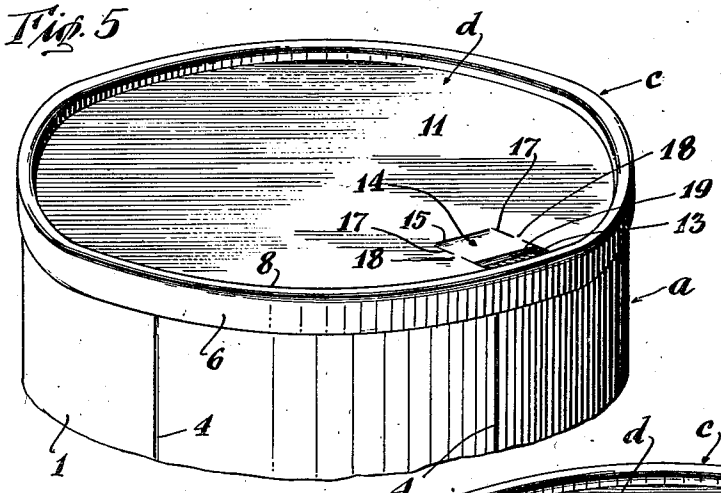


Fig. 6

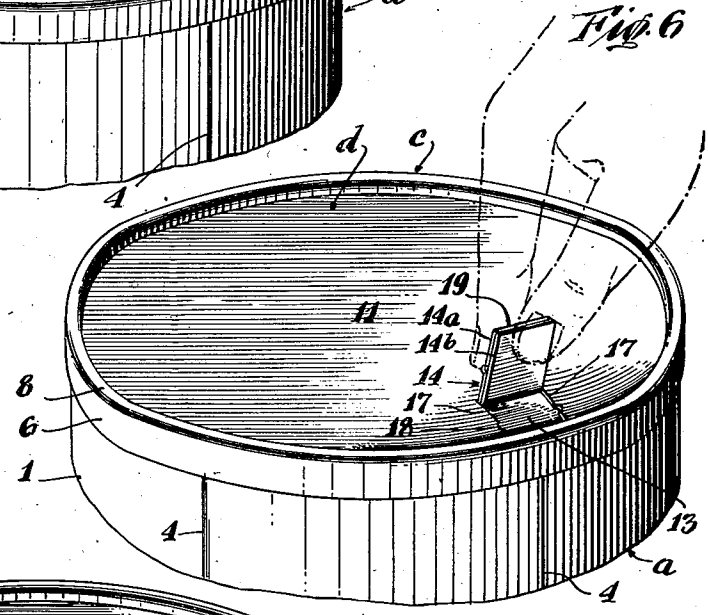
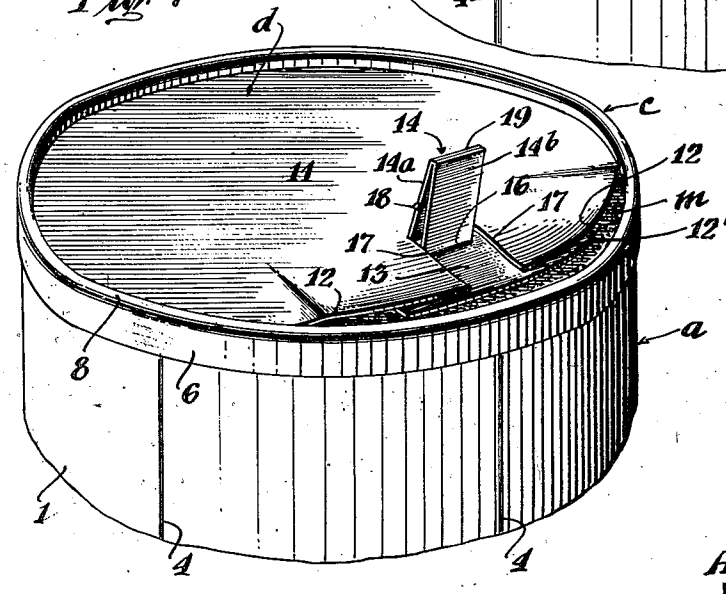


Fig. 7



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2,310,398

UNITED STATES PATENT OFFICE

2,310,398

COVER CONSTRUCTION

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Application September 16, 1940, Serial No. 356,905

8 Claims. (Cl. 229—43)

This invention relates to cover constructions, and more particularly to a container cover having means associated therewith whereby the cover disc can be quickly and expeditiously pulled loose and removed from the cover rim which may form a more or less permanent part of the container body.

Ice cream and similar edible and bulky products have for some time been quite generally packed in what is known as a collapsible or knockdown container or canister. Such containers generally comprise a tubular body formed from fiberboard or paperboard material which is suitably scored to permit substantially flat collapse thereof during shipment and storage. In assembling the container for receipt of the bulky merchandise, the collapsed body is expanded into tubular form and a bottom wall disc or member inserted into or applied to the lower end of the body. It will be appreciated that the upper end of such containers generally require reinforcing to prevent inward collapse, and such reinforcing is provided by the provision of a cover comprising a suitable cover disc whose peripheral edge seats within an annular cover rim. Suitable interlocking means are provided to lock the cover rim to the upper end of the container body when applied thereto. When access to the contents is desired, the cover disc is pulled loose from the cover rim, the cover rim remaining secured to the container body to reinforce and stiffen the upper end of the container body during removal of the contents.

In the dispensing of ice cream and similar edible products from such containers, the attendant or dispenser often encounters difficulty in removing the cover disc. When the cover disc is unscored or unbroken the attendant will usually search for some instrument such as an ice pick or fork which he will jab through the cover disc for the purpose of obtaining a grip thereon. Such instruments usually pierce the edible contents within the container and thus contaminate the contents with dirt and other foreign matter. It has heretofore been suggested to provide perforations in such discs whereby the discs can be broken into segments, but in puncturing the perforations and removing the thus severed segments of the discs contamination of the contents is also likely to result.

It is an object of this invention to provide an improved cover disc having a pull-out tab which can be easily grasped with the fingers to remove the cover disc. The pull-out tab normally lies substantially in the plane of the disc proper and is provided with an extension plate which underlies the pull-out tab and completely closes and seals the contents from any possible contact with the instrument employed by the attendant in effecting removal of the cover disc. My improved cover disc is formed from a single blank of paperboard material comprising a main disc portion and an extension plate which are joined together by a connecting strip which forms the pull-out tab. The connecting strip is provided with a deep score which divides the same into two connecting portions which can be folded together to form the pull-out tab, and when folded together permits the extension plate to be placed underneath that portion of the disc adjacent the pull-out tab. My improved cover discs can be cut from a blank of suitable sheet material such as paperboard, fiberboard, or the like, with economy of material. The cutting and scoring of the blanks may be effected at a high production rate by a single pass of the sheet material through an automatic cutting and scoring machine. My improved cover disc can be inserted into the cover rim and the assembled cover applied to the container body as heretofore practiced.

Another object of this invention is to provide an improved cover rim and cover disc assembly wherein means are provided on the cover disc to effect withdrawal of the disc from the rim applied to the container body, easily, quickly and in a sanitary manner and without danger that the contents will be touched or contaminated by foreign materials or instruments.

Another object of this invention is to provide an improved cover disc provided with means formed integrally therewith by which the cover disc may be pulled loose from the cover rim, which can be manufactured and assembled into the cover rim at substantially the same cost as a plain cover disc without the pull-out feature.

Other objects and advantages of this invention will become apparent as the disclosure proceeds.

The invention also consists in certain new and original features of construction and combination of parts hereinafter set forth and claimed.

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 drawings forming a part thereof, in which

Fig. 1 is a plan view of a paperboard blank illustrating the manner in which a plurality of my improved cover discs may be cut therefrom with a minimum of waste;

Fig. 2 is a perspective view of my improved cover disc showing the pull-out portion thereof in the process of being folded under the main portion of the cover disc;

Fig. 3 is another perspective view of my improved cover disc showing the pull-out portion in folded position under the main body of the cover disc ready for insertion into the cover rim;

Fig. 4 is an enlarged vertical cross-sectional view of a filled container showing my improved cover disc applied thereto and held in place by a cover rim;

Fig. 5 is a perspective view of the top portion of a container with cover applied thereto and showing more particularly my improved cover disc associated with the cover rim as it appears when in shipping position;

Fig. 6 is a top perspective view of my improved cover disc showing the manner in which the pull-out tab forming a part thereof may be gripped to pull the cover disc out of the cover rim; and

Fig. 7 is a perspective view of my improved cover disc as it appears when partially pulled loose from the cover rim and in position for complete withdrawal therefrom.

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

Referring to the drawings, my improved cover disc is especially adapted for use with the collapsible or knockdown type of containers formed in whole or in part from paperboard material such as now commonly used for the bulk packaging of ice cream and similar bulk products. Such containers generally comprise a tubular body *a* usually formed from paperboard material, which supports a bottom forming disc *b*. When the container body has been filled with the bulk material *m* packaged therein, a cover is applied, which cover generally comprises a removable cover disc *d* locked to the container body *a* by a suitable cover rim *c* of relatively stiff and rigid construction.

The container body *a* generally comprises a tubular body portion **1** which may be formed from a series of overlying layers of spiral wound paperboard, as illustrated and described in Reissue Patent No. 20,235, or the body **1** may be formed from a single blank of paperboard material held in tubular form by stitches or other securing means such as shown in Patent No. 2,053,679. The bottom end of the tubular body **1** is generally provided with some means for supporting the bottom forming member, as for example an inturned and upturned flange portion **2** which provides a seat for the bottom end disc **5**. The upper end of the tubular body **1** is usually provided with an outturned and downturned flange portion **3** providing means whereby the cover rim *c* may be locked thereto. In order to effect desirable economies in shipping and storage space, the tubular body **1** is generally provided with a plurality of vertically extending score lines or folds **4** whereby the body *a* may be shipped in flat knockdown condition and thus stored by the user until ready for use. When the container is to be filled, the body *a* is expanded into tubular form and the bottom end disc *b* inserted therein in seating engagement with the inturned and upturned bottom flange portion **2** to provide a strong and sturdy substantially leakproof bottom for the container. The bottom end disc *b* also serves to retain the bottom end of the container in fully expanded position at all times.

After the contents *m* have been inserted into the container, the cover rim *c* having the cover disc *d* inserted therein is then telescoped over the container body. The cover rim *c* may be formed of metal, as illustrated, or relatively stiff spiral wound paperboard material as illustrated in Patent No. 2,181,545. Such cover rims generally comprise an annular rim forming portion **6** having a lower inturned lip **7** adapted to seat under the lower edge of the downturned top flange **3** of the container body and an inturned upper lip **8** against which the outer periphery of the cover disc *d* seats. The cover disc *d* normally rests against the top edge **9** of the container body *a* and between this edge and the inturned upper lip **8** of the cover rim.

In gaining access to the contents *m* of the container, it is customary to pull out or remove cover disc *d* from the rim *c*, the rim *c* being left on the container body *a* to prevent inward or outward collapse of the upper end of the container and maintain the upper end of the container in fixed tubular form. Where ice cream and other edible materials *m* are packed in the container, objections to the use of this type of cover have arisen due to the unsanitary methods employed in removing the cover disc *d*. For example, at ice cream and soda fountains the attendant will often jab an ice pick, fork, or similar instrument through the cover disc *d* and into contaminating contact with the edible contents.

This invention is directed to the provision of a cover disc which can be inexpensively made and formed and which is provided with readily accessible means easily engaged and gripped to pull up the cover disc from the cover rim without puncturing the cover disc or otherwise exposing or contaminating the contents. It will be appreciated that my improved cover disc can be associated with almost any selected type of cover rim, whether formed from metal or paperboard, and almost any type of container whose body is equipped with a flange **3** or other suitable means for retaining the cover rim in place.

In accordance with this invention, the cover discs are each formed from a single piece of paperboard or other suitable cover material comprising a main cover portion **11** which may be made circular, elliptical or polygonal in shape to conform with the annular contour of the cover rim *c* and the container body *a* with which it is to be associated. A plate extension **13** extends from the edge **12** of the body portion **11** and is integrally connected thereto by a connecting strip **14**. This connecting strip is defined by a pair of parallel extending cut lines **17** which extend a distance into the body portion **11** and the extension plate **13**. One end of the strip **14** is hingedly connected to the discs portion **11** by a score line **15** which joins the adjacent ends of parallel cut lines **17**, and the other end of the strip **14** is hinged to the extension plate **13** by a score line **16** which joins the adjacent ends of the cut lines **17**. It will be noted that the connecting strip **14** is divided into two half sections **14***a* and **14***b* by a transversely extending deep score or cut **19** which permits the connecting portions **14***a* and **14***b* to be folded together in

close juxtaposed relationship, as shown in Figs. 4 and 6. It will be appreciated that the deep score or cut 19 should not be such as to sever the connecting portion 14a from the connecting portion 14b but rather to permit these parts to hinge about one another and yet be movable into a close contacting double-ply relationship.

It will be noted that the outer edge 12' of the extension plate 13 possesses the same contour or curvature as the outer edge 12 of the main body portion 11 of the cover disc. The connecting portion 14b is also of such length that when the extension plate 13 is folded under the main portion 11 of the cover disc with the connecting portion 14b in abutting contact with the connecting portion 14a, the outer edge 12' of the extension plate 13 is in alignment with and forms in effect a continuation of the outer edge 12 of the main portion 11 of the cover disc. When the extension plate 13 is thus collapsed under the main portion 11 of the cover disc, the cover disc presents a continuous outer edge of the proper shape and contour to properly fit within the selected cover rim c. The inner edge 12'' of the extension plate 13 may, if desired, also possess the same contour as the outer edge 12 of the main portion 11 of the cover disc to simplify the cutting operation.

It will be appreciated that in cutting a plurality of truly circular cover discs from a rectangular blank of paperboard or similar material, a wasted section occurs between the adjacent discs, which cannot be avoided. As shown in Fig. 1, this normally wasted material is employed to provide the extension plate 13 without requiring any paperboard material additional to that required in cutting the plain circular discs, so that the same number of discs each provided with an extension plate 13 may be cut from the same blank of sheet material as heretofore.

A plurality of my improved cover discs can be cut from a single blank of sheet material by a single pass of the blank through an automatic cutting and scoring machine, so that all cutting and scoring operations may be fully performed in a single operation. Thus my improved cover disc can be economically produced without additional waste at substantially the same cost as that involved in forming the usual plain cover disc without my improved pull-out tab feature.

When the cover disc has been cut out from the blank 10 as above described, the extension plate 13 is pushed under the main portion 11 of the cover disc and the cover disc then sprung into the cover rim c. Preferably the parallel cut lines 17 are each interrupted to provide a short uncut portion at 18 so that the connecting portion 14a will normally lie flat and flush with the main portion 11 of the cover disc. When the extension plate 13 has been pushed into position under the main portion 11 of the cover disc as shown in Figs. 3 and 4, the connecting portion 14b will lie flat and snug against the bottom face of the connecting portion 14a and will also overlie a section of the top face of the extension plate 13. Since the sheet material from which the cover disc is made is relatively thin, a double or treble thickness of material adjacent the extension plate 13 will not interfere with the proper locking of the cover rim c to the downturned flange portion 3 of the container body. My improved cover disc assembled within a cover rim c and applied to a container body packed with the contents, would appear as shown in Fig. 5.

When the cover disc d is to be removed to give access to the contents, the operator can easily grasp the connecting portions 14a and 14b at the fold line 19 along which they are hinged. Ample room to obtain a firm finger or instrument grip on the edge 19 is possible by reason of the fact that the edge 19, as shown in Figs. 4 and 5, is spaced some distance inwardly from the rim c and does not extend thereunder. A slight upward pull on the connecting portions 14a and 14b will tear loose the short uncut sections 18 which interrupt the cut lines 17 so that the connecting portions 14a and 14b can be raised into position substantially at right angles to the main portion 11 of the cover disc, as illustrated in Fig. 6. A firm finger grip can then be obtained upon the upwardly projecting connecting portions 14a and 14b so as to pull loose the adjacent edge 12 of the main portion 11 of the cover disc and the adjacent edge 12' of the extension plate 13 from their positions under the overlapping inturned lip 8 of the cover rim c, as illustrated in Fig. 7. A further upward and lateral pull on the connecting tabs 14a and 14b will quickly remove the cover disc from the cover rim.

It will be noted that the extension plate 13 at all times covers and protects the contents of the container from contact and contamination while the connecting portions 14a and 14b are pulled loose and gripped to remove the cover disc. Thus the operator has means immediately available on the cover disc whereby the cover disc can be pulled loose and removed from the rim without danger that the contents will become contaminated or the disc punctured. My improved cover disc can be manufactured at low cost and the pull-out device formed from those sections of sheet materials which are normally waste. The cover disc can be easily and quickly inserted into the rim and the rim applied to the container in the same manner and at the same speed as heretofore and at substantially no additional cost.

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 paperboard closure disc having a periphery adapted to seat under an inturned lip associated with a container body, said disc including a main disc portion, a complementary closure portion extensible beyond the periphery of said main disc portion, and a pull-up tab defined by a pair of cut lines extending from the periphery of said main disc portion a distance inwardly thereof and a pair of cut lines extending from an edge of said complementary closure portion a distance inwardly thereof, one end of said tab portion being integrally joined to said main disc portion and the other end being integrally joined to said complementary closure portion.

2. A paperboard closure disc having a periphery adapted to seat under an inturned lip associated with a container body, said disc including a main disc portion, a complementary closure portion extensible beyond the periphery of said main disc portion, and a pull-up tab defined by a pair of cut lines extending from the periphery of said main disc portion a distance inwardly thereof and a pair of cut lines extending from an edge of said complementary closure portion a distance inwardly thereof, one end of said tab portion being integrally joined to said main disc

portion and the other end being integrally joined to said complementary closure portion, said pull-up tab being foldable to permit said complementary closure portion to extend under the area defined by said folded pull-up tab.

3. A closure disc having a periphery adapted to seat under an inturned lip associated with the container body, said disc being formed from a single blank of paperboard material which includes a main disc portion, a complementary closure portion extensible beyond the periphery of said main disc portion, and a pull-up tab having one end thereof integrally hinged to said main disc portion and the other end integrally hinged to said complementary closure portion, said pull-up tab being defined in part by a pair of cut lines extending from the periphery of said main disc portion a distance inwardly thereof and a pair of adjacent cut lines extending from an adjacent edge of said complementary closure portion a distance inwardly thereof, said pull-up tab having a transversely extending fold line whereby said pull-up tab may be folded to permit said complementary closure portion to extend under the opening defined by that portion of the pull-up tab which is cut from said main disc portion.

4. A paperboard closure disc having a periphery adapted to seat under an inturned lip associated with the container body, said disc including a main disc portion, a complementary closure portion extensible beyond the periphery of said main disc portion, and a pull-up tab having one end thereof integrally hinged to said main disc portion and the other end integrally hinged to said complementary closure portion, said pull-up tab being defined in part by a pair of severable lines extending from the periphery of said main disc portion a distance inwardly thereof and a pair of adjacent cut lines extending from an adjacent edge of said complementary closure portion a distance inwardly thereof, said pull-up tab having a transversely extending fold line whereby said pull-up tab may be folded to permit said complementary closure portion to extend under said folded tab and said main disc portion, said complementary closure portion having a peripheral edge which is complementary to the peripheral edge of said main disc portion when said complementary closure portion is positioned under said main disc portion.

5. A paperboard closure disc having a periphery adapted to close the top of a container body, said disc including a main disc portion, a complementary closure portion extensible beyond the peripheral edge of said main disc portion, and a pull-up tab having one end thereof integrally hinged to said main disc portion and the other end integrally hinged to said complementary closure portion, said pull-up tab being defined in part by a pair of spaced severable cut lines extending from the periphery of said main disc portion a distance inwardly thereof and a pair of spaced cut lines generally in alignment with said first named cut lines extending from an adjacent edge of said complementary closure portion a distance inwardly thereof, said pull-up tab being foldable transversely of its midsection to permit said complementary closure portion to extend under said main disc portion.

6. A one-piece paperboard closure disc having a periphery adapted to close the top of a container body, said disc including a main disc portion, a complementary closure portion extensible beyond the peripheral edge of said main disc portion, and a pull-up tab having one end thereof integrally hinged to said main disc portion and the other end integrally hinged to said complementary closure portion, said pull-up tab being defined in part by spaced cut lines extending from the periphery of said main disc portion a distance inwardly thereof and spaced cut lines extending from an adjacent edge of said complementary closure portion a distance inwardly thereof, said pull-up tab being foldable transversely of its midsection to permit said complementary closure portion to extend under said main disc portion, the folded edge of said pull-up tab extending short of the periphery of said main disc portion whereby said folded edge may be readily grasped when the closure disc is positioned on the container body.

7. A one-piece paperboard blank prepared to provide a closure disc for a container body, said blank comprising a main disc portion presenting a generally circular peripheral edge, a complementary closure portion having one edge thereof adjacent the periphery of said main disc portion and an opposite edge contoured to conform to the peripheral edge of said main disc portion, and a pull-up tab integrally joining said main disc portion and complementary closure portion, said pull-up tab being defined by cut lines extending from the periphery of said main disc portion a distance inwardly thereof and a pair of spaced cut lines extending from the adjacent edge of said complementary closure portion a distance inwardly thereof.

8. A one-piece paperboard blank prepared to provide a closure disc for a container body, said blank comprising a main disc portion presenting a generally circular peripheral edge, a complementary closure portion having one edge thereof adjacent the periphery of said main disc portion and an opposite edge contoured to conform to the peripheral edge of said main disc portion, and a pull-up tab integrally joining said main disc portion and complementary closure portion, said pull-up tab being defined by a pair of cut lines extending from the periphery of said main disc portion a distance inwardly thereof and a pair of spaced cut lines extending from the adjacent edge of said complementary closure portion a distance inwardly thereof, said pull-up tab having a fold line extending transversely of its midsection to permit said complementary closure portion to be superimposed on said main disc portion and said folded pull-up tab.

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