PORTABLE RESILIENT CLOSURE FOR CONTAINER

George Arlington Moore, New York, N. Y.
Application March 28, 1955, Serial No. 497,223

9 Claims. (Cl. 229—43)

This invention relates to a portable resilient closure which may be used to close the open mouth of containers, the closure being provided with a novel structure with which to resiliently effect a tight seal thereof and in a sanitary manner including means provided in the closure that will afford a visible display of the product packed in the container.


For many years conventional conical shape paper containers have been made with an annular open groove in the mouth thereof adapted to receive a flat rigid disc of paper board material with which to effect a closure, the disc being snapped into the groove for retention. The mouth of these containers are formed with a side wall recess disposed above the lateral wall of the inserted disc. Foreign matter collects in this recess in such manner as to render this type of disc closure unsanitary. Cover-all lids made of paper or of other rigid material have been employed for use of these containers to some extent for the purpose of overcoming this unsanitary condition, especially covers made of relatively heavy paper. However, conical paper containers are fabricated by a spinning process that produces an imperfection in the interior surface of the container that interferes with the attainment of accurate control of dimensional tolerances considered necessary to establish a uniform size for the open mouth structure of the container that will uniformly fit the closure. This lack of proper control of size introduces problems that make it necessary to compromise for these varying dimensions of the container by tolerating a range of variation that is not uniform with respect to the substantially stable size of the above discs or cover-all lids used for closing the containers thereby failing to effect a tight and efficient closure seal therefore. The above containers are provided with a double thickness body wall longitudinal seam which transverses the groove in the open mouth of the body portion, the inner free corner edge of the seam develops an interstitial crevice in the groove that adds a further problem that is involved in sealing the container properly.

The present invention contemplates novel means which provides an improved closure having structural embodiment of features that will resiliently compensate the container for better fitting closure relationship, and one of the prime objects herein is to provide a novel arrangement in the use of resilient plastic sheet material as a component part of the closure and thereby provide flexible means to compensate for the above dimensional variation of the mouth of the container and effectively improve the sealing thereof. The seal is effectuated by the resilient activity of the plastic wall portion of the improved closure that will engage into the above mentioned groove of the container and also form a pellicle over the wall portion constituting the open mouth thereof.

Another object of the invention is to provide instru-

mental means in the form of a rigid component part of the closure upon which the plastic component is assembled and formed into a pellicle that is resiliently active in sealing the container.

A further object of the invention is to provide a portable resilient closure for use of the above type containers that will close them effectively in a sanitary manner, the closure having means with which to afford a neat and visible display of contents packed therein, the closure being adapted with flexible means to be easily removed from the mouth of the container for dispensing purposes and be restored without loss of sealing efficiency.

Other objects and novel features of the invention will appear more fully hereinafter from the following detailed description when considered in connection with the accompanying drawings, wherein embodiments of the invention are illustrated. It will be understood that the drawings are utilized for purposes of illustration only, and are not to be taken as a definition of the limits of the invention, reference being had for this purpose to the appended claims.

In the drawings, wherein similar reference characters refer to similar parts throughout the several views;

Fig. 1 is a corner side elevation of two component parts of cut sheet of dissimilar material used to form the closure of the above type;

Fig. 2 is a cross section of the closure as formed of the above material and taken on line 2—2 of Fig. 3;

Fig. 3 is a plan view of the formed closure of Fig. 2;

Fig. 4 is a side elevation of the container partly in cross section showing the closure engaged in the mouth thereof, the structural engagements being shown in cross section taken on line 4—4 of Fig. 3, and

Fig. 5 is a fragmentary view in cross section showing another type of mouth wall structure of containers in which the closure is slightly modified and engaged.

The present invention is particularly directed to novel means provided in a portable closure which produces an effective resilient seal when being inserted into the open mouth of paper containers and thereby afford a cohesion like fitting engagement with the annular groove provided in these containers, and which will lock the closure into the groove and thereby seal the container in a manner that will flexibly take up a substantial part of the above mentioned variations in the size of the groove including the open mouth side wall recession thereof. The closure provides a resilient pellicle which covers the surface of this side wall recess of the container mouth which is formed upwardly adjacent the lateral wall surface of the sealed container. A portion of the lateral wall of the closure is made adaptable with transparent means that will afford a neat display of the particular contents packed within the sealed container.

To this end, a cut disc component of substantially rigid paper board sheet material is provided for assembly in combination with a cut disc component of substantially transparent plastic sheet film, which film is placed concentrically over a surface side of the paper board disc.

The rigid disc component may be provided with a central opening cut through the wall thereof, which opening is covered by the centeral surface area of the plastic disc component. By pre-heating the plastic sheet film to suitable temperature, the film component is formed into contoured shape by being drawn over and upon surface portions of the above rigid disc which rests upon a lateral wall surface of a shaping die having wall surfaces of predetermined contour shape. Suction of air drawn through holes provided in the die causes atmospheric pressure to press the pre-heated plastic material upon these wall surface portions of the die, which upon surface contact thereupon chills and sets the plastic film in the form of the contoured shape desired. The por-
tion of plastic film wall which covers the opening in the assembled rigid disc component is drawn inwardly in a recess by said opening and lateral wall surface of the die. The relative surface plane of the recessed plastic wall is thereby rendered flush with the opposite surface side of the rigid disc, the film covering the cut corner edge of said opening. The plastic film is drawn tautly over the corner edge periphery of the rigid disc to form a resiliently active male bead wall around this edge periphery. A projected portion of the wall of the plastic film is then flared outwardly and downwardly to form a continuing wall in offset relationship with said bead wall portion and is formed to constitute a U-shaped skirt around said periphery. The U-shaped skirt is inverted with respect to the flat lateral surface side of the rigid disc component that remains uncovered by the plastic film component.

Referring more particularly to Fig. 1, the present invention is illustrated therein as including a circular cut disc 4 of substantially rigid paperboard material of desired thickness and having a corner edge 5 including a cut edge 6 which defines the corner edge of an opening through the wall of the disc. The top side of the annular lateral surface 7 of the disc supports a plastic sheet film disc 8 which is cut substantially concentric with the supporting disc 4 but of increased diameter. The plastic film disc 8 is recessed into the annularly mentioned opening to cover the cut corner edge 6 thereof and provide a depressed wall surface portion 9 of the plastic film to be substantially flush with the wall surface 7 of the supporting disc 4 as illustrated in Fig. 2. A portion of plastic film 8 is drawn tautly over the entire corner edge periphery to form a resilient male bead wall portion 10 which forms a minor projection of plastic material around the periphery thereof. Thus, a portion of the plastic film 8 encases a minor portion of an opposite lateral surface side of disc 4 including the two opposing circular cut edges thereof. The plastic film provides a skirt wall portion 11 which is formed to flare outwardly and downwardly of the bead wall portion 10, the skirt being terminated in an upturned and outwardly flared U-shaped wall portion 12. The terminal corner edge 13 of the U-shaped wall is spaced downwardly of wall surface 7 of disc component 4 and projects outwardly in greater diameter than the periphery of bead 10. The plastic disc component 8 while heated, is formed over a lateral surface side and corner side edges 5 and 6 of disc 4, the latter component being substantially secured in position by surrounding these three surfaces sides thereof with plastic film including a lower corner surface side portion 14 of the disc, which portion completes the shape of the plastic bead 10. Fig. 3 is a plan view of the constructed closure as assembled and formed of the above composite materials.

Due to the fact that the general characteristic of the component plastic film 8 is resilient and flexible, the film will not of itself be rigid enough to maintain a lateral bridging wall area that will support the form of its skirt portions 11 and 12 for any practical use without having other supporting means. The gauge thickness of the plastic film is preferably confined in a range from 0.008 to 0.012 inch thickness in order to afford necessary economy, the film being of polyethylene, vynils or of similar material. Hence, the formed plastic disc 8 is flexible and of itself will readily collapse when being opposed in any manner of handling. Therefore, by providing the disc 4 around which the plastic film 8 is formed a contour shape providing rigid base support including a rigid lateral bridging wall 8 for support of the plastic film lateral wall and a support for the projected skirt and U-shaped wall portions 11 and 12 thereof. Disc component 4 may be cut of sheet material of any desired diameter and of gauge thickness that will be suitable for engaging the groove provided in the container intended for use of the portable closure. Usually, the range of gauge thickness of paper board is from .055 to .125 inch thickness depending upon the capacity size of the container.

The portable closure as formed in Fig. 2 may be inserted by hand or machine into the open mouth of container 15, the seated position of the closure being illustrated in Fig. 4. The above paper containers are made with a longitudinal body seam 16 which is marginally overlapped composed of two thicknesses of body wall material and being adhesively secured together to form and maintain the shape of the body portion, the seam being illustrated in Fig. 5. The female groove 17 is formed into the body wall adjacent the mouth thereof is formed into and across the two thicknesses of body wall forming material of the longitudinal seam 16 which leaves a corner edge 18 extending transversely across the groove which is not completely obliterated by pressure which forms the groove. Therefore, edge 18 develops an interstitial crevice 19 disposed across the groove, the crevice being formed by impressing the corner edge 18 into the groove having double thickness of material at this edge junction. This crevice can not be effectively closed and sealed by engaging in the groove a closure made of substantially rigid material, such as closures formed of paper board or of metallic sheet. Referring to container 15 of Fig. 4, the container is provided with a longitudinal body seam of double wall thickness as above described and illustrated in Fig. 5. The annular groove 20 provided in the body wall of container 15 is spaced downwardly in parallel with a curled rim 21 which extends around the mouth of the container. The mouth of the container is closed and adapted to be effectively sealed by engagement with the portable closure as assembled and formed of components 4 and 8' illustrated in Fig. 2. The plastic bead 10 of the closure structure is compressibly fitted into groove 20 of the container. The compression of the plastic bead 10 is afforded by the rigid support given to the plastic bead wall by the related edge surface 5 of component 4 of the closure. The resiliency of the plastic bead 10 fills the interstices in the circular seal wall surface of groove 20 including the interstitial crevice 19 formed of a portion of the longitudinal seam 16. The above resilient engagement of the closure in the mouth of the container constitutes effective means which tightly seals the container. This sealed portion of the container is augmented by an effective plastic closure seal of the upper disposed side wall surface and rim portion of the mouth of the container disposed transversely of the lateral wall portions 7 and 9 of the portable closure. The inner surface of this side wall portion including the top wall surface of the rim is snugly covered by plastic wall portions 11 and 12 of the closure. The top exterior surface portion of the marginally curled rim 21 of the container is covered by the U-shaped plastic wall portion 12, which plastic wall portion may be formed with a radius which is less in dimension than the radius of the curled rim 21. Thereby, to effect a resilient pellicle over the mouth of the container and render the closure strictly sanitary. Corner edge 13 of the plastic bead 12 terminates downwardly of the top surface of the curved rim 21 of the container. The wall of the closure formed of plastic wall portion 8' of the portable closure may be formed of substantially transparent plastic sheet and thereby provide a dome window panel 9 in the structure of the closure which affords a neat visible display of contents 22 packed within the container for consumer distribution. The above wall being substantially impermeable to moisture, dusts, and other elements not being exposed to the contents of the container. Hence, the rigid component can not absorb any moisture, fatty substances or other elements of the above contents that otherwise may decrease the efficiency of the closure. Disc 4 of the closure provides an exterior wall surface that may be economically printed with appropriate design

The plastic film of the closure is preferably confined in a range from 0.008 to 0.012 inch thickness in order to afford necessary economy, the film being of polyethylene, vynils or of similar material. Hence, the formed plastic disc is flexible and of itself will readily collapse when being opposed in any manner of handling. Therefore, by providing the disc around which the plastic film is formed a contour shape providing rigid base support including a rigid lateral bridging wall for support of the plastic film lateral wall and a support for the projected skirt and U-shaped wall portions thereof. Disc component may be cut of sheet material of any desired diameter and of gauge thickness that will be suitable for engaging the groove provided in the container intended for use of the portable closure. Usually, the range of gauge thickness of paper board is from 0.055 to 0.125 inch thickness depending upon the capacity size of the container.

The portable closure as formed in Fig. 2 may be inserted by hand or machine into the open mouth of container 15, the seated position of the closure being illustrated in Fig. 4. The above paper containers are made with a longitudinal body seam which is marginally overlapped composed of two thicknesses of body wall material and being adhesively secured together to form and maintain the shape of the body portion, the seam being illustrated in Fig. 5. The female groove is formed into the body wall adjacent the mouth thereof is formed into and across the two thicknesses of body wall forming material of the longitudinal seam which leaves a corner edge extending transversely across the groove which is not completely obliterated by pressure which forms the groove. Therefore, edge develops an interstitial crevice disposed across the groove, the crevice being formed by impressing the corner edge into the groove having double thickness of material at this edge junction. This crevice can not be effectively closed and sealed by engaging in the groove a closure made of substantially rigid material, such as closures formed of paper board or of metallic sheet. Referring to container 15 of Fig. 4, the container is provided with a longitudinal body seam of double wall thickness as above described and illustrated in Fig. 5. The annular groove provided in the body wall of container is spaced downwardly in parallel with a curled rim which extends around the mouth of the container. The mouth of the container is closed and adapted to be effectively sealed by engagement with the portable closure as assembled and formed of components and illustrated in Fig. 2. The plastic bead of the closure structure is compressibly fitted into groove of the container. The compression of the plastic bead is afforded by the rigid support given to the plastic bead wall by the related edge surface of component of the closure. The resiliency of the plastic bead fills the interstices in the circular seal wall surface of groove including the interstitial crevice formed of a portion of the longitudinal seam. The above resilient engagement of the closure in the mouth of the container constitutes effective means which tightly seals the container. This sealed portion of the container is augmented by an effective plastic closure seal of the upper disposed side wall surface and rim portion of the mouth of the container disposed transversely of the lateral wall portions and of the portable closure. The inner surface of this side wall portion including the top wall surface of the rim is snugly covered by plastic wall portions and of the closure. The top exterior surface portion of the marginally curled rim of the container is covered by the U-shaped plastic wall portion, which plastic wall portion may be formed with a radius which is less in dimension than the radius of the curled rim. Thereby, to effect a resilient pellicle over the mouth of the container and render the closure strictly sanitary. Corner edge of the plastic bead terminates downwardly of the top surface of the curved rim of the container. The wall of the closure formed of plastic wall portion of the portable closure may be formed of substantially transparent plastic sheet and thereby provide a dome window panel in the structure of the closure which affords a neat visible display of contents packed within the container for consumer distribution. The above wall being substantially impermeable to moisture, dusts, and other elements not being exposed to the contents of the container. Hence, the rigid component can not absorb any moisture, fatty substances or other elements of the above contents that otherwise may decrease the efficiency of the closure. Disc of the closure provides an exterior wall surface that may be economically printed with appropriate design.
with which to display the brand name of the contents in the container. The disc may be waxed or otherwise treated if desired to prevent liquid or undue moisture absorption by exterior influences within the container during distribution and use. The dome window panel 9 provided by the plastic component 8' forms an elevated wall centrally disposed over contents 22 in the container. Raw corner edge 6 is thereby covered by plastic to prevent exposure of this edge and form a neat appearing exterior wall structure of the transparent container. The interior recessed space provided by the dome window panel 9 over contents in the container will constitute means with which to minimize surface contact with contents and subsequent loss of transparency of this wall portion of the closure.

Usually, the above containers are utilized for packing a variety of food-stuffs such as cottage cheese, salads of various kinds and many other commodity products. Packers of such commodities desire in many instances to have their packaged contents visibly displayed. The dome window panel 9 of the closure provides means for such display. In addition to this feature, the resilient bead 10 of the closure seals the container in a manner that will efficiently protect the displayed contents therein. The plastic wall portions 11 and 12 of the closure provides a pellicle over the side wall mount of the container for further protection of the contents and thereby renders the closure strictly sanitary when engaged with the container. The plastic enclosure rim 12 and corner edge 13 provided in the closure affords simple means with which to lift this rim portion 12 to disengage bead 10 from groove 20 and thereby remove the portable closure from the container for dispensing purposes. The resilient characteristics of the composite closure as constructed by the components 4 and 8' will not be mutilated or be deformed in shape when being withdrawn from the container. Hence, the closure may be restored into the mouth thereof without losing any of its efficiency to again seal the container in periodic sequence during use thereof. The pellicle wall portions 11 and 12 of component 8' will permanently retain normal uniform shape as initially formed in constructing the closure. Therefore, regardless of the way in which the closure may be manipulated for being released from the container, the plastic component of the closure will assume its normal shape as supported by the disc component 4.

The composite closure of the present invention may be slightly modified to accommodate conventional containers having a mouth formed with an in-turned body wall margin into which the groove 17 is impressed as illustrated in connection with 23 of Fig. 5. A rigid disc component 24 may be provided with a solid wall across the mouth of the container if desired, component 24 being assembled with a plastic component 25. The substantially impervious plastic wall portion 26 thereof covers the inner wall surface of the disc, therefore the rigid material of component 24 is not exposed to the contents within the container when filled. Plastic component 25 is formed in contour similar to component 8' except the pellicle formed wall portions 26 and 27 of the closure is contoured in shape suitable to fit over the upper portion of the in-turned margin 28 in the mouth of container 23.

The portable closure of the present invention as above described is formed of two component parts 4 and 8'. The description has been preferably directed to the forming of component 8' over and around a surface side and cut corner edges of disc component 4, thus effecting the assembly relationship of the components. However, if desired, the plastic component 8' may be formed precisely in the contour shape shown in Fig. 2 or in modified form without strict dependence upon disc component 4. The disc component 4 may be inserted into the plastic component after it is formed to desired shape and thereby constitute the assembly of components which forms the portable closure for use. It is not necessary to adhesively secure disc 4 with the plastic component, the latter component being dimensionally stable in form so that it may be slightly recessed over a surface side of the corner edge periphery of the rigid component when being inserted in the formed pocket thereof. The rigid component, however, must be relied upon to support the plastic component in order to render it of practical use in closing and sealing the above containers.

While modifications of the invention have been illustrated and described, it will be understood, by those skilled in the art, that various changes may be made therein without departing from the spirit of the invention. Reference will therefore be had to the appended claims for a definition of the limits of the invention.

What is claimed is:

1. A portable resilient closure in combination with a conical shape container having a circular open mouth wall structure adapted to receive an insertion thereto of 8 said closure, the closure having cushion-like means with which to seal said container, said closure comprising a circular cut all plastic transparent disc being formed in wall contour shape coincident with the open mouth wall surface structure of said container, said plastic wall being formed over surface portions including cut corner edges of a circular cut rigid disc, said disc being provided with a substantially central cut opening, the open space thereof being covered by a portion of said plastic wall, said covered opening being in the form of a dome window panel, which window panel is disposed in a surface plane offset with respect to the surface plane of the plastic wall portion which covers a surface side of said rigid disc including the cut corner edges thereof, a portion of the plastic wall being disposed in substantially transverse offset relationship with respect to the lateral wall surface of the closure, which offset portion provides a circular outwardly flared side wall rim being terminated in a U-shaped wall portion coincident in shape with a circular open mouth rim provided at the top of the container, after filling the container, said closure being inserted into the open mouth thereof, said plastic wall portion of the closure providing means which seals the container by the compressive co-action effects provided by the outer circular cut edge of said rigid disc encased by said plastic and the inner surface of the engaged side wall portion of the container, said seal being augmented by engagement of said circular U-shaped wall portion of the closure structure, which portion forms a pellicle over a wall surface portion of the container disposed upwardly of said engaged lateral wall of the closure, said dome window thereof providing means to visibly display the filled contents within said container.

2. A portable closure for use in closing and sealing the open mouth of a paper container, said closure having a substantially flat lateral wall surface composed of two dissimilar materials and a side wall skirt being formed around the corner edge periphery of the lateral wall composed of one of said materials, the shape of said side wall skirt being coincident with the side wall body portion of the container constituting the mouth structure thereof, said closure comprising a substantially rigid disc of fibrous sheet material having a cut corner edge periphery and a cut opening through its wall with the corner edge thereof being spaced inwardly of said edge periphery, a surface side of said lateral wall of said disc including said cut opening therein being covered with a wall of non-adhered transparent plastic film, a portion of said film wall being formed transversely over the corner edge of said cut opening and having a lateral wall portion formed and disposed substantially flush with the opposite surface side of said rigid disc, said film being tautly formed over the exterior surface of said corner edge periphery which defines the wall area of said disc, the film over said edge being formed to constitute a resilient bead portion of the closure, a portion
of said film being formed to provide a side-wall skirt extending in spaced relation outwardly of the surface of said lateral wall portion of the closure, said side-wall skirt being provided with a contour shape coincident with the side wall surface of the container to be enclosed thereby, after filling the container with its intended product, said closure being pressed into the open mouth thereof, said resilient bead portion of the closure being compressibly engaged against a marginal side wall surface portion provided thereby in the mouth of the container, which bead provides a flexibly sealed engaged relationship, said side wall skirt portion of the closure being engaged over a wall surface portion of the side wall structure of the container adjacent the lateral wall enclosure thereof and thereby flexibly augment the seal of said resilient bead portion thereof and further the effects of tightly closing the container in a sanitary manner, the plastic film wall portion of the closure over said opening provided through the rigid disc component thereof, being means with which to display the product packed within said container.

3. A portable closure having a cushion-like wall formed over and upon surface portions of a substantially rigid flat wall disc, said cushion-like wall portion of the closure being adapted to flexibly seal the open mouth of the container by being engaged into said disc and being resiliently engaged therein, said closure comprising an assembly of two non-adhered discs of dissimilar sheet material, one of said discs being cut of substantially rigid paper board material having a substantially central open cut section, and the other cut disc being composed of resilient plastic sheet film material that is substantially transparent, the latter disc being of larger wall surface area than said rigid disc, said rigid disc being encased in said film over a wall surface side and corner edge surface periphery thereof which defines the outer boundary of the wall surface area of the disc including the edge of said open cut section, said film having a side wall skirt portion formed in shape contour coincident with the shape of the side wall surface that constitutes the mouth portion of the container to be closed and sealed, said container being filled with its intended product prior to closure assembly being engaged into the open mouth of the container, said rigid disc component of said assembly being means to effect a compression contact of said plastic film component in its engagement with a marginal surface provided in the side wall of the container and thereby resiliently seal the container by co-acting cushion-like adjustment in said plastic film in closing interstices in said structure of marginal side wall portion of the container engaged therewith, said plastic side wall skirt portion of the closure constituting a pellicle which forms an enclosure wall over a surface portion of the container side wall adjacent said sealed margin thereof, the plastic film wall surface of the closure constituting an impervious wall having sole contact with the wall surface of the container including the product contents packed therein, which products may be visually displayed through said transparent wall covering, of said open cut section of the rigid disc portion of the closure.

4. A portable resiliently sealed closure being adapted for use in closing and flexibly sealing the open mouth of a conventional shaped paper container of conventional type, said closure comprising a substantially rigid circular cut disc of flat sheet material, the disc being further cut to provide a substantially central hole through the wall thereof, a cut disc of plastic transparent film material being formed over wall surface sides of said rigid disc and having a wall portion formed in contour shape coincident with the wall surface contour provided in the body side wall constituting said open mouth structure of the container to be closed and sealed, a wall portion of said film being shaped in contour to cover said concentric hole and the surface of the cut thereof to provide an embodiment in said closure of a dome-like window panel in the structure thereof, a side-wall portion of said film being formed to provide a skirt which surrounds the edge surface periphery of said rigid disc in spaced relation to said edge surface which is covered by another wall portion of said film, said skirt wall portion constituting a flexible pellicle enclosure wall with which to enclose the wall surface portion of said open mouth of the container when the closure is being engaged therewith, said closure when being inserted into said through of the container being means provided by said plastic film with which to resiliently seal the mouth of the container in an effective sanitary flexible enclosure, said window panel embodiment in the closure structure afforded by said plastic wall portion thereof being means provided with which to visibly display the contents selected to fill said container prior to said insertion of the portable closure.

5. A resiliently flexible closure formed of an assembly of two component parts of dissimilar sheet material, the closure being adapted to close and flexibly seal the open mouth of a product filled paper container having an annular open groove in the body wall portion thereof including a curled rim around its top periphery, the body having a marginal longitudinal body seam transversing said groove, said closure comprising a substantially rigid disc cut to provide a corner edge surface periphery defining the lateral wall surface area thereof with the open mouth space of said container, said rigid disc being provided with an assembled non-adhered plastic film wall, which plastic wall forms an enclosure over a lateral surface side and said corner edge surface periphery of the rigid disc component, the plastic film wall being extended in spaced relation from said lateral wall portion to form a flexible skirt provided with a contour shape coincident with the mouth and rim periphery wall surface of said body portion of the container, said plastic corner edge surface periphery of the assembled closure constituting a flexible male bead wall portion of the closure being provided to engage into said annular open groove of the container, and upon being engaged therein, said rigid corner edge periphery of the disc component of the closure assembly being means with which to compressibly force said plastic bead wall portion against the wall surface of said body portion of said container substantially closing interstices therein including an interstitial crevice formed across the groove by the inner disposed pressed corner free edge of said marginal longitudinal body seam of the container and thereby effecting a tightly fitting said plastic skirt wall portion of the closure being snugly fitted over a major body wall surface portion of said mouth which further augments a sanitary flexible seal covering of the inner wall surface of the container adjacent the lateral rigid wall of the closure assembly, said rigid disc of the assembly being provided with an opening through the wall thereof, which opening is covered by a portion of said plastic film component, which component is of transparent composition, said covering wall portion being deformed in shape to cover the surface side of the cut corner edge of said opening so that the lateral wall surface portion thereof which bridges over the open space is disposed in surface plane offset with respect to another lateral wall portion of said film component that is engaged in surface to surface contact with said rigid disc component.

6. A flexible closure according to claim 5 wherein said non-adhered plastic film wall component of the closure assembly is of a substantially impervious material having resilient inherent characteristics of resuming its pre-shaped contour without loss of efficiency when used repeatedly for closing and opening said container for dispensing purposes of its contained product.

7. A flexible closure according to claim 5 wherein said rigid disc component of the closure assembly is provided with an opening through the wall thereof, which opening is covered by a portion of said plastic film component,
which component is of transparent composition, said covering wall portion being deformed in shape to cover the surface side of the cut corner edge of said opening so that the lateral wall surface portion thereof which bridges over the open space is disposed in surface plane offset with respect to another lateral wall portion of said film component that is engaged in surface to surface contact with said rigid disc component.

8. A portable flexible closure in combination with a conventional container made substantially of paper sheet material, and said container having an open mouth wall and rim structure shaped coincident with the inserted wall structure of said flexible closure to enclose and resiliently seal said open mouth by flexible non-adhered engagement, said flexible closure comprising a transparent sheet of resilient plastic material being pre-formed in wall contoured shape coincident with said open mouth wall structure of the container, the wall portion of said pre-formed plastic being formed over surface portions of a substantially rigid disc, said disc having an open cut section through the wall thereof and said plastic wall portion being shaped to cover the bottom surface of said rigid disc and said open section thereof including the edges that define the outer periphery thereof and the inner disposed periphery of said open cut section, said portion of the plastic wall that is pre-formed in contoured shape coincident with said open mouth wall structure of the container being disposed in upper offset relationship with respect to said covered outer edge periphery of said rigid disc, said closure being inserted into the open mouth of the container, said offset contoured plastic wall portion of the inserted closure providing means which forms a snugly fitted pellicle over said rim surrounding said mouth of the container disposed upwardly of the lateral wall portion of the closure, thereby closing and resiliently sealing said container in non-adhered closure forming relationship, said transparent plastic wall portion that covers said open cut section of the embodied rigid disc of the closure providing means to visibly display the filled product that is resiliently sealed in said container.

9. A flexible portable display closure adapted to be used in combination with a product filled container, said container having an open mouth body wall structure provided with an annular groove and upwardly disposed curled rim to be enclosed and resiliently sealed by engagement with said closure including visible display of said product sealed in the container, said portable closure comprising a pre-formed pellicle wall of transparent plastic film sheet material having shape and size substantially coincident with said open mouth wall structure of said container, said plastic film being formed over a bottom surface side and outer corner edge of a substantially rigid disc, said disc being provided with an opening through the wall thereof that is covered by said plastic film including the edge of said opening so that the planar surface of said film is offset and thereby disposed in co-planar relation with the top surface side of said rigid disc, said pre-formed pellicle wall including an upwardly extended inverted U-shaped flange portion thereof having its lower base covering said outer corner edge of the rigid disc thereby forming a resiliently active male bead portion of the formed closure, said closure being inserted in said open mouth of the container so that said male bead is resiliently engaged in said annular groove thereof, said inverted U-shaped flange portion of the closure providing means which encases said curled rim with a pellicle of plastic film, said container being sealed by the co-acting effects of said engaged male bead made resiliently active by compressing effects into said groove by the corner edge of said rigid disc and the seal being augmented by said rim encasing pellicle, which pellicle has inherent characteristic to snugly conform in tight configuration coincident with said mouth structure of the engaged container, said plastic film that covers said opening and edge thereof in the rigid disc portion of the sealed closure being means which avoids a dirt catching recessed pocket from being exposed in the exterior transparent lateral wall portion thereof that visibly displays the product sealed in said container.

References Cited in the file of this patent

UNITED STATES PATENTS

1,064,787 Taylor 6 June 1913
1,644,542 Pease 4 Oct. 1927
1,834,085 Bloom 1 Dec. 1931
1,914,208 Laidlaw 13 June 1933
2,099,056 Ferngren 6 Nov. 1937
2,487,400 Tupper 8 Nov. 1949
2,568,697 Amberg 25 Sept. 1951

FOREIGN PATENTS

1,051,777 France 23 Sept. 1953