A. SCHNEIDER.

REMOVABLE COVER FOR CONTAINERS.

APPLICATION FILED DEC. 23, 1919.

1,403,571. Patented Jan. 17, 1922.

Fig. 1.

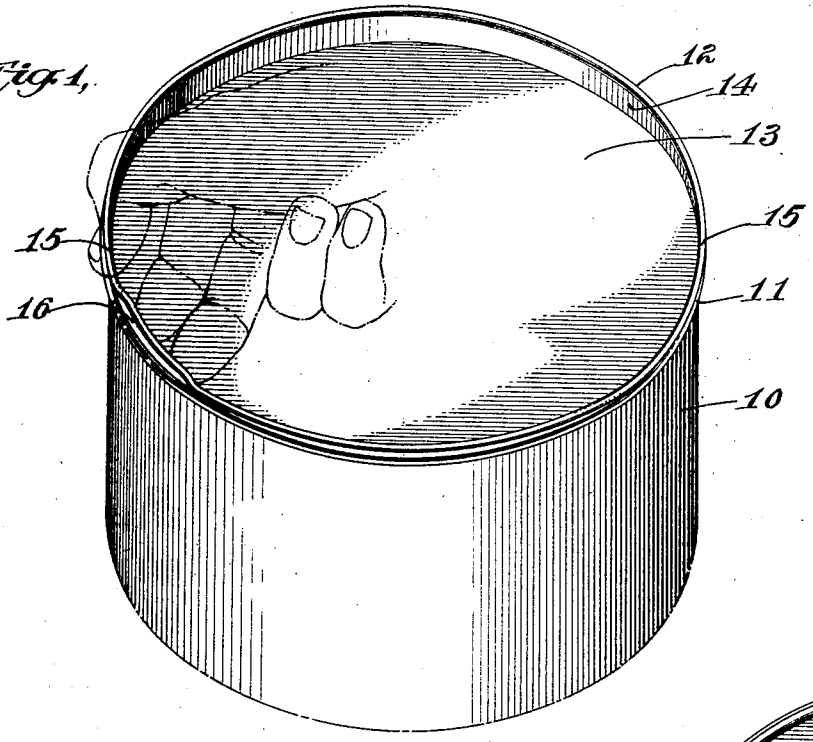


Fig. 2.

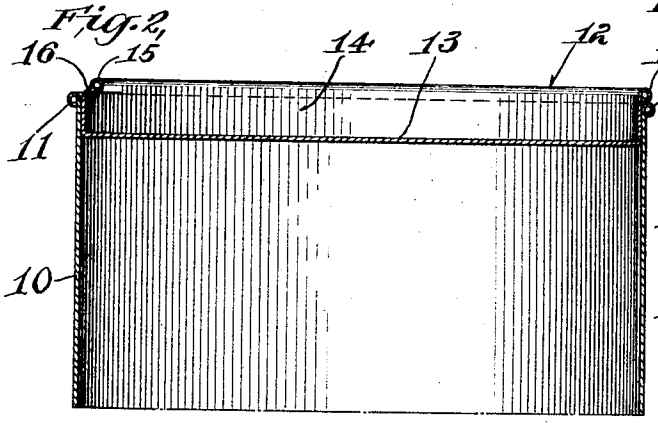
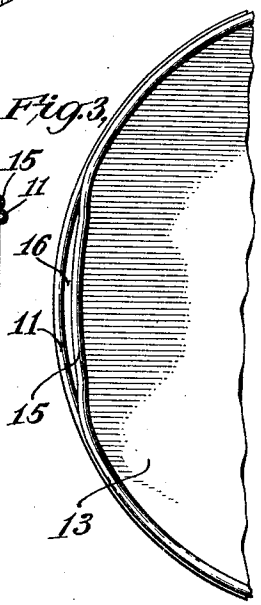


Fig. 3.



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UNITED STATES PATENT OFFICE.

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REMOVABLE COVER FOR CONTAINERS.

1,403,571. Specification of Letters Patent. **Patented Jan. 17, 1922.**

Application filed December 23, 1919. Serial No. 346,928.

To all whom it may concern:

Be it known that I, ANTHONY SCHNEIDER, a citizen of the United States, and resident of Whippany, in the county of Morris and State of New Jersey, have invented certain new and useful Improvements in Removable Covers for Containers, of which the following is a specification.

My invention relates to closures for containers, and in particular to the type of closure which includes an inset friction cover.

The need for a tight closure for cans which can be readily opened and closed repeatedly without interfering with its effectiveness has been filled by the well-known inset friction top construction which, for certain purposes, has come into practically universal use. The chief difficulty with this type of can, however, lies in the fact that, as it depends upon friction for maintaining a tight closure, the covers are somewhat difficult to remove without damage. Many constructions have been evolved for avoiding this difficulty by facilitating ready removal of the cover. Such constructions, however, require the employment of special implements, such as coins, to operate them; or their construction is such that they substantially increase the cost of manufacture. The business of manufacturing containers of this nature is highly competitive. Consequently, any material increase in cost tends to render the container unsaleable, regardless of its efficiency.

Furthermore, the employment of such implements for removing the cover is necessarily inconvenient, and convenience is of prime importance in manipulating containers which are in common use.

An object of my invention is to produce a container of this type which combines extreme simplicity in construction, and consequent cheapness of manufacture, with means for readily removing the friction cover.

A further object is to provide means for this purpose which, though adapted to be operated by a suitable implement, is also adapted to be operated directly by hand.

I also provide a construction in which the cover may be made of a single piece of material without the attachment thereto of separate parts for facilitating removal. A primary advantage of the inset friction cover is the tight closure produced thereby, owing to the continuous contact of the cover walls with the edges of the container opening. For certain uses, it is desirable to provide the cover with a relatively extended vertical side wall, which engages vertical walls on the container to provide a relatively large contact area, forming an extremely effective and practically air-tight closure.

This arrangement, however, necessarily results in a very tight fitting cover which is correspondingly difficult to remove; and as it depends upon the contacting area between the side walls of the cover and the container walls for its effectiveness, the side cover walls must be smooth and free from ready removal constructions, which would interfere with the continuous contact with the container wall.

Another object of my invention is to provide a construction adapted to this type of closure, which facilitates the ready removal of the cover without affecting the contacting portion of the side cover wall. One specific form of container having a closure of the nature last indicated is provided with a side container wall entirely free from inward projections and open at one end, this type being particularly useful where relatively fragile articles, such as cigarettes or cigars, are packed endwise therein, any inward projection on the wall of the container interfering with the withdrawal of the contents. This type of container is also extremely simple and cheap to manufacture, and an inset friction cover therefor must necessarily be provided with an outwardly extending portion adapted to engage the upper edge of the container wall when the cover is forced into position to limit the cover movement and provide a tight closure. Covers of this type are also simple and cheap to manufacture, the combination forming a very efficient and inexpensive container.

In the specific form of my invention, it is applied to a container of this type, and provides ready removal means for the cover without increasing to any substantial extent the expense of manufacture or decreasing the effectiveness of the closure.

Other objects and advantages of my invention will be apparent from the following description, taken in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view of the upper

portion of the container with the cover in position, indicating the method of withdrawing the cover,

Fig. 2 is a vertical transverse section through Fig. 1, and

Fig. 3 is a fragmentary top plan view, showing the ready removal device.

The container body 10 may be of any desired form, and while I have disclosed the type which is provided with a smooth side wall free from inward projections, which may be provided with an outwardly directed bead 11, it will be apparent that any type of container having an opening for an inset friction cover may be employed. The cover 12 includes a relatively flat bottom 13, a side wall 14 at the periphery of the bottom and adapted to engage the opening in the body 10, and an outwardly extending portion, such as bead 15, adapted to contact with the upper edge of the body opening to limit the motion of the cover into the container and seat it properly in position. Where the side wall 14 contacts throughout a substantial part of its height with the side wall of the body 10, it will be apparent that this arrangement provides a very tight fitting cover, which is adapted to protect the contents of the container admirably, but which is somewhat difficult to remove, owing to the wide frictional engagement between cover and body.

I provide means for the ready removal of the cover, consisting of an inwardly projecting portion of the upper part of side wall 14, which may be in the form of an inturned lip 16, of sufficient length and depth to permit suitable engagement with the under side thereof for removal of the cover. Lip 16 is preferably located at a sufficient distance above the cover bottom 13, and is of a suitable length, to permit one or more fingers to be inserted below the lip and grasp it properly. It will be apparent that lip 16 may vary considerably in size and extent, depending upon the nature and size of the inset friction cover employed. Where the cover is provided with a bead 15, it will be apparent that lip 16 may be produced by rolling the bead inwardly over the cover bottom 13; and while I have disclosed a complete bead extending across the inner edge of lip 16, my invention includes the flattening or straightening of the bead, if desired. Furthermore, though the length of lip 16 may be varied, it is substantially less than the periphery of the cover; and it will be readily apparent that, if desired, more than one lip 16 may be employed.

It will be apparent, especially from Fig. 2, that I have provided means on the cover which may readily be engaged by the fingers, the location of the projection at the upper edge of the wall 14 serving the double purpose of providing plently of room for insertion of the fingers beneath the lip 16, and also insuring contact of cover 12 with the wall of the container body 10 throughout substantially the entire height of cover wall 14 adjacent the lip 16, so that the effectiveness of the cover is not marred in any way by the employment of my cover removing means.

While I have described the preferred form of my invention and indicated certain variations therein, it will be apparent that numerous other changes may be made within the scope of my invention as set forth in this specification.

I claim:

1. A closure for containers, comprising a container having an opening and a dished cover for closing the opening, said cover including a relatively flat body portion, a side wall substantially at right angles thereto and adapted to frictionally engage the wall of the container opening, an outwardly extending bead along the upper edge of the side wall adapted to engage the upper edge of the container to limit the motion of the cover into the container, and means for facilitating the removal of the cover, said means including a portion of said bead substantially less in extent than the periphery of the cover, bent inwardly above and spaced from the bottom portion of the cover and adapted to be grasped by the fingers to exert an outward pull thereon for removal of the cover.

2. A closure for containers, comprising a container having an opening, and a dished cover having a wall adapted to be placed in and frictionally engage said opening, including an outwardly extending portion adapted to seat against the upper part of the container adjacent said opening to limit the motion of the cover into the container, an integral portion of said wall being bent inwardly to form a lip adapted to be engaged for removal of the top by an upward pull on said lip.

3. A closure for containers, comprising a container having vertically straight side walls free from inward projections and open at one end, and a dished cover for closing the opening, said cover including a relatively flat body portion, a side wall substantially at right angles thereto and adapted to frictionally engage the side walls of the container, an outwardly extending bead along the upper edge of the side wall adapted to engage the upper edge of the container to limit the motion of the cover into the container, and means for facilitating the removal of the cover, said means including a portion of said bead substantially less in extent than the periphery of the cover, bent inwardly above and spaced from the bottom portion of the cover and adapted to be grasped by the fingers to exert an outward pull thereon for removal of the cover.

4. The combination with a container having an open end, of a dished closure having a wall adapted to be placed in and frictionally engage said open end, and means to limit the motion of the closure into the container, an integral portion of said wall extending inwardly to form a lip to be engaged for removal of the closure by an upward pull thereon.

5. The combination with a container having an open end, of a dished closure having a wall adapted to be placed in and frictionally engage said open end, a portion of said wall substantially less than the total periphery of the closure extending inwardly to form a lip to be engaged for removal of the closure by an upward pull thereof, substantially as set forth.

6. The combination with a container having an open end, of a dished closure having a wall adapted to be placed in and frictionally engage said open end, and means to limit the motion of the closure into the container, a portion of said wall substantially less than the total periphery of the closure extending inwardly to form a lip to be engaged for removal of the closure by an upward pull thereof, substantially as set forth.

Signed at New York, in the county of New York and State of New York.

ANTHONY SCHNEIDER.