May 6, 1969

T. ANGELUS

3,442,377

CAN RE-SEALERS

Filed March 1, 1968

Sheet 1 of 2

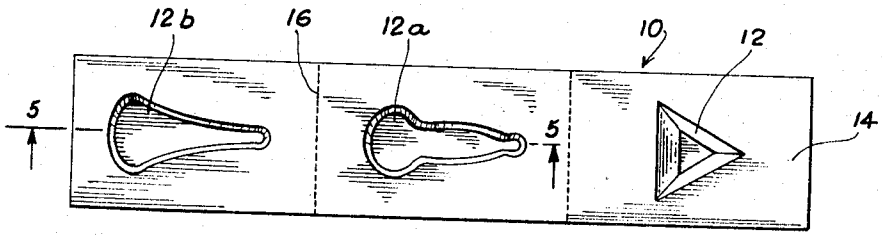


Fig. 1

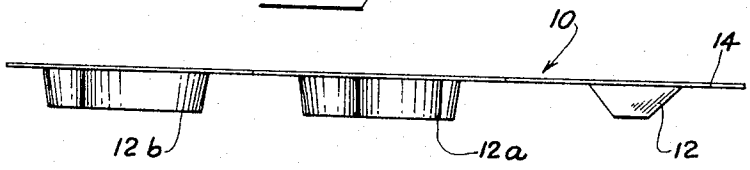


Fig. 2

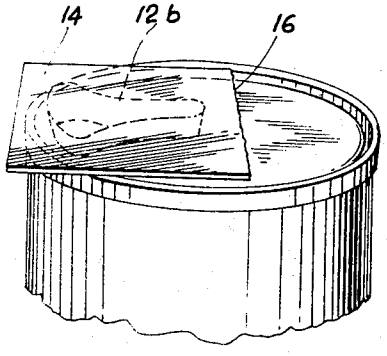


Fig. 3

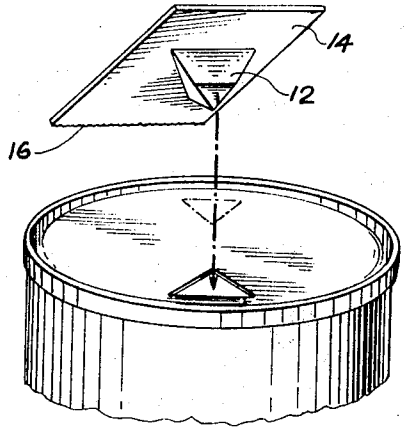


Fig. 4

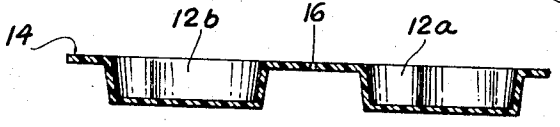


Fig. 5

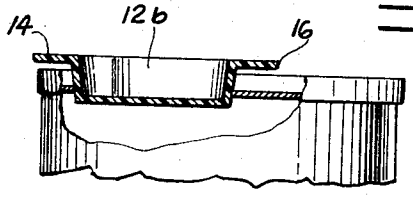


Fig. 6

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May 6, 1969 T. ANGELUS 3,442,377

CAN RE-SEALERS

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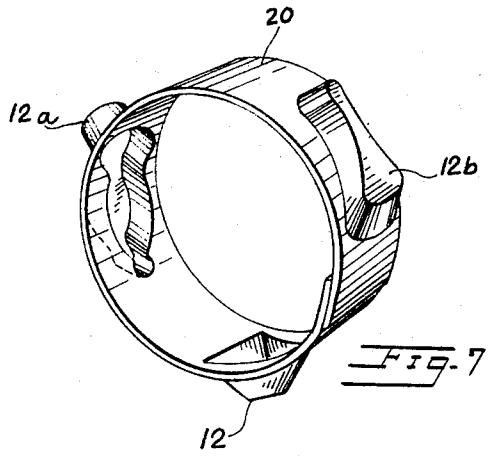


Fig. 7

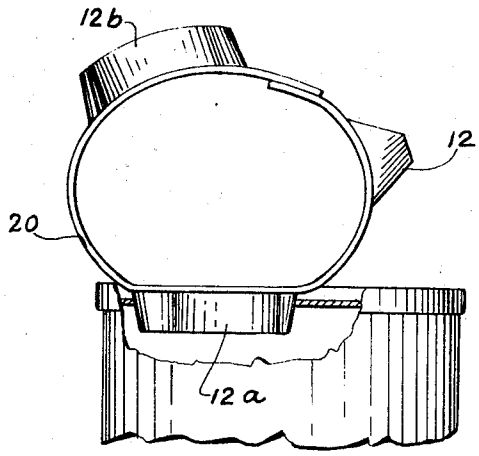


Fig. 8

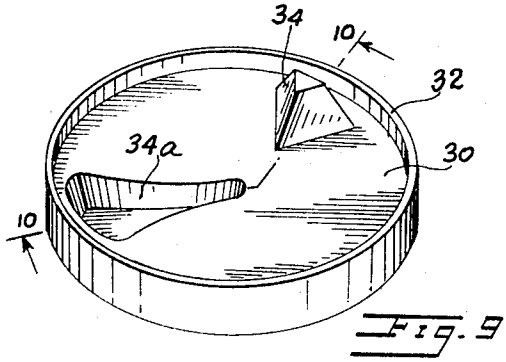


Fig. 9

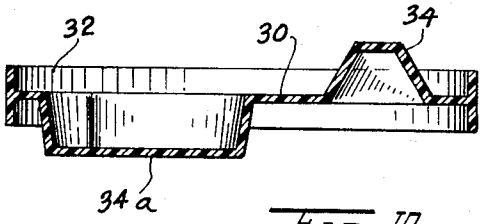


Fig. 10

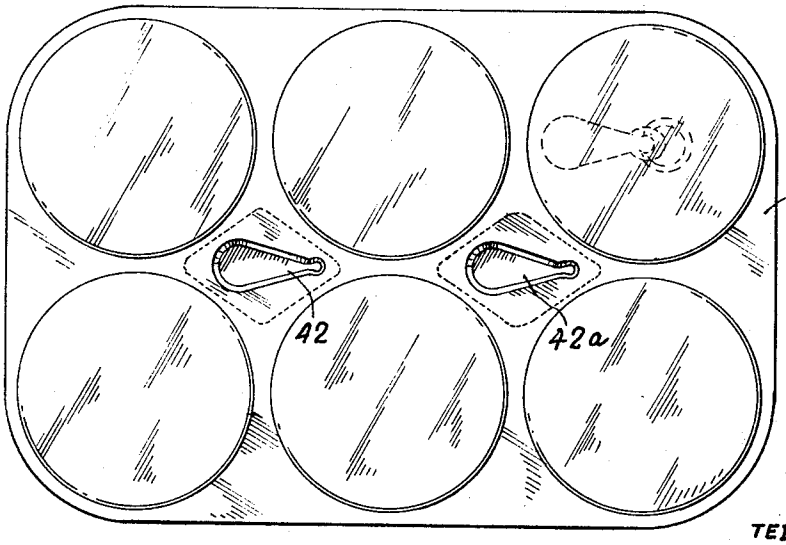


Fig. 11

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CAN RE-SEALERS

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Int. Cl. B65d 39/00, 39/16, 41/00, 41/02, 41/16
U.S. Cl. 206—65 2 Claims

ABSTRACT OF THE DISCLOSURE

A resilient material formed to have a grip portion and a sealing portion which sealing portion is adapted to the contour and configuration of the hole into which it is intended to be inserted whereby holes of a variety of shapes may be easily, economically and efficiently closed.

BACKGROUND OF THE INVENTION

Field of the invention

Closures for cans and the like.

Description of the prior art

Plugs and corks to seal holes are well known and have been well known since antiquity. Modern times, however, have seen proliferation of methods by means of which sealed metal containers may readily be opened. Among these is the well known cutting can-opener which has a lever pivoted at the can edge and which pierces and cuts to open a triangular hole in the can top. The triangle is usually substantially equilateral and it varies in size both with the size of the tool and the extent to which the tool is used. Other can-opening devices include integral "pull-tabs" which consist of a strip of metal soldered or embossed into the can top and provided with a ring handle for removal. The resulting hole is highly irregular in shape and varies from manufacturer to manufacturer. The prior art is not known to have means for closing such holes and re-sealing the containers. The closest known prior art constitutes a closure for the entire top of the can which fits and inefficiently seals about the outer circumference of the can top.

Summary of the invention

Accordingly, the present invention provides a can re-sealer which is adapted to close and re-seal the irregularly shaped holes commonly produced when opening cans.

The present invention also provides a means for re-sealing holes in cans which is so economical as to be normally considered disposable and actually has virtually negligible cost in certain of its embodiments.

The present invention further provides a means for placing spoilable fluids in larger capacity containers such that partial use may be made of the contents with complete re-sealability and preservation of the remainder thereof.

Briefly, and not by way of limitation, the present invention provides a formed plug adapted to the shape of the hole into which it is intended to be inserted. The material used is plastic or the like and, therefore, resilient enough to engage and seal the edges of the hole and, in the event of internal container pressure, resist unintended removal.

According to an embodiment of the invention, the plug shape may be tapered such that a single plug is adapted to be used in holes similar in shape but varying in size. Thus, in the case of a hole produced by a standard can opener which may be a larger or smaller substantially equilateral triangle according to the extent the opener is inserted into the can top, the present invention teaches a truncated triangular pyramid to be utilized as a plug.

According to another embodiment of the present invention, a single grip embodies a plurality of plugs which may differ in shape.

According to still another embodiment of the present invention, can re-sealers in accordance herewith may be formed integral with the sheet material used to join cans into a convenient single grouping, usually of six cans. This popularly called "six-pack" is accordingly provided with plugs for re-sealing the cans therein.

Brief description of the drawing

FIGURE 1 is a plan view of a plurality of joined can re-sealers according to the present invention.

FIGURE 2 is a side view of the can re-sealers of FIGURE 1.

FIGURE 3 is a perspective view of a can re-sealer re-sealing a can.

FIGURE 4 is an exploded perspective view of a can re-sealer and a can.

FIGURE 5 is a fragmentary cross-sectional view taken across line **5—5** of FIGURE 1.

FIGURE 6 is a fragmentary partial cross-sectional view of a can re-sealer re-sealing a can.

FIGURE 7 is a perspective view of a plurality of joined can re-sealers according to an embodiment of the present invention.

FIGURE 8 is a fragmentary view of the embodiment shown in FIGURE 7 re-sealing a can.

FIGURE 9 is a perspective view of a plurality of joined can re-sealers according to another embodiment of the present invention.

FIGURE 10 is a cross-sectional view taken across line **10—10** of FIGURE 9.

FIGURE 11 is a plan view of a plurality of joined can re-sealers according to a further embodiment of the present invention.

Description of preferred embodiments of the invention

Referring to the drawing, a sheet **10** of formable material preferably a thermoplastic, is formed as by vacuum molding or the like to provide at least one plug or sealing portion **12**. The portion of sheet **10** surrounding each sealing portion **12** forms a flange or grip portion **4**.

Each sealing portion **12** is formed specifically to the contour of the hole into which it is intended to be inserted. For example, the hole punched by the common can opener is substantially triangular in shape, the triangle being substantially equilateral. The extent to which the can opener is forced into the can top determines the size of the triangular hole. Sealing portion **12** adapted to seal such a hole is accordingly a truncated pyramid any right cross-section of which is an equilateral triangle. Such a sealing portion **12** may be inserted into a triangular can hole to the extent necessary for proper sealing regardless of the size of that hole up to the largest dimension of that sealing portion.

As a further example of the formation of a sealing portion **12** to the contour of the hole into which it is intended to be inserted, FIGURE 1 shows two other sealing portions **12***a* and **12***b* each of which is intended for insertion into a can hole produced by removal of the so-called "pull-tab" manually opened can. The curious and somewhat irregular configuration produced in the hole necessitated by the exigences of the "pull-tab" design heretofore defied conventional re-sealing. Forming sealing portion **12***a* or **12***b* with an integral grip portion **14** from sheet **10** provides a most economical and useful re-sealer. It is to a great extent the negligible cost of manufacture that permits the present invention to be economically feasible although varying plug contours and shapes are herein taught and contemplated. The can re-sealer of the

present invention may be intended to be a throw-away article, or more precisely, to be used only with a given can and to be disposed therewith. To this end, sheet **10** may be relatively thin since wearing properties are of little concern. Of course, should it be desired to produce a more useful and long lived product, which can be used time and again, it is only necessary to provide a thicker and therefore more durable sheet **10**. It is also possible to mold the can re-sealers of the present invention such that they are solid rather than hollow.

FIGURE 1 shows a plurality of can re-sealers joined on a common sheet **10**. Between the respective grip portions **14** there may be formed a perforation **16** to permit easy separation of each can re-sealer for individual use as shown in FIGURES 3 and 4. Such separation is not necessary of course, but may be useful and convenient.

FIGURES 7 and 8 show an embodiment of the present invention in which sheet **10** is looped and joined to form a ring **20** having a plurality of sealing portions **12**. This embodiment of the invention provides the unique advantage of a combination of can re-sealers useful for many and varying applications and which provides a ring handle for the most simple and effortless removal from the can. As this embodiment is inetnded to be used several times it may be made more durable than the "throw-away" embodiment above referred to. While FIGURE 8 would tend to suggest that ring **20** is cumbersome and requires considerable space upon the can top, it is to be remembered that sheet **10** is to be a relatively flexible material and may be depressed to allow the can to be inserted upright under a low refrigerator shelf by way of illustration.

The embodiment shown in FIGURES 9 and 10 provides a disk **30** having a circumferential annular flange **32** which is intended to engage and seal about the outer edge of the can rim. Formed in disk **30** are two sealing portions **34** and **34***a*, each upstanding from the disk surface but in opposite directions such that one sealing portion **34** may be used without interference from the other sealing portion **34***a* and of course, vice versa. Annular flange **32** extends in both directions above and below disk **30** such that rim sealing is effected regardless of which way disk **30** is turned.

FIGURE 11 demonstrates a particular use of the present invention in connection with "six-pack" can groupings having a single sheet **40** formed across the respective can tops to join them for sales purposes. It is an aspect of the present invention to form removable sealing portions **42**, **42***a* into an integral width sheet **40**. In this manner, cans are sold together and in conjunction with can re-sealers adapted for use with those cans and disposable thereafter.

While the foregoing is illustrative of preferred embodiments of the present invention it is clear that other embodiments and modifications may be had within the broad spirit of the invention and the scope of the appended claims. By way of example, the sealing portions may be provided with roughened or serrated outer surfaces to aid in retention of the sealing portion in the can hole and to resist the build-up of internal pressure which may occur if a carbonated beverage is in the can. By way of further example, the grip portions may be utilized for advertising appliqué and accordingly may be made in any size or shape necessary to that purpose.

What is claimed is:

1. A can re-sealer comprising in combination:

(a) a plurality of sealing portions formed to the contour of the can opening into which they are intended to be inserted;

(b) a grip portion integral with and surrounding each said sealing portion;

(c) such grip portions being joined as a single sheet; and

(d) said single sheet being a disk having a circumferential annular sealing flange extending above and below said disk, at least one of said grip portions being formed on the opposite side of said disk from another of said grip portions.

2. A can re-sealer in accordance with claim **1**, wherein said sealing portions are serrated.

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JAMES B. MARBERT, *Primary Examiner.*