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METAL CONTAINER

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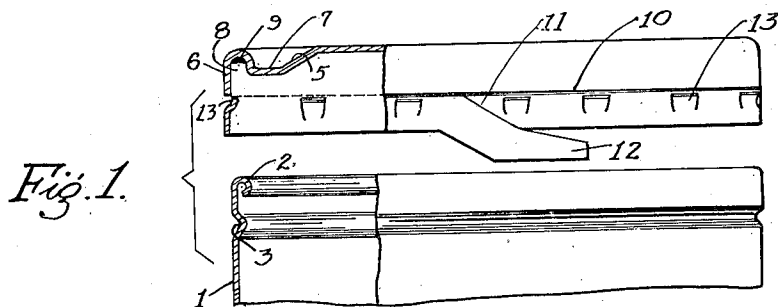


Fig. 2.

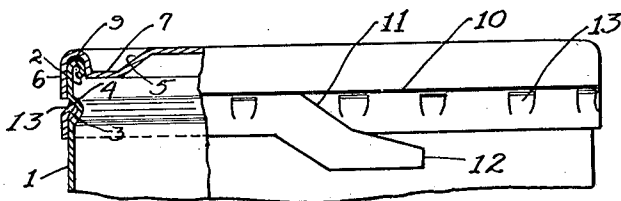
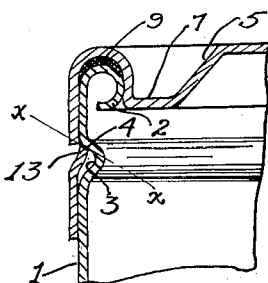


Fig. 3.



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METAL CONTAINER

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The invention relates to new and useful improvements in metal containers and more particularly to a metal container which is capable of being tightly sealed and which can be readily opened.

An object of the invention is to provide a container which may be sealed by pressure applied to the closing cover and which is opened by a rip strip formed as a part of the cover and containing the cover holding means.

A further object of the invention is to provide a container of the above type wherein the cover holding means is in the form of lugs located in the cover flange adjacent the score line so that said lugs are withdrawn from locking engagement with the container body when the rip strip is removed, with ease, simplicity and speed.

A further object of the invention is to provide a container of the above type wherein the cover holding means includes lugs struck up from the metal of the cover flange in the rip strip and adjacent the score line, said lugs being cut all the way through the metal at the upper ends thereof whereby said lugs will have a gripping engagement with a shoulder on the container body for positively holding said cover on the container until the rip strip is removed withdrawing the lugs from engagement with the shoulder of the container.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings, which show by way of illustration one embodiment of the invention:—

Fig. 1 is a view partly in section and partly in side elevation showing a portion of a container body with a cover therefor embodying the improvements, the cover being detached from the body.

Fig. 2 is a view similar to Fig. 1, but showing the cover applied to the container body and held in sealed engagement thereon.

Fig. 3 is an enlarged vertical sectional view through a portion of the cover and a portion of the container body showing in detail the securing lug and the manner in which said lug grips the container body.

The invention is directed to a metal container which is capable of being tightly sealed and which is, at the same time, easy to open. The container body is preferably formed with a rolled edge at its open end and with an inwardly projecting bead parallel with the open end and spaced thereon. This inwardly projecting bead is constructed so that the upper wall thereof lies in a line which approaches a position perpendicular to the wall of the container. The cover is preferably provided with a central depressed portion forming a channel for a sealing material which is adapted to be pressed against the end of the container body when the cover is applied thereto for forming a tight seal between the cover and the container body. The cover has a depending flange extending over the container body and said flange is preferably proportioned so as to have a comparatively snug sliding fit with the outer wall of the container body. Said flange is provided midway of its height with a score line which is parallel with the lower edge of the flange and forms from said lower edge portion a rip strip. The score line extends across the rip strip and said flange is provided with an integral projecting tongue at the extreme lower edge thereof, one edge of which lies in a line with the cross score line. The cover flange is provided with a series of holding lugs; these holding lugs are located adjacent the score line in the rip strip. The lugs are formed by indenting the metal, and the metal at the upper end of the lug which is at the score line is broken through so that at the upper end of the lug there is a raw edge of metal. These lugs are so positioned and the flange so proportioned that when the cover is forced into sealing engagement with the container body, the lugs will engage the shoulder formed by the upper wall in the bead of the container body and thus the cover will be positively held locked to the container body through these lugs gripping into the metal.

The cover can only be removed by tearing off the rip strip which withdraws the lugs from gripping engagement with the wall of the container body. Thus it will be seen

that a means has been provided whereby the securing means, which is of positive locking character, can be speedily removed with an ease and simplicity not heretofore accomplished.

Referring more in detail to the drawings, the container consists of a body portion 1 having its upper edge rolled into a hollow bead 2. This not only strengthens the open edge of the container, but it conceals the raw edge of the metal and provides a smooth comparatively wide bearing surface at this open end of the container. The container is also provided with an inwardly projecting bead 3. This bead is annular and is parallel with the upper edge of the container body. It is also spaced a slight distance beneath the upper edge of the container body. The upper wall 4 of the bead 3 lies in a line $x-x$ which approaches a horizontal for purposes which will be referred to later.

The container is closed by a cover 5. Said cover is provided with a depending flange 6 which extends down over the container body and has a snag sliding fit therewith. Said cover is provided also with a depressed portion 7 forming a channel 8 in which is placed a sealing material 9. When the cover is placed on the container body, the upper rolled edge of the container body substantially fits within this channel 8 and when the cover is pressed down onto the container body a tight seal will be formed between the cover and the container body through the aid of this sealing material.

The depending flange of the cover is provided with a score line 10 which is located midway between the upper and lower edges of the flange. This score line provides a rip strip at the lower edge of the flange of the cover. The score line extends across the rip strip as indicated at 11 and the flange is provided with an integral portion 12 disposed relative to the cross score line 11 so as to provide a tongue with which a key may be engaged for tearing the rip strip from the flange of the cover.

Located in this flange is a series of gripping lugs 13. These lugs are located adjacent the score line and when the metal is indented to form the lugs the metal along the score line is cut all the way through, which provides a raw edge of metal at the upper end of each holding lug. The cover is formed with its lug before it is attached to the container body. The parts are so proportioned and the lugs so arranged that when the cover is forced onto the container body to a sufficient extent to bring about a proper tight seal, then it is that the lugs will spring into the space formed by the bead 3, and the end of the lug will engage the wall 4. The raw edge of metal at the upper end of the lug will grip the wall of the container and positively lock the cover on the container so that it cannot be pulled

off by force or pried off. When it is desired to remove the cover, a key is placed on the rip strip and the rip strip torn off. When the rip strip is torn off, it withdraws these locking lugs from their gripping engagement with the wall of the container body, and thus releases the cover from the container so that it may be slipped off. The score line being placed midway between the upper and lower edges of the flange leaves a portion of the flange on the cover after the rip strip is removed, which will slide down over the container and serve for the purpose of reclosing the container.

From the above it will be apparent that a container has been provided wherein the cover may be placed on the container without the use of complicated closing machines. All that is necessary is to press the cover firmly on to the container end to a sufficient extent so that the locking lugs will snap into the recess formed by the bead in the container body and grip the container wall, and thus lock the cover to the container. As noted, these parts are so proportioned that the locking of the cover to the container is not accomplished until the cover is forced on to the container to a sufficient extent to bring about a proper seal. The lugs or fingers 13 are yielding, and so is the flange of the cover yielding. Therefore, these fingers are constantly being forced toward the container body and will grip the wall of the bead just as soon as the cover is pressed sufficiently on to the container to allow the fingers to move into the recess. When the cover is pressed further on, the fingers will spring down the more or less inclined gripping wall on the container and thus lock the cover firmly to the container in the extreme position to which it is pressed. The cover is so held on the container that it cannot be removed and the contents of the container tampered with without the removal of or damage to the rip strip which clearly indicates that the package has been opened, or tampered with.

Furthermore, the rip strip can be opened readily with a key which is secured to the package in any suitable way and, therefore, means is present in the package for readily opening the container without the use of any tools.

While the body is shown as provided with an inwardly projecting bead to form a shoulder which is engaged by the lugs for locking the cover to the container body, it will be understood that these locking walls may be formed by otherwise shaping the container body. It will also be understood that the cross sectional shaping of this bead in the container body forming the locking shoulder may be greatly varied. It is essential, however, that the wall with which the ends of the locking lugs make contact shall approach sufficiently near to a horizontal line so as to

cause said lugs to grip into the metal and positively lock the cover to the container body until the rip strip is torn from the cover.

It is obvious that minor changes in the details of construction may be made without departing from the spirit of the invention as set forth in the appended claims.

Having fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. A metal container comprising a body portion having an annular shoulder parallel with the open end of the body and spaced therefrom, a cover having a depending flange adapted to extend down over the body, said cover having means for supporting a sealing material for forming a seal between said cover and the end of the body of the container, said cover flange having a score line substantially midway of the height of the flange and forming therein a rip strip at the lower edge portion of the flange, said rip strip being provided with spaced inwardly projecting locking lugs adapted to engage said shoulder when the cover is pressed into sealed engagement with the body for securing the cover to the body, said lugs and shoulder being constructed so as to maintain the cover in sealed engagement with the body until said rip strip is torn from the cover.

2. A metal container comprising a body portion having an annular shoulder parallel with the open end of the body and spaced therefrom, a cover having a depending flange adapted to extend down over the body, said cover having means for supporting a sealing material for forming a seal between said cover and the end of the body of the container, said cover flange having a score line substantially midway of the height of the flange and forming therein a rip strip at the lower edge portion of the flange, said rip strip being provided with spaced inwardly projecting locking lugs adapted to engage said shoulder when the cover is pressed into sealed engagement with the body for securing the cover to the body, said lugs being disposed in said rip strip with the upper ends thereof adjacent the score line and constructed so as to maintain the cover in sealed engagement with the body until said rip strip is torn from the cover or damaged.

3. A metal container comprising a body portion having an annular shoulder parallel with the open end of the body and spaced therefrom, a cover having a depending flange adapted to extend down over the body, said cover having means for supporting a sealing material for forming a seal between said cover and the end of the body of the container, said cover flange having a score line substantially midway of the height of the flange and forming therein a rip strip at the lower edge portion of the flange, said rip strip being provided with spaced inwardly project-

ing locking lugs adapted to engage said shoulder when the cover is pressed into sealed engagement with the body for securing the cover to the body, the metal at the upper end of said lugs being cut through so as to form a raw edge of metal at the upper end of each lug which is adapted to grip the shoulder of the container body for maintaining the cover in sealed engagement with the body until the rip strip is torn from the cover.

In testimony whereof, we affix our signatures.

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