

Feb. 1, 1944.

H. SEBELL

2,340,568

CONTAINER

Filed Jan. 12, 1942

3 Sheets-Sheet 1

Fig.1.

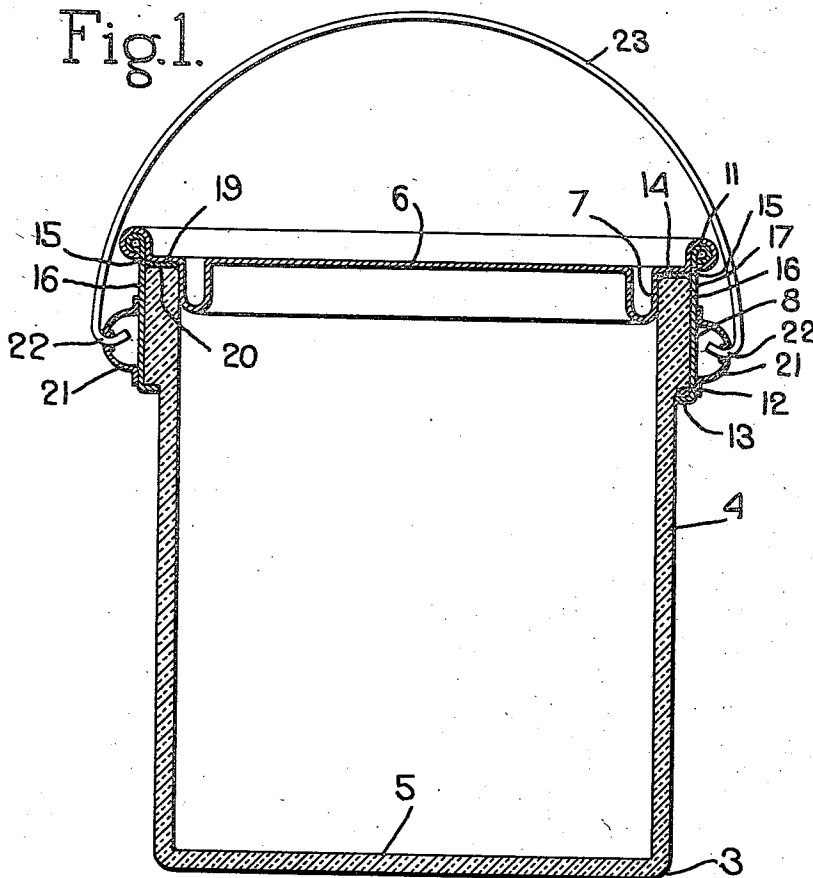


Fig.2.

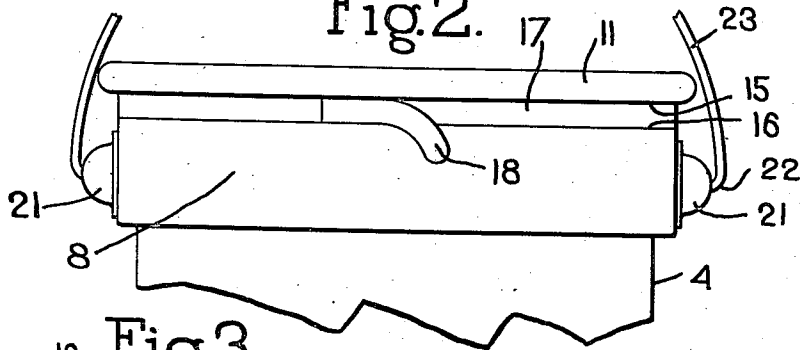
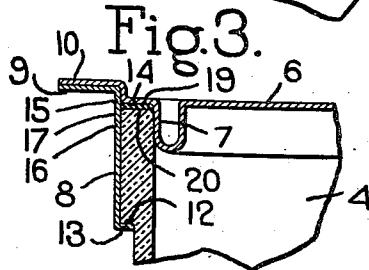


Fig.3.



Inventor.
Harry Sebell
by *Edward Smith & Tennant.*
Attys.

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Fig.4.

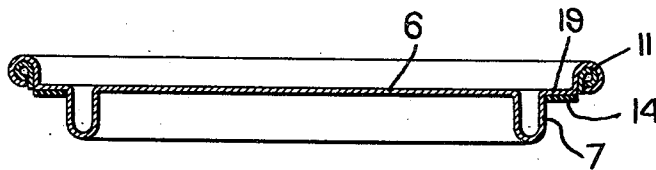


Fig.5.

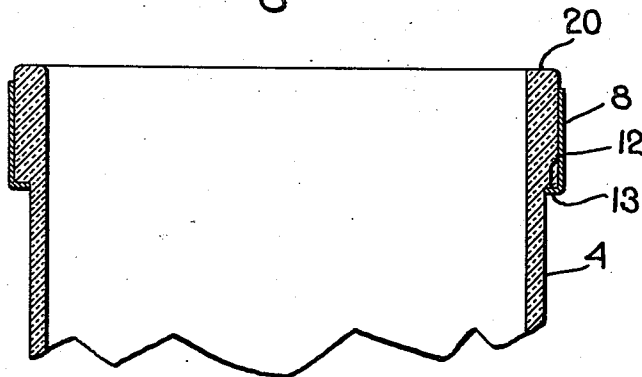


Fig.6.

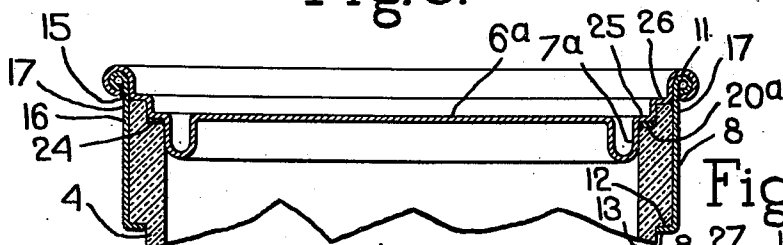


Fig.7.

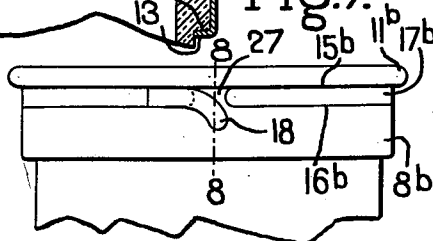
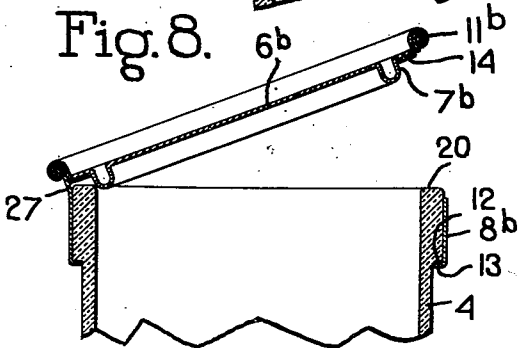


Fig.8.



Inventor.
Harry Sebell
by *Heard Smith & Tennant.*
Attys.

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Fig.9.

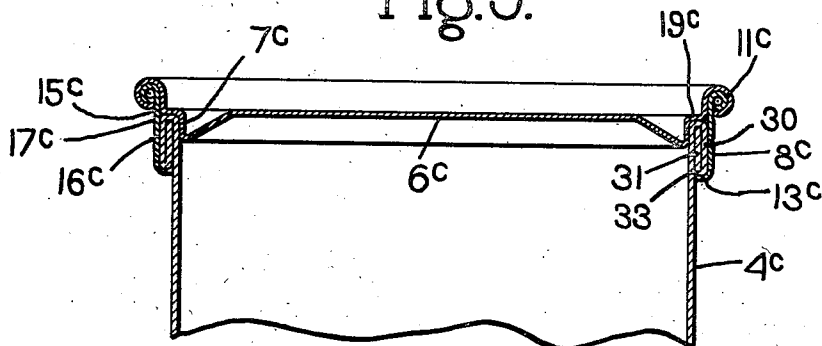


Fig.10.

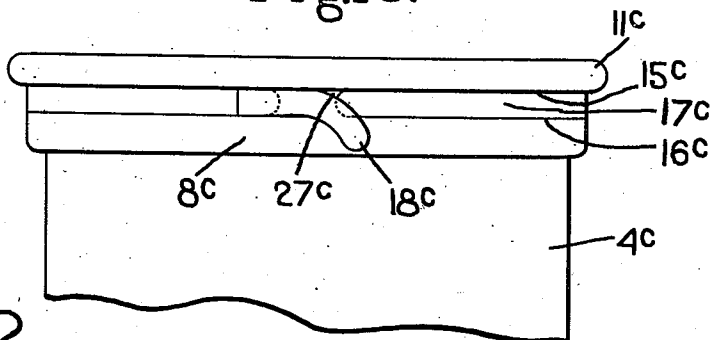


Fig.12.

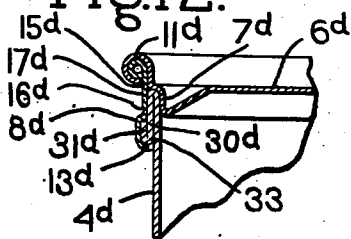
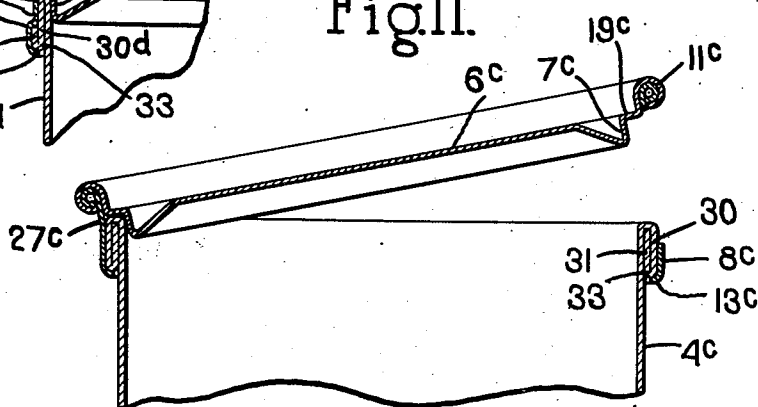


Fig.11.



Inventor.
Harry Sebell
by *Heard Smith Tennant*
Attys.

UNITED STATES PATENT OFFICE

2,340,568

CONTAINER

Harry Sebell, Marblehead, Mass., assignor of one-half to Arthur H. Parker, Lexington, Mass.

Application January 12, 1942, Serial No. 426,446

2 Claims. (Cl. 215—38)

This invention relates to containers of that type comprising a body member and a removable end member which, after the container has been filled, is sealed to the container body with a hermetic seal and which is so constructed that the container may be opened for the discharge of its contents by tearing out a circumferential tear strip, thereby permitting the end member to be removed, said end member being constructed so that it can be again replaced on the container body with a friction fit.

One of the objects of the present invention is provide a novel container of the type in which the body member is made of vitreous materials such as glass, or plastics, or some other suitable non-metallic material, while the removable end member is made of sheet metal.

In order to give an understanding of the invention, I have illustrated in the drawings some selected embodiment thereof which will now be described, after which the novel features will be pointed out in the appended claims.

Fig. 1 is a vertical sectional view of a container embodying my invention.

Fig. 2 is a fragmentary side view thereof.

Fig. 3 is a fragmentary sectional view illustrating the manner in which the end member is sealed to the body of the container.

Fig. 4 is a sectional view showing the end member after it has been removed.

Fig. 5 is a fragmentary sectional view through the upper part of the container body showing the latter after the container has been opened.

Fig. 6 is a fragmentary sectional view similar to Fig. 1 but showing a different embodiment of the invention.

Fig. 7 is a fragmentary side view of a container embodying the invention but having an end member or closure member which is pivotally connected to the body after the can has been opened.

Fig. 8 is a fragmentary sectional view of the container illustrated in Fig. 7 taken on the line 8—8, Fig. 7 but showing the container opened.

Fig. 9 is a fragmentary sectional view showing my invention as applied to a container having walls of paper or fibre.

Fig. 10 is a side view of Fig. 9.

Fig. 11 is a sectional view illustrating the container in Fig. 9 after it has been opened.

Fig. 12 is a fragmentary sectional view of a different embodiment of the invention.

In my improved container shown in Fig. 1, the body member 3 having the side walls 4 and bottom 5 may be made from glass or plastics or any

other suitable non-metallic material. The end member 6 is made of sheet metal and it is formed with a depending vertical wall 7 which fits within the upper end of the body 3 with a friction fit.

In order to provide for sealing the end member 6 to the body 3 when the container is first filled, I propose to employ a metal band 8 which encircles the upper end of the body 3 and is permanently secured thereto. This band 8 is initially provided with a laterally extending sealing flange 9 and the end member 6 is also initially provided at its periphery with a sealing flange 10, as shown in Fig. 3.

After the container has been filled, the end member 6 is assembled with the body 3 by inserting the depending wall 7 into the open top of the body 3 and positioning the sealing flange 10 thereon against the sealing flange 9 of the band 8. These two sealing flanges are then rolled together in the usual way to form the lock seam 11 and thereby the end member 6 is secured to the body 3.

The body member 3 is shown as having a downwardly-facing circumferential shoulder 12 and the lower edge of the band 8 is bent inwardly into engagement with said shoulder as shown at 13, thereby locking or anchoring the band 8 to the container body 3. The cover member or end member 6 is formed to present the annular portion 19 which extends outwardly from the upper edge of the wall 7 and overlies and forms a tight joint with the top edge 20 of the body member.

If desired, a suitable gasket or packing 14 may be employed between said portion 19 of the end member 6 and the top edge 20 of the body wall 4, thereby to hermetically seal the container.

The band 8 is formed with two circumferential lines of weakness or score lines 15 and 16 which form between them a tear strip 17 that can be torn out of the band when the container is to be opened. This tear strip will be provided with the usual projecting tab 18 to which a key may be applied for tearing the tear strip from the band 8 as usual in cans or containers that are opened by removing a tear strip from the wall of the container.

The lower line of weakness 16 is situated below the top edge 20 of the container body, and the upper line of weakness 15 is situated no lower than the bottom face of the annular portion 19. When the tear strip 17 has been torn out of the band 8, the latter will be divided into an upper portion which is seamed to the cover member 6 by the lock seam 11, and a lower portion which

remains anchored to the body member. The removal of the tear strip exposes not only the upper edge portion of the body member but also the sealing gasket 14, and after the tear strip has been removed the cover may be lifted from the container by forcing a suitable implement into the space between the annular portion 19 of the end member 8 and the top edge 20 of the container body which is occupied by the gasket or packing strip 14. In this way, the end member can be readily pried off from the body portion.

Because of the fact that the end member has the depending wall 7 which fits within the open end of the body with a friction fit, the end member or cover member 6 is a replaceable cover which can be replaced on the container body, and when so replaced it will have a tight fit therewith.

There is thus provided an hermetically sealed container having the body portion made of glass, plastics or some other non-metallic material and which is provided with a replaceable sheet metal cover member of the plug type which when replaced has a friction fit with the body.

Some containers of this type, and especially containers of the gallon or 1/2-gallon size which are used for packaging paint, are frequently provided with a bail by which they can be carried. Such a bail is shown in Figs. 1 and 2 of the drawings and this may be provided for by securing suitable ears 21 to the band 8 on the opposite sides thereof and connecting the ends 22 of a bail 23 with said ears in a well-known way.

The use of the band 8 therefore makes it possible not only to use a container having a body member of glass or plastic or other non-metallic material but it also provides means by which the container can be opened by removing a tear strip in the usual way, and a container in which the cover member has a friction fit with the upper end of the body member when said cover is replaced thereon. The use of the band 8 also makes it possible to equip the container with the carrying bail 23.

The band 8 will have sufficient frictional engagement with the exterior of the body member 3 so that said band will retain its place on the body after the tear strip 17 has been removed.

In Fig. 6, there is shown a slightly different embodiment of the invention in which the upper edge of the wall 4 of the container body is formed with a rabbet 24 and the end member 6a is formed with the two annular stepped portions 25, 26 one of which rests on the bottom wall of the rabbet 24 and the other of which rests on the top edge of the body. In this embodiment of the invention, the packing gasket 20a is interposed between the bottom face of the rabbet 24 and the step 25. The peripheral edge of the end member 6a is secured to the band 8 by means of the lock seam 11 as in the other embodiments of the invention, and said band is provided with the two lines of weakness 15, 16 which form between them the tear strip 17 as above described with reference to Figs. 1 and 2.

Figs. 7 and 8 show a construction in which the upper end of the body member 3 has a band 8b thereon similar to the band 8 in Fig. 1 and in which the end member 6b is seamed to the upper edge of the band by means of the lock seam 11b.

In the embodiment shown in Figs. 7 and 8, however, the lines of weakness which are indicated at 15b and 16b do not extend entirely about the band 8b so that when the tear strip

17b is torn out of the band, there will be left a portion 27 which connects the can end with the band. This portion 27 constitutes a hinge about which the cover may be swung when the container is to be opened as shown in Fig. 8.

In Figs. 9 to 12 I have illustrated a still different embodiment of the invention in which the body of the container is made of paper fibre, cardboard, etc. In this embodiment, the side wall of the container body is indicated at 4c and as stated above, it may be made of fibre, cardboard or some other paper-like product. The upper edge portion of the side wall 4c is folded over on the outside of said side wall as shown at 30 and then is folded or bent inwardly and upwardly as indicated at 31 so that the portion 31 is located between the fold 30 and the wall 4c of the container body. Surrounding the folded portion 30, 31 of the container body is a metal band 8c to the upper edge of which the end member 6c is seamed by means of the lock seam 11c, said end member 6c being preferably made of sheet metal. This end member 6c is made with the depending circumferential wall 7c which fits within the open end of the body and the cover is also made with an annular portion 19c which rests on the top edge of the body.

The band 8c is made with the two lines of weakness or score lines 15c and 16c forming between them a tear strip 17c similar to the tear strip 17 in Fig. 1 and which can be torn from the band when the container is to be opened.

In the construction shown in Fig. 10, the tear strip 17c does not extend entirely around the band but is constructed so that when the tear strip is removed from the band, there will be left a portion 27c constituting a hinge for the end member when the container is to be opened as shown in Fig. 11. One end of the tear strip 17c is provided with the usual tab 18c which can be engaged by a key or other implement for tearing the strip from the can.

The lower edge of the band 8c is bent inwardly as shown at 13c to engage the under side of the folded portion 30, 31, thereby to retain the band on the container.

The three-ply formation at the upper edge of the body together with the band 8c provides a container with a relatively stiff rim at its upper end so that after the container has been opened, the end member 6c can be replaced on the container body with a friction fit and will quite effectively seal the container again, notwithstanding the fact that the container body is made of paper or fibre.

In Fig. 12, I have illustrated a different embodiment of the invention in which the upper edge of the wall 4d of the body is folded outwardly and back on itself as shown at 30d and then is folded outwardly and upwardly as shown at 31d, the fold 31d having less vertical dimension than the fold 30d. Surrounding the upper edge of the can body is a sheet metal band 8d to the upper edge of which the end member 6d is seamed by means of the lock seam 11d. This end member 6d is formed with the vertical wall 7d that fits snugly within the upper end of the container body. The band 8d is provided with the two lines of weakness or score lines 15d and 16d which form between them the tear strip 17d that is adapted to be torn out of the band when the container is to be opened.

In this embodiment of the invention, not only is the lower edge 13d of the band bent around underneath the shoulder formed by the folded

portions 30d and 31d, but said band may have its upper portion offset with relation to the lower portion thereby to form the shoulder 33 that engages the top edge of the fold 31d.

I claim:

1. A container comprising a body member having a downwardly facing circumferential shoulder on its exterior surface adjacent to its upper edge, a band of sheet metal encircling the portion of the body above said shoulder, the lower edge of said band being bent inwardly to engage said shoulder, a cover member separate from said band and having its peripheral edge seamed to the upper edge of the band, said cover member having a depending annular wall that frictionally fits within the upper open end of the body member and further having an annular portion extending outwardly from the upper edge of said depending wall and overlying the top edge of the body portion, said band having two circumferential lines of weakness forming between them a tear strip which when torn out divides the band into an upper portion that remains seamed to the peripheral edge of the cover member and a lower portion which remains anchored to the body member, whereby the cover member is free to be lifted to open the container, the lower line of weakness being situated below the top edge of the container body and the upper line of weakness being situated no lower than the lower face of said annular portion, said cover member being replaceable on the body member to occupy the same position it occupied before the tear strip was removed, the friction fit between the depending annular wall of the replaced cover member and the interior face of the body member forming a tight joint.

2. A container comprising a body member of glass having a downwardly facing shoulder on its exterior adjacent to its upper edge, a band of sheet metal encircling the portion of the body above said shoulder, the lower edge of said band being bent inwardly to engage said shoulder, a cover member of sheet metal separate from said band and having its peripheral edge seamed to the upper edge of the band, said cover member also having an annular portion which overlies the top edge of the body member and further having an annular wall depending from the inner edge of said annular portion, which wall frictionally fits within the upper open end of the body member, a sealing gasket situated between said annular portion and the top edge of the body member for hermetically sealing the container, said band having two circumferential lines of weakness forming between them a tear strip which extends nearly but not entirely around the band, the portion of band between the ends of the tear strip constituting a hinge portion for the cover member, the lower line of weakness being situated below the top edge of the container body and the upper line of weakness being situated opposite the lower face of said annular portion, said tear strip having a tab by which it may be torn from the band thereby exposing the upper edge portion of the body member and said gasket to permit a suitable implement to be forced between said annular portion of the cover and the top edge of the body member for prying the cover member free from the body member.

HARRY SEBELL.