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CLIPS FOR SECURING LIDS TO PAILS

Filed May 16, 1960

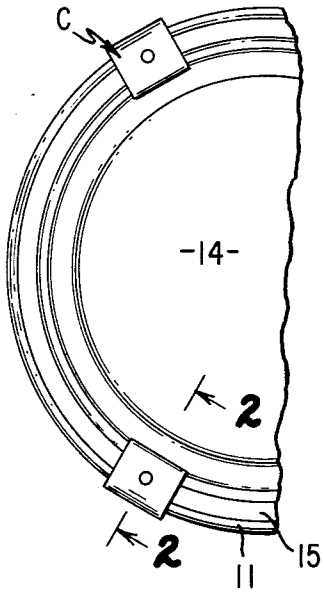


Fig. 1

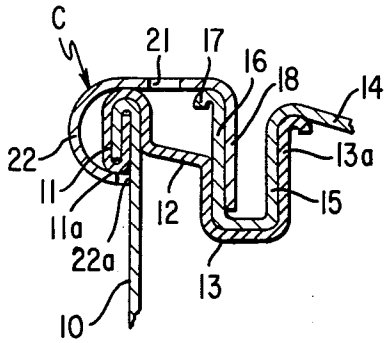


Fig. 2

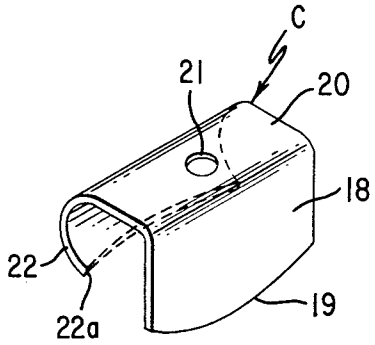


Fig. 3

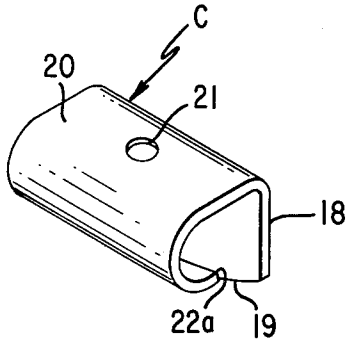


Fig. 4

INVENTOR.
ERNEST G. BRADNER
BY
Malcolm W. Fraser
ATTORNEY

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CLIPS FOR SECURING LIDS TO PAILS

Ernest G. Bradner, Toledo, Ohio, assignor to Prestole Corporation, Toledo, Ohio, a corporation of Michigan

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1 Claim. (Cl. 292—258)

This invention relates to sheet metal snap-on clips for securing the lids or covers of cans in place.

Postal requirements are such that for the mailing of cans, such as paint cans, additional means other than the pressed-on fit of the lids must be employed to insure the retention of the lids. This invention provides a simple and inexpensive spring metal clip which can be readily snapped on the can for holding the lid or cover securely and reliably in place. The simplicity of the clip is that it lends itself admirably to economical large quantity production and the design is so chosen that it is exceedingly sturdy but sufficiently flexible that its application to the can may be effected without difficulty.

Other objects and advantages of the invention will hereinafter appear, and for purposes of illustration but not of limitation, an embodiment of the invention is shown on the accompanying drawings in which:

FIGURE 1 is a top fragmentary view of a sheet metal can body closed by a pressed-on lid and equipped with clips for insuring the retention of the lid in its closed position;

FIGURE 2 is an enlarged fragmentary sectional view substantially on the line 2—2 of FIGURE 1;

FIGURE 3 is an enlarged perspective view of the retaining clip; and

FIGURE 4 is a perspective view of the retaining clip taken from a different angle.

The illustrated embodiment of the invention comprises a sheet metal can body having vertically disposed side walls **10**, the upper edge of which is bent over and crimp seamed to an inwardly extending annular rim portion **12**. The crimped seam **11** provides an external shoulder **11***a* which extends completely around the side walls **10**. The rim portion **12** has a depressed annular channel **13** which in this instance is U-shaped in cross section, the rim terminating in an upwardly extending limb **13***a*, the free end of which is curled inwardly. Fitting the rim portion is a sheet metal cover **14** which has a depending peripheral rim **15** which is also U-shaped in cross-section and has a press fit within the annular channel **14**. The U-shaped rim **15** of the cover terminates in a vertically disposed limb **16**, the upper edge of which is substantially the same height as the upper edge portion of the crimped seam **11**. The limb **16** terminates in an outwardly curled edge portion **17**.

For insuring the retention of the can lid or cover **14** upon the can, a plurality of sheet metal clips C are employed, the number of which varies in accordance with the size of the can. Each clip C is formed from spring sheet metal and is provided with a relatively long, flat arm **18** provided with a downwardly curved lower edge portion **19**. The vertical length of the arm **18** is such that it is approximately the length of the vertical limb **16** of the cover **14**. The lowermost portion of the curved edge **19** may contact the bottom of the depending cover rim **15**. The upper end of the wall **18** is integral with a flat top wall **20** which is disposed at right angles to the arm **18**. The top wall **20** is provided with a centrally disposed hole **21** to assist in affording resiliency or added flexibility to the arms of the clip, and also to enable a nail or the like to be inserted for prying

the clip loose from its snapped on position of use. Integral with the opposite edge of the flat wall **20** is a downwardly and inwardly curved arm **22**, the free edge of which is arcuately formed to provide a pair of teeth **22***a* at opposite corner portions. The spacing between the free end of the curved arm **22** and the arm **18** is somewhat less than the space between the outer surface of the can body **10** and the inner wall of the vertical limb **16** of the can cover.

In use the clip is applied by first hooking the hook or curved arm **22** over the crimped seam **11** so that the teeth **22***a* bite into the shoulder **11***a*. Thereafter by rocking the clip over the vertical limb **16** and exerting a downward pressure, the clip is snapped into position with the arm **18** intimately abutting the outer surface of the limb **16** substantially as shown on FIGURE 2. Thus the shoulder **11***a* serves as a fulcrum for the clip C and since the spacing between the free edge of the hook or curved arm **22** and the wall **18** is somewhat less than is required, it will be understood that a snap action takes place and the inherent resiliency of the metal retains the clip securely and firmly in position of use. In position of use, the can cover or lid **14** is securely retained in place and will remain thereon until pried loose. By removing some of the metal from the top wall **20** as by the hole **21**, it will be manifest that greater ease is afforded to the flexing of the arms. Since the clip in applied position is held in place by the spring action, a tool must be used to remove it and hence the hole **21** serves the added function of enabling the insertion of a nail or similar instrument for prying the clip loose.

Numerous changes in details of construction, choice of materials may be effected without departing from the spirit of the invention, especially as defined in the appended claims.

What I claim is:

A sheet metal snap-on clip for securing a lid to a container in which the container has a depressed groove about the mouth and spaced inwardly from the outer walls and an external shoulder at the outside of the open end near the upper edge thereof and the lid has a depressed edge portion snugly fitting the container groove and an upstanding wall adjacent the free edge portion approximately level with the upper edge of the container, the clip comprising a one-piece body of spring sheet metal having a flat up and down arm for flatwise engagement with the upstanding wall of the lid, a flat top wall portion at right angles to the up and down arm and provided with an aperture to enhance the flexibility of the clip and to admit a tool for prying the clip loose, and a downwardly and inwardly curved flat arm on the opposite side of and co-extensive with said top wall, the free edge of said downwardly and inwardly curved flat arm being arcuately formed to provide a pair of teeth, one at each of the opposite corner portions of said free edge for impingement against the container directly beneath the container shoulder, whereby the free edge of the curved arm is first applied to the container body below the shoulder which acts as a fulcrum enabling rocking of the clip and snapping the up and down arm against the inner face of the wall adjacent the free edge of the lid.

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