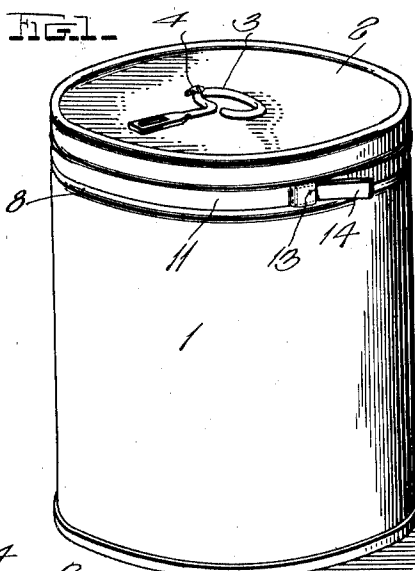
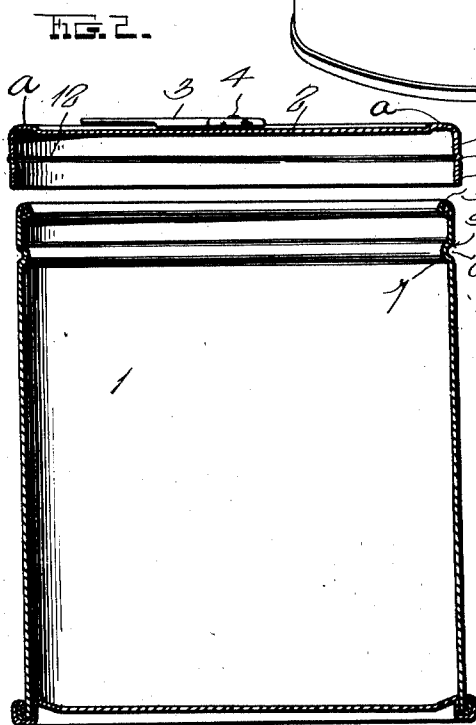
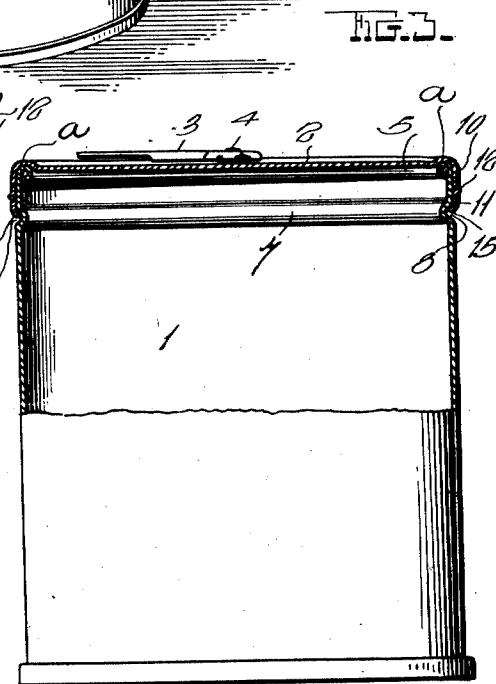
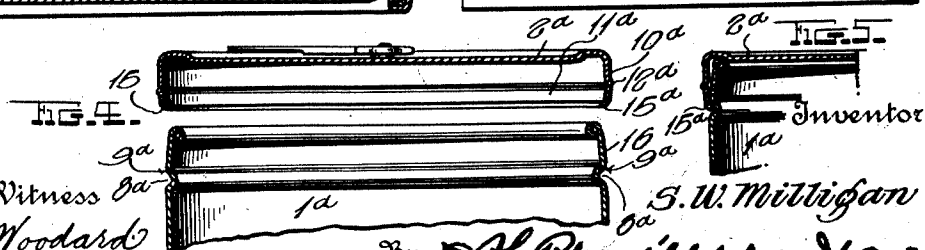


S. W. MILLIGAN.
SHEET METAL CAN.
APPLICATION FILED AUG. 30, 1916.

1,335,007.

Patented Mar. 30, 1920.



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SHEET-METAL CAN.

1,335,007.

Specification of Letters Patent.

Patented Mar. 30, 1920.

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To all whom it may concern:

Be it known that I, STEPHEN W. MILLIGAN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Sheet-Metal Cans; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to sheet metal cans of that type wherein the cover is locked to the body, and can only be removed by tearing a strip of metal from around the top.

In cans of this type it has been customary to provide the flange of the cover with a weakened line or score at a point slightly spaced from the edge of the flange and to solder such edge to the can body after the contents has been placed in the can, the portion of the metal between the solder and the weakened line forming a tearing-strip which in the opening of the can, is rolled upon a key. The operation of soldering the cover to the can body after the contents have been placed in the latter renders the use of this type of can expensive and such soldering operation is an undesirable one when the can is to be used for shipping food products such as oysters.

It is the primary object of the present invention to provide a simple and inexpensive can closure of this self-opening type in which the use of solder is eliminated and the cover effectively locked to the body so that the can is practically non-refillable and at the same time the portion of the cover which remains after the tearing strip has been removed, can be used as a slip cover for the can by the consumer.

With the above and other objects in view the invention resides in the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed and illustrated in the accompanying drawing in which:

Figure 1 is a perspective view of a can embodying my invention;

Fig. 2 is a vertical sectional view through the same showing the cover raised above the body;

Fig. 3 is a side elevation with the upper portion of the can in section showing the cover in its locked position;

Fig. 4 is a view similar to Fig. 2 showing a slightly different embodiment of the invention; and,

Fig. 5 is a detail vertical section through the parts shown in Fig. 4 showing the cover in its closed or locked position.

In the drawing, 1 denotes the body of a sheet metal can, box or other receptacle and 2 the cover or top therefor, the latter preferably carrying the usual opening key 3 which is temporarily retained on the top of the cover by a drop of solder 4. The body 1 is preferably but not necessarily provided with a rolled upper edge 5 and at a suitable distance below said roll is formed an inwardly extending annular bead 7 which is preferably rolled in the metal and forms on the exterior of the can a surrounding groove 8 which is disposed entirely within the outer face of the bead and provides an annular shoulder 9.

The cover 2 has the usual surrounding flange 10 which at a point suitably distant from its lower edge is scored at 12 to provide a weakened line that marks off a tearing strip 11. This strip 11 is slit vertically as shown at 13, in Fig. 1 and a key engaging tongue 14 has one of its ends passed through said slit and soldered to one end of the tearing strip 11. The central portion of the cover or top of the can is depressed to form at its outer edge an annular recess or groove *a* on the inner side of the top to receive the rolled upper edge 5 of the can body whereby a tight closure is formed at this point when the cover is drawn down and fastened in position by means herein after described.

The depth of the flange 10 is greater than the distance between the bead 5 and the shoulder 9 so that after the can has been filled and the cover 2 placed thereon the lower edge of the flange will project beneath in the shoulder 9 and can be rolled or turned inwardly into engagement therewith and into the groove 8 as shown at 15 in Fig. 3, to effectively lock the cover on the can body. When the edge of the flange is thus turned or crimped into engagement with the groove 8 and shoulder 9 the groove *a* is drawn into tight engagement with the rounded edge of the can body as hereinbefore described. The engagement of the grooved surface of the cover with the rolled upper edge of the can body and the en-

gagement of the crimped or turned in lower edge of flange on the can top with the shoulder 9 forms a double seal and absolutely tight closure between the cover and the can body without the use of solder. This turning or rolling of the portion 15 of the tearing strip or flange can be accomplished by hand tools or machines, and it will be noted that no heat or solder will be necessary to very effectively retain the cover on the body so that it cannot possibly be accidentally displaced or even wilfully removed without the fact being known since in the opening operation, the annular tearing strip 11 must be separated from the remaining portion of the flange. It will be obvious that when it is desired to remove the cover the key 13 is engaged in the usual manner with the tongue 14 and then turned or rolled around the top of the can so that the strip 11 will break loose on the weakened line or score 11 and the bent portion 15 of the strip will be withdrawn from the groove 8. After the can has been thus opened the portion of the flange remaining on the cover is sufficient for the latter to be used on the top of the can as an ordinary slip cover and this is of advantage when food products such as coffee are shipped in the containers. It will therefore be observed that the operation of turning the lower edge of the tearing strip 11 into engagement with the shoulder 9 renders the cover sealing operation inexpensive and provides a secure lock. Therefore the container is practically non-refillable and the shipper may dispense with the use of labels pasted over the cover flange and can body, which practice is now common when ordinary slip cover cans are used.

In the modified form of the invention shown in Figs. 4, and 5 of the drawing the flange 10^a of the cover 2^a instead of being rolled or turned inwardly after the cover has been applied to the can is turned inwardly as shown at 15^a while the cover is being made and so that the portion 15^a will spring or snap into engagement with the shoulder 9^a on the body 1^a when the cover is forced downwardly to its closed position.

The flange has a weakened line 12^a to provide a tearing strip 11^a. To facilitate this

closing operation of the cover the portion of the can body between the groove 8^a and the rolled upper edge is tapered upwardly and inwardly to a slight extent as indicated at 16. These coacting parts of the upper edge of the can body and the flange of the can cover are of such proportions that the cover can be forced closed only with considerable pressure and cannot be forced endwise off of the can body when the curved edge 15^a once engages the shoulder 9^a, unless some special tool or machine is employed. It will therefore be seen that the only practical way of removing the cover 2^a would be by pulling the tearing-strip 11^a off of the cover which would immediately show that the can had been opened even though no exterior label is pasted over the cover flange and can body.

It is believed that from the foregoing description the construction and use of the invention and its many advantages will be readily apparent to those skilled in the use of shipping containers of this type.

I claim:

In combination, a can body having an inwardly rolled upper edge to provide a smooth mouth and an increased bearing surface, said can having an annular groove near its upper end to form a shoulder on the outer face of said can, a cover for said can, having an annular depending flange adapted to extend down over the outer face of said can to a point adjacent said groove, a tearing strip formed by a weakened line substantially midway the width of the flange, said tearing strip having its lower edge crimped into said groove to engage said shoulder and lock the cover onto said can, said tearing strip being removable to permit removing the cover and leaving a portion of the cover flange to hold the cover in position.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

STEPHEN W. MILLIGAN.

Witnesses:

HASTINGS NORTON,
FLORENCE COUGLE.