Aug. 2, 1955 M. K. CLINE 2,714,464

ASH TRAY ATTACHMENT FOR METAL CANS

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Fig. 1.

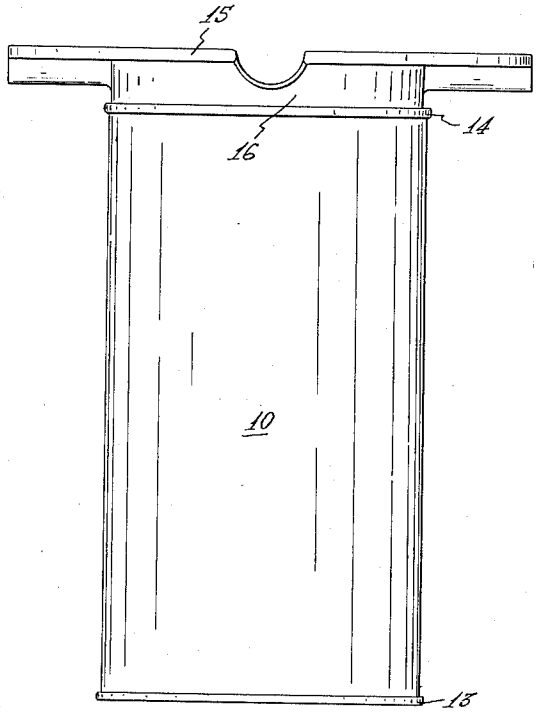
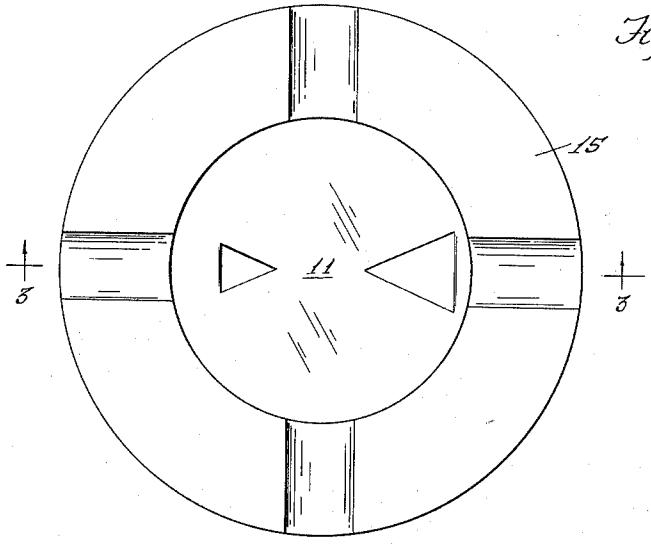


Fig. 2.



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Fig. 3.

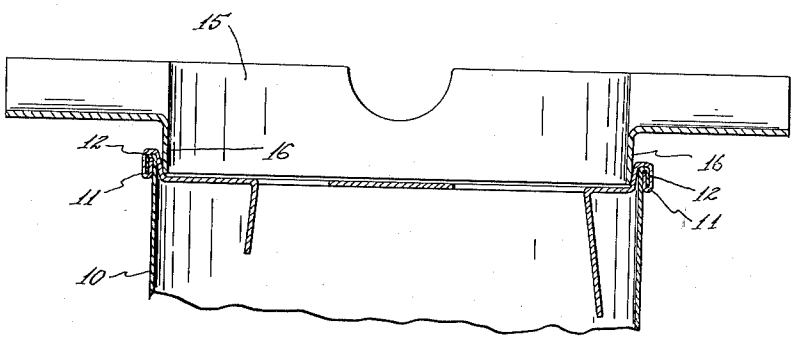


Fig. 6.

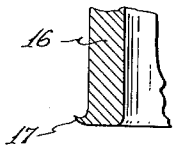


Fig. 4.

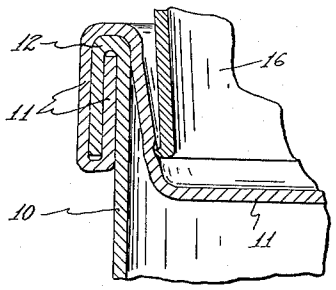
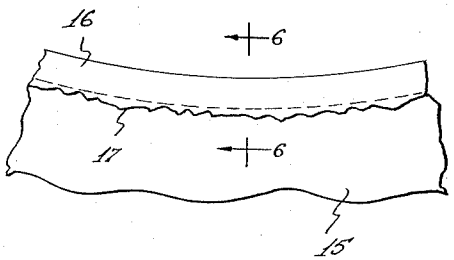


Fig. 5.



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ASH TRAY ATTACHMENT FOR METAL CANS

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Application November 1, 1952, Serial No. 318,197

3 Claims. (Cl. 220—1)

The present invention relates to an ash tray attachment for metal cans.

Various commodities such as fruit and vegetable juices, soups, beer and other beverages are now sold in sealed sheet metal cans in which the body of the can is a cylinder and the ends are closed with end closures that set into the body of the can and have peripheral flanges that extend outwardly and are folded over the end edges of the body of the can. These cans have the end closures perforated to remove the contents by pouring. In some instances the perforations may consist of two or more apertures while in other instances one large aperture is cut close to the peripheral flange, removing the entire center of the enclosure.

In restaurants and taverns it is necessary to provide some sort of ash receptacle for the smokers' refuse and these receptacles have been used with ash tray attachments. See for example, the patent to Bartlett No. 2,158,770. Insofar as I am aware, it has not however, been possible to heretofore provide a simple annular ash tray without spring clips or stands to secure the tray on the can. Since the cans themselves are thrown away and the ash tray units should also be of such a nature that they can be thrown away or carried away by the users as souvenirs, it is essential that the ash tray unit be of very little cost so that it may be disposed of more cheaply than it can be cleaned and re-used.

It is the purpose of the present invention to provide in combination with a can of the character above referred to, an annular ash tray having a simple flange which fits into the peripheral flange of the end closure and has means thereon forming an integral part thereof to deform the peripheral flange sufficiently to retain the tray in place throughout its normal usage on the can.

The nature and advantages of my invention will appear more fully from the following description and the accompanying drawings wherein a preferred form of the invention is illustrated.

In the drawings:

Figure 1 is a view in side elevation of a can with an ash tray attached thereto according to my invention;

Figure 2 is a plan view of the ash tray and can;

Figure 3 is an enlarged fragmentary sectional view taken on the line 3—3 of Figure 2;

Figure 4 is a further enlarged detailed sectional view illustrating the manner in which the ash tray flange deforms the peripheral flange of the can end closure;

Figure 5 is a bottom edge view of a portion of the flange of the ash tray; and

Figure 6 is a fragmentary sectional view taken on the line 6—6 of Figure 5.

In the manufacture and filling of sheet metal cans such as are used in the present invention, it is customary to provide the cylindrical body **10** of the can with end closures which have peripheral flanges **11** that are bent upwardly and outwardly over the end edges **12** of the cylindrical body portion **10** of the can. As illustrated best by Figures 3 and 4, the end closure and the edges of the cylindrical

body are folded and rolled together to provide beads **13** and **14** at the ends of the can. These beads, being composed of several thicknesses of metal, are quite rigid. However, the peripheral flange **11** in the drawing operation of forming the end closure and in securing it to the can, tapers inwardly away from the cylindrical can wall so that its inner surface does not form a cylinder into which one could wedge another cylindrical member. In order to attach an annular tray **15** to the can, I provide a cylindrical flange **16** on the tray which is of an outer diameter such that it will fit snugly within the peripheral flange **11**. The flange **16** must contact the peripheral flange **11** above the bottom thereof if there is to be any holding engagement. However, the tapering nature of the flange **11** precludes any wedge action sufficient to retain the tray **15** in place.

In order to overcome the difficulty of securing the flange **16** within the peripheral flange **11** without resorting to spring clips or the like, I provide the lower edge of the flange **16** with irregular projections or teeth **17**. These teeth are formed by pressing the metal at the lower edge outward and curling the teeth upward slightly as shown in Figure 6. I also utilize for the material of the tray **15**, a metal that is harder than the metal used for the can end closures. Alternatively I harden the lower edge of the flange **16** so that the projections **17** are hard enough to deform the surface of the peripheral flange **11**. When the ash tray is placed on the can and the flange **16** is forced down into the peripheral flange **11**, the tray is turned slightly with respect to the can. This enables the projections **17** to score the surface of the peripheral flange **11** enough to hold the tray firmly in place.

The cans are usually thrown away at the time the tray is removed. A tray need not be discarded after one use because the projections **17** will stand up under several usings before becoming worn enough to require discarding the tray.

It is believed that the nature and advantages of my invention will be apparent from the foregoing description. The provision of the rough irregular projections **17** on the flange **16** eliminates the necessity of providing any springs or clips or other extraneous supporting part on the tray. The tray can be stamped from any suitable metal. The flange **16** is tapered sufficiently for drawing purposes. It is slightly smaller in diameter at the lower edge than at the top edge to enable the drawing die to be withdrawn readily.

Having thus described my invention, I claim:

1. A receptacle assembly comprising the combination with a sheet metal can having a closed lower end, the upper end of the can having an apertured end closure set inwardly of the end of the can and having a peripheral flange extending upwardly within the can end to the edge thereof, an annular tray having a central opening and having a depending annular flange seated within said peripheral flange, the annular flange having a plurality of irregular sharp-edged projections engaging the inner surface of said peripheral flange intermediate the top and bottom thereof and holding the tray and can together.

2. A receptacle assembly comprising the combination with a sheet metal can having a closed lower end, the upper end of the can having an apertured end closure set inwardly of the end of the can and having a peripheral flange extending upwardly within the can end to the edge thereof, an annular tray having a central opening and having a depending annular flange seated within said peripheral flange, said peripheral flange tapered outwardly from its lower edge upwardly, and the annular flange having a plurality of projections at its lower edge provided with upturned sharp edegs pressing against the tapered surface of the peripheral flange and holding the tray and can together.

3. A receptacle assembly comprising the combination with a sheet metal can having a closed lower end, the upper end of the can having an apertured end closure set inwardly of the end of the can and having a peripheral flange extending upwardly within the can end to the edge thereof, an annular tray having a central opening and having a depending annular flange seated within said peripheral flange, said peripheral flange tapered outwardly from its lower edge upwardly, and the annular flange having a plurality of projections at its lower edge provided with upturned sharp edges pressing against the tapered surface of the peripheral flange and holding the tray and can together, said projections being hard enough to deform the surface of said peripheral flange where the sharp edges engage said surface.

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