June 9, 1936. F. L. DARLING 2,043,738

RECEPTACLE, COVER THEREFOR, AND MEANS FOR RELEASING THE COVERS FROM THE RECEPTACLES

Filed Dec. 18, 1934

Fig. 1.

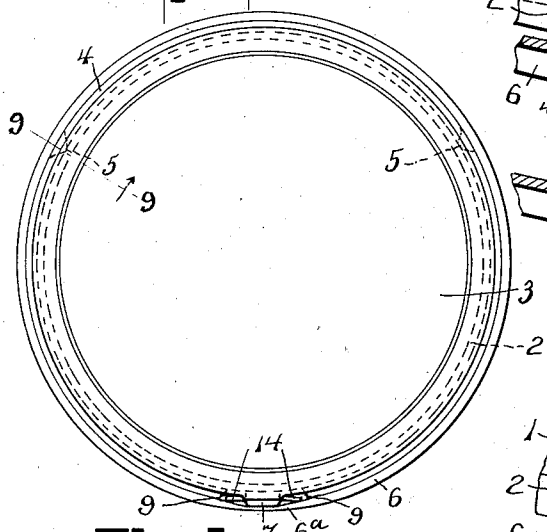



Fig. 7.

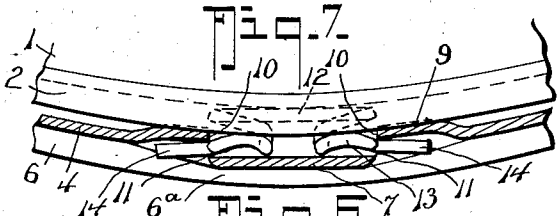



Fig. 6.

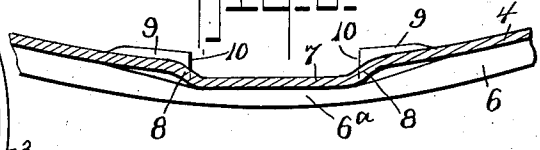



Fig. 5.

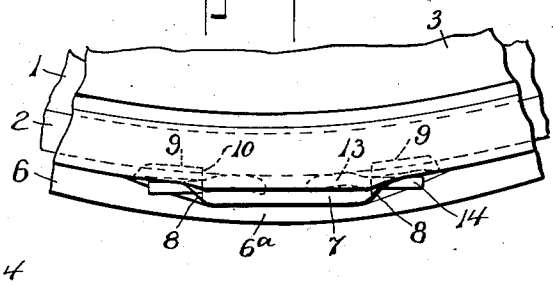



Fig. 8.

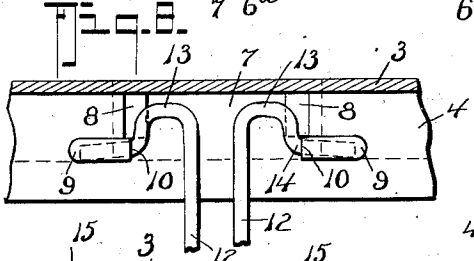



Fig. 2.

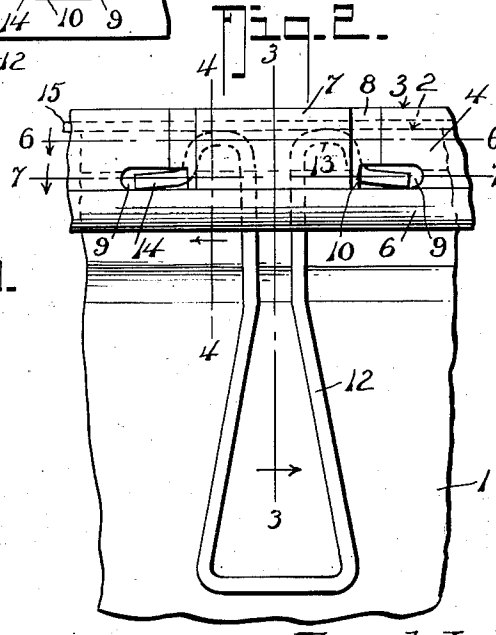



Fig. 3.

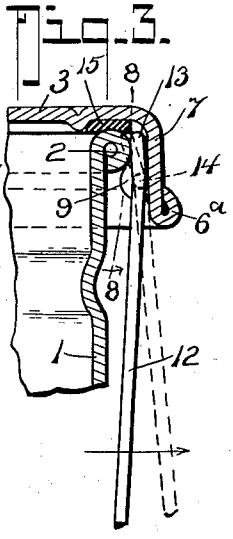



Fig. 9.

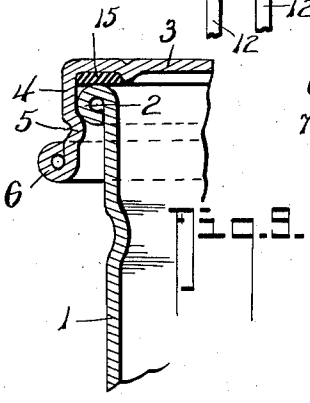
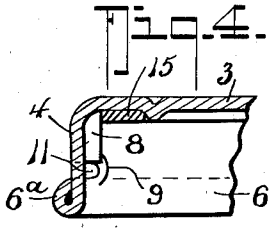



Fig. 4.




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## RECEPTACLE, COVER THEREFOR, AND MEANS FOR RELEASING THE COVERS FROM THE RECEPTACLES

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Application December 18, 1934, Serial No. 758,135

10 Claims. (Cl. 220—43)

The present invention relates to certain new and useful improvements in the covers of receptacles and has for its objects to modify and improve the structure disclosed in my patent issued January 8, 1935, No. 1,987,550, so as to reduce the expense of manufacturing and assembling the cover and the cover releasing and lifting lever, as well as to strengthen the structure of the cover at the place where the lever is located and reduce to the minimum the deforming of the cover in releasing the same from the receptacles.

The invention also has for its object to eliminate the angular offsetting of the cover-bead beneath the hood and to extend the front wall of the hood as an unbroken or continuous wall from the top of the cover to the bead.

Again, it is an object to provide the cover skirt with indentations located adjacent the hood to receive the trunnions of the lever and also, if desired, to serve in cooperation with lugs spaced apart 120 degrees, more or less, as a snap-on interlocking means between the cover and the receptacle.

A further object is to provide all improvements hereinbefore mentioned and yet retain the advantages of the structure disclosed in my application aforesaid.

With other objects in view which will hereinafter appear, the invention resides further in those novel details of construction hereinafter described and specifically pointed out in the appended claims.

In the drawing:

Figure 1 is a top plan view of a can and cover or lid assembled and embodying my present invention.

Figure 2 is a magnified detail elevation of a portion thereof.

Figure 3 is a vertical section on the line 3—3 of Figure 2.

Figure 4 is a detail vertical section of the cover or lid on the line 4—4 of Figure 2.

Figure 5 is a plan view of the parts shown in Figure 2.

Figure 6 is a horizontal section of the cover taken on the line 6—6 of Figure 2.

Figure 7 is a detail horizontal section on the line 7—7 of Figure 2, the can and opener being shown in plan.

Figure 8 is a vertical section on the line 8—8 of Figure 3.

Figure 9 is a detail section on the line 9—9 of Figure 1.

In the drawing, in which like numerals and letters of reference indicate like parts in all the figures, 1 represents a can or other similar receptacle whose mouth edge is provided with an outwardly formed bead 2. Aside from the presence of the bead 2 the remaining structure of the can or receptacle is not material to the present invention, but may be modified and formed to suit the varying conditions met with in the trade.

3 designates the cover which is provided with a depending skirt 4 preferably having a pair of lugs 5 disposed approximately 120 degrees apart. The bottom of the skirt 4 is provided with an outwardly formed bead 6 which extends around the entire skirt as a substantially true circle, it being bulged out slightly as at 6a adjacent the hood 7.

The hood 7 projects radially outwardly from the remainder of the skirt 4 and has its front or outer wall continuous from the top of the lid 3 to the bead portion 6a (see Figures 2, 3 and 4). In this respect it differs from the construction disclosed in my prior application where the lower portion of the hood is shown cut away by a transverse slot, leaving the bead of the cover standing alone where it passes beneath the hood proper. In my application aforementioned the bead of the cover is outwardly offset to conform to the outline of the hood, whereas in the present instance the bead is not offset angularly, but simply bulges out slightly in a curve which, to the eye of an ordinary observer, does not depart from a true circle; hence the general appearance of the lid is not greatly different from that of an ordinary lid. By continuing the front wall of the hood 7 down to the bead at 6a as an unbroken structure the bead is strengthened and hence is less likely to be distorted during the act of releasing and lifting the cover from the can.

The side walls 8 of the hood are inclined outwardly and converge toward one another. At the bottom of the side walls 8, and above the bead 6—6a, the side walls 8 are interrupted by pressing the skirt inwardly to form laterally elongated indentations 9 and straight side walls 10. The hood 7 and indentations 9 are formed in practice by stamping dies which have provisions for forming the straight walls 10, and simultaneously providing openings 11 in the side walls 8 by shearing the material (see Figures 4, 7 and 8). It will therefore be seen that the indentations 9 provide convenient recesses for the trunnions 14 of the lid releasing and lifting lever 12 after the trunnions 14 are passed through the apertures 11 in the side walls 8. These indentations 9 may be formed so as to serve the double purpose of providing recesses for the trunnions 14 and coop-

erating with the lugs 5 as snap-on fasteners between the cover and the can (see Figure 3).

The cover releasing and lifting lever is composed of a resilient wire 12 bent back upon itself to form two approximately parallel portions which are then bent back upon themselves as at 13 with the ends of the wire bent laterally as at 14, forming the trunnions. The portions 13 constitute the short arm of the lever and are designed to extend up to near the top of the cover 3 whereby, when the cover and can are assembled, the short arm 13 will lie within the hood 7 in contact with the bead 2 of the can and terminate about on a level with the top of the bead and the long arm of the lever 12 will lie in contact with the body of the can. Preferably the trunnions 14 are designed so as not to lie in alignment with each other. (See Figures 2 and 7). By forming the trunnions so that they do not lie in alignment and by locating the holes 11 in the side walls 8, the lever 12, when the cover is off the can, will automatically assume the dotted line position shown in Figure 3, as in the construction disclosed in my previous application above referred to.

As will be clear from Figure 8, it is a simple matter to assemble the lever 12 and top 3, since it is only necessary to squeeze the parallel portions of the lever 12 together in order to enable the trunnions to be inserted into their respective bearing apertures 11 in which they are then retained by the spring action of the lever. The cover may be provided with a sealing gasket 15 if desired, this being preferable where a vacuum or air-tight closure is desired.

By the construction illustrated in the accompanying drawing it will be observed that I am enabled to make the hood 7 considerably shallower than the corresponding hood illustrated in my previous application, and am also enabled to make the skirt of the cover proportionately of less depth than that disclosed in my aforesaid application.

In the act of removing the cover from the can it is to be observed that the lever 12 does not fulcrum on the trunnions 14, but the lever bears against the two beads 2 and 6a, the short arm 13 of the lever riding up and over the bead 2 as the long arm 12 is pulled from the full line position shown in Figure 3 to the dotted line position. While the upper end of the short arm 13 rides on the bead 2, the long arm presses against the bead 6a which constitutes the second point of leverage. The trunnions 14 serve not only as a means for retaining the lever on the cover, but in cooperation with the angled sides 8 of the hood and the short arm portions 13 of the lever serve as automatic means to incline the long arm of the lever outwardly (see dotted lines, Figure 3) when the cover is off the can.

Hence it will be seen that while I have improved the structure disclosed in my application aforesaid, I have retained the advantageous features thereof.

From the foregoing description, taken in connection with the accompanying drawing, it is believed that the complete construction and advantages of the invention will be clear to those skilled in the art to which it appertains.

What I claim is:

1. A receptacle having a mouth edge, a skirted cover fitting over the mouth of said receptacle, the skirt having an outwardly offset hood provided with side walls and an uninterrupted front wall extending the full depth of the skirt, said hood having apertures in the side walls thereof, a cover releasing and lifting lever having a bifurcated resilient portion provided with trunnions which are located in said apertures, said lever having a short arm lying within said hood and having a long arm extending beyond said skirt, said lever having its short arm terminating adjacent the mouth edge of said receptacle when the cover is in place, said bifurcated portion being such that the furcations may be squeezed together to bring the trunnion ends into position to be sprung into said apertures in assembling the lever and cover, the resiliency of said bifurcated portion serving to hold the trunnions in place.

2. A receptacle having a reinforcing bead around its mouth constituting an external shoulder, a cover having a shallow skirt, a continuous reinforcing bead of a substantially uniform diameter measured from the center of the cover and located at the edge of the cover, said skirt being formed to fit over the bead of the receptacle, three bead engaging lugs formed in the skirt and spaced approximately 120 degrees apart for cooperating with the receptacle's bead as a snap-on interlocking means between said receptacle and its cover, said skirt having an outwardly projecting hood in its skirt, the hood having side walls and having an uninterrupted front wall extending substantially the full depth of the skirt, the side walls of the hood having apertures, the hood being located adjacent one of said lugs, a cover releasing and lifting lever having trunnions mounted in said apertures and having a short end lying within said hood and projecting alongside the reinforcing bead of the receptacle to adjacent the mouth edge thereof when the cover is in place on the receptacle, and having a long end lying alongside the receptacle below the cover.

3. A receptacle having a bead at its mouth, forming an external shoulder, a cover having a skirt to fit over said bead, said skirt having an outwardly offset hood which has side walls and a front wall, the latter extending substantially the full depth of the skirt, the side walls of the hood adjacent the cover bead being apertured, a cover lifting lever comprising a substantially U-shaped wire member bent back upon itself to constitute two resilient arm portions, the extremities of said arm portions being bent back upon themselves and having their ends bent laterally to form a pair of short arm members and trunnions, said trunnions being adapted for being sprung into the apertures of the side walls of the hood and being retained therein by the spring action of the wire, the short arm members of said lever lying in the hood between the skirt and the receptacle.

4. A receptacle having a bead at its mouth, forming an external shoulder, a cover having a skirt to fit over said bead, and itself having an external bead at its edge, said skirt having an outwardly offset hood which has side walls and a front wall, the latter extending substantially the full depth of the skirt, the side walls of the hood adjacent the cover bead being apertured, a cover lifting lever comprising a substantially U-shaped wire member bent back upon itself to constitute two resilient arm portions, the extremities of said arm portions being bent back upon themselves and having their ends bent laterally to form a pair of short arm members and trunnions, said trunnions being adapted for being sprung into the apertures of the side walls

of the hood and being retained therein by the spring action of the wire, the short arm members of said lever lying in the hood between the skirt and the receptacle.

5. A receptacle having a bead at its mouth, forming an external shoulder, a cover having a skirt to fit over said bead, said skirt having three lugs located approximately 120 degrees apart to engage the receptacle's bead as a snap-on interlocking means between said receptacle and its cover, said skirt having an outwardly offset hood which has side walls and a front wall, the latter extending substantially the full depth of the skirt, the side walls of the hood adjacent the cover bead being apertured, a cover lifting lever comprising a substantially U-shaped wire member bent back upon itself to constitute two resilient arm portions, the extremities of said arm portions being bent back upon themselves and having their ends bent laterally to form a pair of short arm members and trunnions, said trunnions being adapted for being sprung into the apertures of the side walls of the hood and being retained therein by the spring action of the wire, the short arm members of said lever lying in the hood between the skirt and the receptacle.

6. A receptacle having a bead at its mouth, forming an external shoulder, a cover having a skirt to fit over said bead, said skirt having an outwardly offset hood which has side walls and a front wall, the latter extending substantially the full depth of the skirt, the side walls of the hood adjacent the cover bead being apertured, a cover lifting lever comprising a substantially U-shaped wire member bent back upon itself to constitute two resilient arm portions, the extremities of said arm portions being bent back upon themselves and having their ends bent laterally to form a pair of short arm members and trunnions, said trunnions being adapted for being sprung into the apertures of the side walls of the hood and being retained therein by the spring action of the wire, the short arm members of said lever lying in the hood between the skirt and the receptacle, the side walls of said hood being inclined to converge outwardly.

7. A receptacle having a bead at its mouth forming an external shoulder, a cover having a skirt to fit over said bead and itself having an external bead at its edge, said skirt having three lugs located approximately 120 degrees apart to engage the receptacle's bead as a snap-on interlocking means between the receptacle and its cover, said skirt having an outwardly offset hood which has outwardly converging side walls and whose front wall is continuous throughout the depth of the skirt, the side walls of the hood adjacent the cover bead being apertured, a cover lifting lever comprising a substantially U-shaped wire member bent back upon itself to constitute two resilient arm portions, the extremities of said arm portions being bent back upon themselves and having their ends bent laterally to form a pair of short arm members and trunnions, said trunnions being adapted for being sprung into the apertures of the side walls of the hood and being retained therein by the spring action of the wire, the short arm members of said lever lying in the hood between the skirt and the receptacle.

8. A receptacle having a bead at its mouth forming an external shoulder, a cover having a skirt to fit over said bead and itself having a bead at its edge, said skirt having an outwardly offset hood with side walls and an uninterrupted front wall extending substantially the full depth of the cover skirt, the side walls of the hood adjacent the cover bead being apertured, said skirt having a pair of inwardly projecting laterally extending indentations one adjacent each aperture at the sides of the hood, said skirt also having a pair of inwardly projecting lugs located approximately 120 degrees from each other and from the hood, a cover lifting lever comprising a substantially U-shaped wire member bent back upon itself to constitute two resilient arm portions, the extremities of said arm portions being bent back upon themselves and having their ends bent laterally to form a pair of short arm members and trunnions, said trunnions being adapted for being sprung into the apertures of the side walls of the hood and being retained therein by the spring action of the wire, the short arm members of said lever lying in the hood between the skirt and the receptacle.

9. A receptacle having a bead at its mouth forming an external shoulder, a cover having a skirt to fit over said bead and itself having a bead at its edge, said skirt having an outwardly offset hood with side walls and an uninterrupted front wall extending substantially the full depth of the cover skirt, the side walls of the hood adjacent the cover bead being apertured, said skirt having a pair of inwardly projecting laterally extending indentations one adjacent each aperture at the sides of the hood, said skirt also having a pair of inwardly projecting lugs located approximately 120 degrees from each other and from the hood, a cover lifting lever comprising a substantially U-shaped wire member bent back upon itself to constitute two resilient arm portions, the extremities of said arm portions being bent back upon themselves and having their ends bent laterally to form a pair of short arm members and trunnions, said trunnions being adapted for being sprung into the apertures of the side walls of the hood and being retained therein by the spring action of the wire, the short arm members of said lever lying in the hood between the skirt and the receptacle, said pair of indentations also serving as recesses to receive said trunnions.

10. A sheet metal receptacle and a sheet metal cover therefor combined with a cover lifter lever having trunnions mounted and fulcrumed on the flange of the cover whereby the lifter will lie between the flange of the cover and the receptacle, said receptacle having a bead at its mouth, said cover having a pair of indentations arranged to serve as bearings for said lever, said cover having other indentations separated from said pair of indentations and from each other, all of said indentations cooperating with the bead of the receptacle as a snap-on fastener.

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