

March 15, 1938.

R. G. CURTIS

2,111,359

RECEPTACLE COVER

Filed Feb. 13, 1937

2 Sheets-Sheet 1

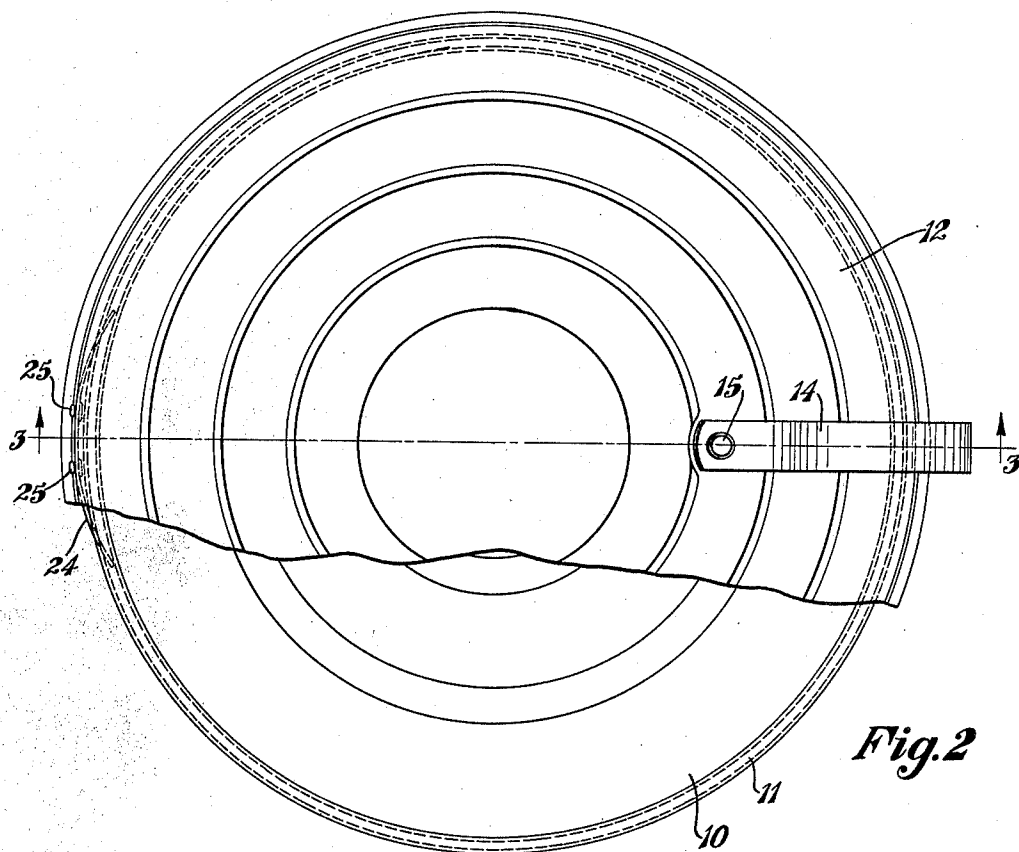


Fig. 2

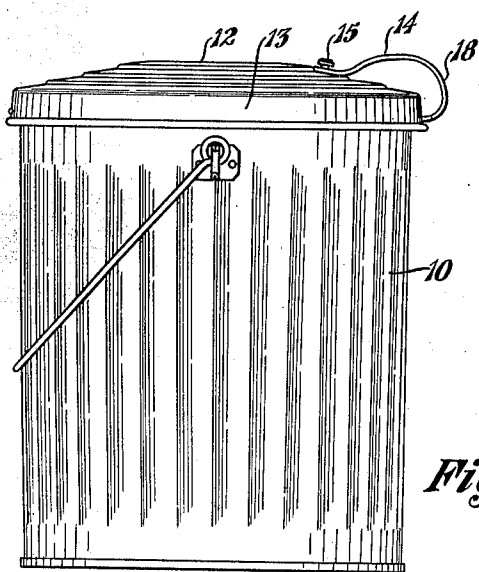


Fig. 1

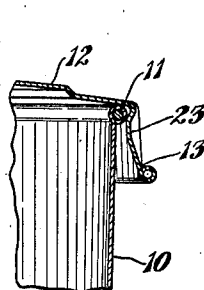


Fig. 7

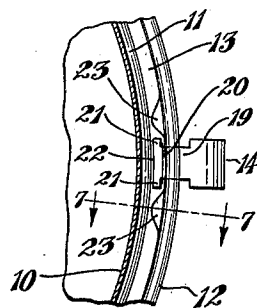


Fig. 6

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2 Sheets-Sheet 2

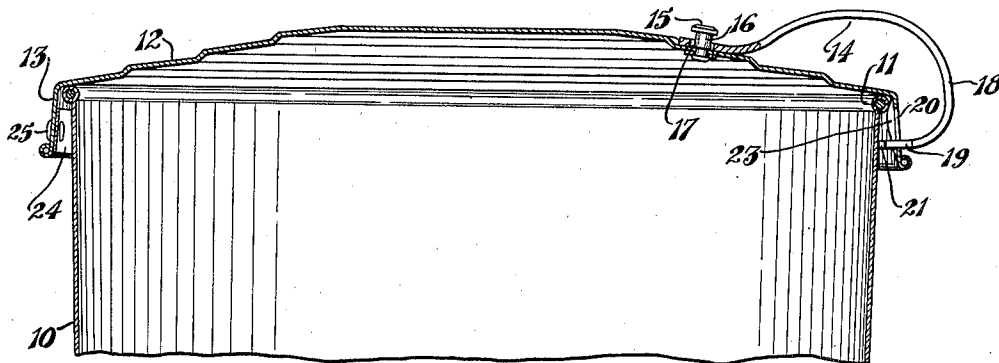


Fig. 3

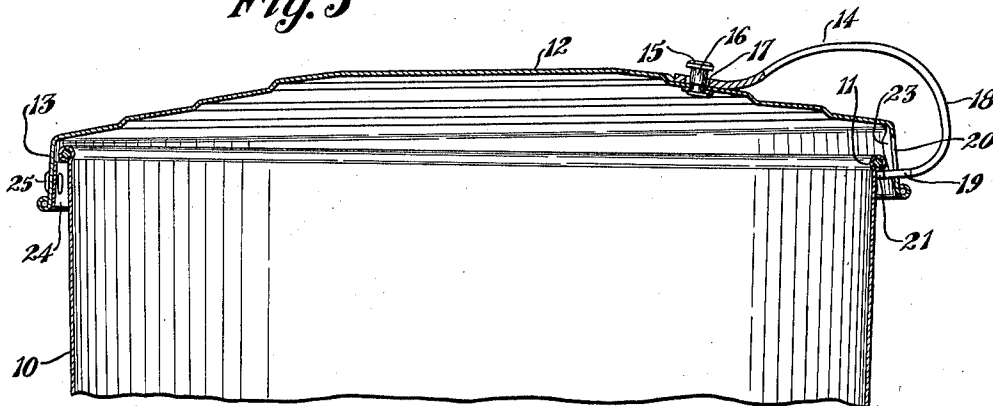


Fig. 4

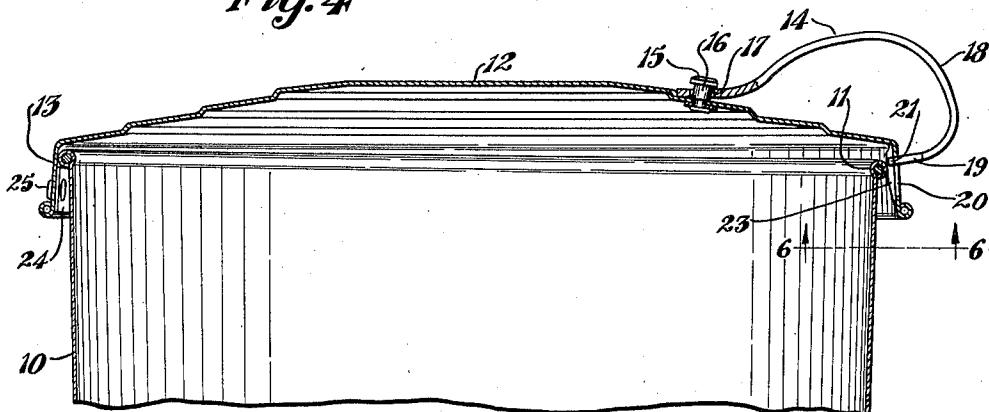


Fig. 5

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UNITED STATES PATENT OFFICE

2,111,359

RECEPTACLE COVER

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Application February 13, 1937, Serial No. 125,581

6 Claims. (Cl. 220—56)

The invention relates to receptacles provided with removable self-locking covers and more particularly to the covers for garbage cans and the like where it is desirable to prevent lifting or removal of the cover either by the force of the wind or by dogs or other animals attempting to get at the contents of the receptacle.

The invention relates more especially to the particular type of covers having a pivoted handle mounted near one side of the cover and provided with an intumed latch portion extended through an opening in the depending rim of the cover and adapted to engage beneath the usual rim bead of the receptacle to normally hold the cover locked upon the receptacle unless the handle is raised by the operator for the purpose of removing the cover.

It is known that covers of this general type have been produced in the past, such as Loeber Patent No. 1,358,380, which required an inclined wedge housing upon the rim of the cover to house the handle latch and wedge the same downward into locked position; Loeber Patent No. 1,856,877 which provides an outwardly bulged recess to receive the latch portion of the pivotally and slidably mounted gravity actuated handle; Loeber Patent No. 1,884,763 which provides a spring operated latch handle; and Jamison Patent No. 1,961,223 which provides struck-out recesses in the cover rim to receive the latch portion of the handle.

The object of the present invention is to provide an improvement upon the various structures above referred to whereby a simple and easily operated handle latch is provided which is gravity actuated and will automatically lock when the cover is placed upon the receptacle and automatically unlock when the handle is grasped and raised to remove the cover, without requiring any outwardly projecting housing or recess in the depending rim flange of the cover to receive the latch portion of the handle when the same is moved to the unlocked position.

This may be accomplished by providing inwardly disposed projections upon opposite sides of the opening in the rim flange of the cover adapted to engage the rim bead of the receptacle and hold this portion of the rim flange of the cover sufficiently spaced therefrom to permit the latch portion of the handle to clear the rim bead of the receptacle.

It is also found desirable to concave the inner end of the latch portion of the handle upon substantially the same radius as the rim bead of

the receptacle so as to more easily clear the same.

The above objects together with others which will be apparent from the drawings and following description or which may be later referred to, may be attained by constructing the improved receptacle cover in the manner illustrated in the accompanying drawings, in which

Figure 1 is a side elevation of a receptacle provided with a cover constructed in accordance with the invention;

Fig. 2, an enlarged top plan view of the same with a portion of the cover broken away;

Fig. 3, a fragmentary transverse sectional view taken substantially on the line 3—3, Fig. 2, showing the cover in locked position upon the receptacle;

Fig. 4, a similar view showing the manner in which the cover remains locked when the same is tilted upon the receptacle;

Fig. 5, a view similar to Figs. 3 and 4, showing the manner in which the cover is unlocked from the receptacle by raising the handle;

Fig. 6, a fragmentary sectional view taken as on the line 6—6, Fig. 5; and

Fig. 7, a fragmentary sectional view taken as on the line 7—7, Fig. 6.

Similar numerals refer to similar parts throughout the drawings.

The self-locking cover comprising the invention is adapted to be employed upon a common form of receptacle indicated generally at 10, such as a garbage can or the like. As is common in the construction of receptacles or cans of this character, the side wall of the same adjacent to its open upper end is provided with an outwardly extending reinforcing bead 11 which performs the usual function of strengthening and reinforcing the open upper end of the can and also serves as a means to be engaged by the locking devices associated with the cover and comprising the present invention.

The receptacle and cover are both illustrated in the drawings as being of circular form since this is the customary shape for such receptacles, but it should be understood that the cross section of both the receptacle and cover may be of any other suitable or desired shape without departing from the spirit of the invention.

The cover 12 for the can may be given any suitable and usual contour as by stamping or otherwise, so as to be properly reinforced, and is provided with the usual depending peripheral flange 13 adapted to extend downwardly over the rim bead 11 of the can.

The inner dimensions of the rim flange 13 of the cover are such that sufficient clearance is provided to permit the cover to be easily placed upon and removed from the can without binding and yet not too much clearance so that the latching handle forming an important part of the invention may not function; while at the same time the cover will fit tightly upon the can when in the closed position. This may best be accomplished by slightly flaring the rim flange outward toward its lower edge as shown in the drawings.

The handle which forms a part of the invention is indicated generally at 14 and may be formed of a section of flat strip metal pivotally connected at its upper end to the upper side of the cover. This pivotal connection is preferably made by means of a securing rivet 15 fixed to the top of the cover and having a shank 16 of smaller diameter than the aperture 17 in the handle, through which it extends and of a height considerably greater than the thickness of the handle 14, whereby the handle is loosely pivoted to the cover.

The outer portion of the handle 14 is bent downwardly as at 18 and terminates in an inwardly disposed latching portion reduced in width at a point spaced from its end as shown at 19 and received in an elongated vertical slot 20 formed in the rim flange 13 and radially aligned with the rivet 15. By reducing the width of the handle adjacent to its end, laterally projecting ears 21 are formed upon the inwardly disposed lower end or latching portion of the handle for engagement with the inner surface of the rim flange 13 of the cover to prevent displacement of the handle in the slot 20.

The lower inwardly disposed end of the handle is concaved as shown at 22, upon substantially the same radius as the rim bead 11 of the receptacle, so as to more easily clear the same when the cover is placed upon or removed from the can, as will be later described.

Inwardly disposed projections 23 are provided upon the rim flange at each side of the vertical slot 20 and are preferably of slightly greater transverse diametrical depth than the transverse diametrical dimension of the ears 21 upon the end of the handle and preferably taper down toward the lower edge of the rim flange. These projections may be formed in any desired manner but for the sake of simplicity and cheapness, it is preferable that they be formed by inwardly stamping or pressing portions of the rim flange.

Preferably at a point on the rim flange 13 diametrically opposite to the slot 20, some means such as the spring strip 24 must be provided to project inwardly for a distance sufficient to engage beneath the underside of the bead 11 of the can and prevent dislodgment of the cover upon this side of the can. This spring strip is a common form of device used for this purpose and may be connected intermediate its ends to the flange 13 as by rivets 25, the opposite ends of the strip 24 extending beneath the bead 11.

The operation of the improved latching means may be briefly described as follows: Assuming that the cover 12 is placed upon the can in the manner shown in Figs. 1 and 3, the handle 14 will drop by gravity to the position best shown in Fig. 3, the lower inner end or latching portion thereof being substantially in contact with the side wall of the can at a point directly below the rim bead 11 thereof.

Any attempt to remove the cover from the

can, without grasping and pulling upward upon the handle 14, will be opposed by the latching portion of the handle, including the ears 21, engaging the underside of the bead 11 as shown in Fig. 4.

If, however, the handle 14 is raised to the position shown in Fig. 5, the latching portion 21 of the handle will be received between the inwardly disposed projections 23 of the rim flange, which will thus space the latching end of the handle sufficiently from the bead 11 of the can to permit the same to clear as the cover is raised. The concaved inner end 22 of the handle provides further clearance so that no portion of the handle will engage the bead 11 as the cover is raised from the can.

I claim:

1. The combination with a receptacle having an external bead adjacent to its open end, of a cover for said receptacle having a depending rim flange extending downwardly over said bead, a manipulating and latching handle pivotally secured at its upper end to the cover, the lower end of the handle extending through a vertical slot in the rim flange, a projection on the lower end of the handle securing the same in said slot, and an inwardly disposed projection on the rim flange at each side of the upper end of the slot, said inwardly disposed projections being of slightly greater depth than the projection on the handle.

2. The combination with a receptacle having an external bead adjacent to its open end, of a cover for said receptacle having a depending rim flange extending downwardly over said bead, a manipulating and latching handle pivotally secured at its upper end to the cover, the lower end of the handle extending through a vertical slot in the rim flange, a projection on the lower end of the handle securing the same in said slot, and an inwardly disposed projection on the rim flange at each side of the upper end of the slot, said inwardly disposed projections being of slightly greater depth than the projection on the handle and tapered toward the lower edge of the rim flange.

3. The combination with a receptacle having an external bead adjacent to its open end, of a cover for said receptacle having a depending rim flange extending downwardly over said bead, a manipulating and latching handle pivotally secured at its upper end to the cover, the lower end of the handle extending through a vertical slot in the rim flange, a projection on the lower end of the handle securing the same in said slot, the lower end of the handle being concaved upon substantially the same radius as said bead, and an inwardly disposed projection on the rim flange at each side of the upper end of the slot, said inwardly disposed projections being of slightly greater depth than the projection on the handle.

4. The combination with a receptacle having an external bead adjacent to its open end, of a cover for said receptacle having a depending, outwardly flared rim flange extending downwardly over said bead, a manipulating and latching handle pivotally secured at its upper end to the cover, the lower end of the handle extending through a vertical slot in the rim flange, a projection on the lower end of the handle securing the same in said slot, and an inwardly disposed projection on the rim flange at each side of the upper end of the slot, said inwardly disposed projections being of slightly greater depth than the projection on the handle.

5. The combination with a receptacle having an external bead adjacent to its open end, of a cover for said receptacle having a depending rim flange extending downwardly over said bead and of slightly greater diameter than the external diameter of said external bead, a manipulating and latching handle movably mounted upon the cover, the lower end of the handle extending between the side wall of the receptacle and the rim flange of the cover and comprising a locking projection normally positioned beneath said external bead, and an inwardly disposed projection on the rim flange at the side of said locking projection, and of slightly greater transverse diametrical depth than the transverse diametrical dimension of said locking projection.
6. The combination with a receptacle having an external bead adjacent to its open end, of a cover for said receptacle having a depending rim flange extending downwardly over said bead and of slightly greater diameter than the external diameter of said external bead, a manipulating and latching handle movably mounted upon the cover, the lower end of the handle extending between the side wall of the receptacle and the rim flange of the cover and comprising a locking projection normally positioned beneath said external bead, and an inwardly disposed projection on the rim flange at each side of said locking projection, and of slightly greater transverse diametrical depth than the transverse diametrical dimension of said locking projection.

ROWLAND G. CURTIS.