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[54] **TAMPERPROOF CLOSURES FOR WALL-MOUNTED RECEPTACLES AND THE LIKE**
11 Claims, 8 Drawing Figs.

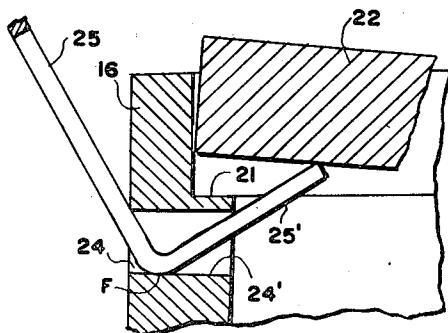
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 47, 42 B, 55 B, 55 G, 55 E, 55 K; 215/51

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ABSTRACT: The internal annular shoulder offered by the counterbored mouth of a wall-mounted receptacle, seats a push-fitted disc closure whose perimetrical edge does not pass through the plane of the receptacle's mouth rim. The upper surface of said disc is smooth and cannot be gripped for removal. The fit is so fine that nothing can be entered in the parting line between said disc and receptacle wall. Out of view at the rear, the receptacle wall has an accessible small aperture immediately below the seat, for receiving the short leg of an L-shaped element, which when inserted, serves as a bell-crank to lift the closure disc at its perimeter, thus tilting it to expose it for removal; the bottom wall of said aperture supporting the vertex of said L form to serve as a fulcrum. Points on the closure disc circumference diametrically opposite the region of lift, are supported to serve as fulcrums on the seat and the wall of the counterbore, for the closure disc swing. When either the disc or receptacle is of material having some resilient quality, tongue and groove engagement means may also be provided thereon to releasably hold the disc in closing position.



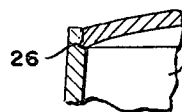
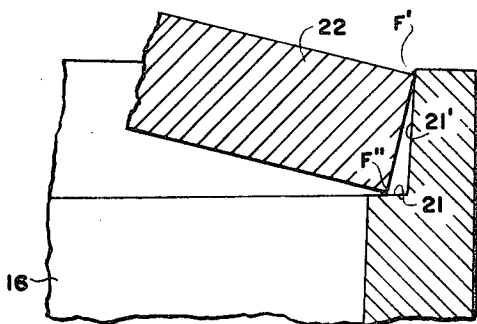
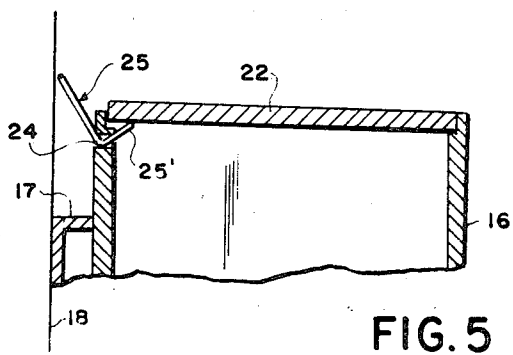
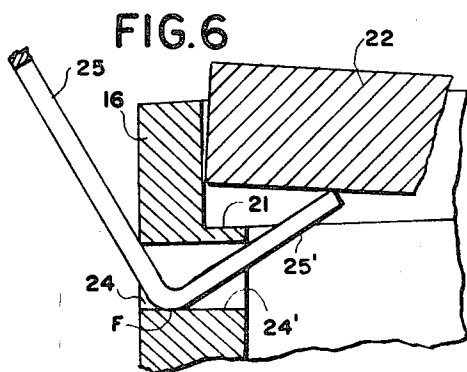
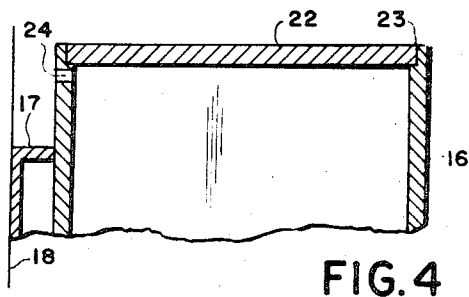
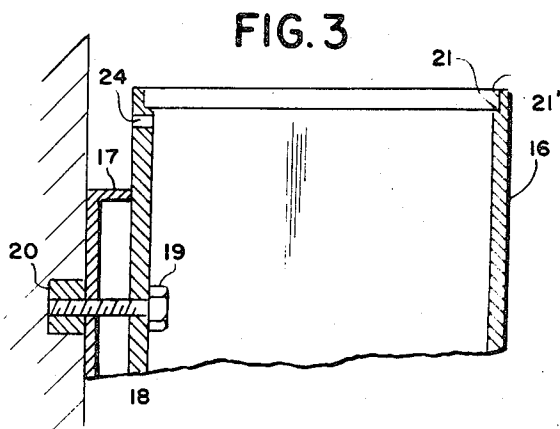
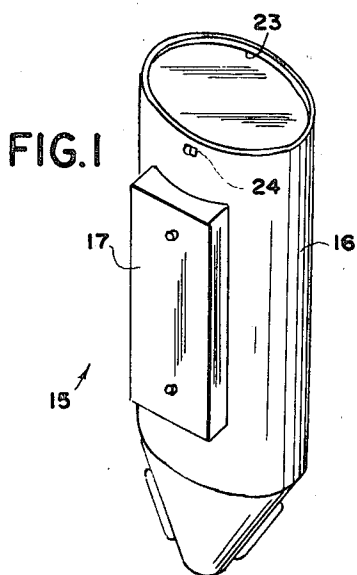
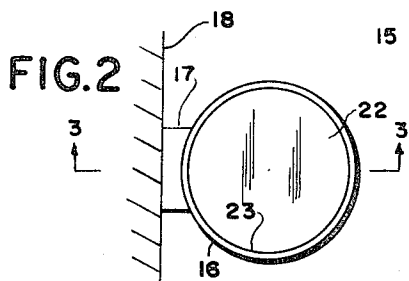


FIG. 7

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TAMPERPROOF CLOSURES FOR WALL-MOUNTED RECEPTACLES AND THE LIKE

The present invention relates to closures for receptacles, as for instance, soap dispensers mounted in public wash rooms. These devices have a removable closure which is removed from time to time to replenish the contents. This is usually done by an attendant, who makes the rounds for such purpose.

The principle object of this invention is to provide a novel and improved closure construction for fixed receptacles, which are easily and conveniently opened by the attendant, but affords security against the casual, curious or mischievous tamperer who just likes to take things apart, thus avoiding waste of contents and loss or damage of equipment parts, but is not intended as protection against an intentional pilferer. This new construction uses no special lock, but needs a particular tool, and cannot be removed by anyone by use of a pen knife, pocket screwdriver, finger nail or other item usually found in a person's pockets or handbag. Even if the aperture provided should become ascertained, the tamperer's usual equipment would be of no avail.

A further object thereof is to provide a closure means of the character described, which is simple and cheap, and efficient in carrying out the purposes for which it is designed, by new structure having a novel "mode of operation."

Other objects and advantages will become apparent as this disclosure proceeds.

For one practice of this invention, a push-fit plate member serves as a plug closing the mouth of a wall-mounted open-top receptacle whose interior offers an annular seat on which said plug rests so it is flush with the receptacle's mouth, though it may be recessed a bit therein, but never outward thereof at the parting line it makes with the receptacle body when it rests fully on said seat. Out of sight at the rear, the receptacle wall has a small aperture immediately below said seat, accessible for the insertion of the short leg of an L-shaped pry. Upon downward movement of the outer leg whereupon the distal end of the short leg contacts the undersurface of the plug at its perimetrical lane, the plug is caused to swing upwardly while said seat, at a point opposite, acts as a fulcrum support for the plug, while the aperture's lower wall acts as a fulcrum support for the vertex in the L-piece. In closing position, the perimetrical parting line of the plug made with the receptacle body is a minimum to just allow swing of the plug, but incapable of admitting anything. The mouth perimeter may be of any shape and of course, the plug is made to suit. The L-piece may be of stiff wire or strip material. When either the plug or receptacle wall is of material having some resilient quality, additional security may be offered by a slight disengageable tongue and groove juncture around the parting line of the plug and receptacle mouth. The upper surface of the plug is smooth so it cannot be gripped for removal, and is either flat, or convex to inhibit its use as a cigarette rest.

In the accompanying drawing forming part of this specification, similar characters of reference indicate corresponding parts in all the views.

FIG. 1 is a perspective showing of a soap dispenser as viewed from the rear. Its closure construction embodies the teachings of this invention, and is recessed a bit in the receptacle which holds the soap supply.

FIG. 2 is a top plan view of FIG. 1, showing the dispenser mounted on a wall.

FIG. 3 is an enlarged fragmentary section taken at line 3—3 in FIG. 2, minus the closure disc.

FIG. 4 is similar to FIG. 3, but includes the closure disc in closing position, as the dispenser is in use.

FIG. 5 is similar to FIG. 5, showing use of the tool to swing the closure disc, so it can be removed.

FIG. 6 shows a magnified portion of FIG. 5, which includes the closure swinger.

FIG. 7 shows a magnified portion of FIG. 5, which indicates the axes of swing the closure disc utilizes.

FIG. 8 shows a fragment of FIG. 4, of slightly modified construction.

In the drawing, the numeral 15 designates generally soap powder dispensing device chosen to illustrate an embodiment of this invention. Its supply-holding open-top receptacle 16, and a spacer member 17 at its rear, comprise a unit mounted on a wall or post 18; such attachment being preferably done by means entered from the interior of the receptacle as for instance by the use of screws as 19 through suitable holes and threadedly engaged in nuts as 20 which are inbedded flush and anchored in the wall. The mouth of the receptacle has a slight counterbore as indicated at 21', which is one manner to provide the seat 21 for the disc closure member 22 which is push-fitted frictionally as a plug substantially tight in the receptacle's mouth. Said plug may be flat, fitting flush with the mouth's rim as in FIG. 4, slightly recessed as in FIG. 1, or may be convex as in FIG. 8, as indicated at 22', but never extending at the parting line 23 through the plane of the receptacle's mouth rim when fully on the seat 21. There is no space to enter anything at such parting line. The disc 22, and 22', must be stiff enough that when in closing position, it cannot be deformed by hand pressure. The upper surface of the closure disc is smooth and cannot be gripped or have any indentations or projections that can be intercepted. Though shown cylindrical, the receptacle may have a cross section at mouth region, of any perimetrical form, and of course, the closure plate therefor would be one to suit.

To replenish the supply within the receptacle 16, it is opened by use of an L-shaped element 25 which may be of very stiff wire or strip material. The short leg 25' is inserted in an unseen but accessible small aperture 24 at the rear, immediately below the seat 21. Said element is manipulated as a bellcrank; the vertex of said L-shape resting on the lower wall 24' of said aperture, to serve as a fulcrum, whereby the distal tip of said leg 25' will contact the underside of the closure disc 22 near its perimeter and cause it to tilt upwardly to make said disc accessible for removal. Circumferential points F' and F'', which are diametrically opposite said point of tip-contact, serve as fulcrums of swing. The minute parting line width 23 between the disc and receptacle, is sufficient to allow said swing, but shall be so small that nothing solid can be entered into such parting space when the disc 22 is in closing position. If desired, the closure disc and the mouth of the receptacle may be provided as shown at 26, for slight tongue and groove releasable engagement, to give additional hold, if resilient.

It is evident that for all practical purposes, the closure scheme taught herein is tamperproof, and while in closed condition, the device cannot be removed from its mount, being that the screws 19, are not accessible.

This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiments shown herein shall be deemed merely illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific showings and description herein to indicate the scope of this invention.

I claim:

1. In combination with a receptacle having a mouth, a closure member plugging said mouth so completely that nothing solid can be entered between said plug and receptacle; said closure plug being push-fitted in said mouth its perimetrical edge being in substantial frictional contact with the interior wall of the receptacle; the receptacle being provided with a relatively small aperture spaced from the bottom and adjacent said seat structure opening into the interior of the receptacle whereupon the insertion of the short leg of a stiff L-shaped pry through said aperture into the receptacle and subsequent manual swing of the distal end of the other end of the L-shape away from the receptacle, the distal end of the short leg will contact the underside of the closure plug and swing it to a tilted position so said closure plug is made accessible for removal; said pry acting as a bellcrank with its vertex bearing against the wall of said aperture as the fulcrum therefor, and a point on the perimeter of said plug opposite the location of

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said aperture, bearing against the seat and serving as the fulcrum for such swing to attain the tilted position of said plug; the outer surface of said plug being ungrippable when said plug is in closing position on said seat structure and said plug when in such closing position, being undeformable by hand pressure applied thereto.

2. The combination as defined in claim 1, wherein the seat structure is annular and is provided by having the mouth of the receptacle counterbored.

3. The combination as defined in claim 1, wherein no part of the closure plug is directly over the mouth rim of the receptacle.

4. The combination as defined in claim 1, wherein no part of the perimetrical surface of the closure plug is through the plane of the mouth rim of the receptacle.

5. The combination as defined in claim 1, wherein at its perimeter, the closure plug is flush with the plane of the mouth rim of the receptacle.

6. The combination as defined in claim 1, wherein at its perimeter, the closure member is recessed in the receptacle.

7. The combination as defined in claim 1, wherein the upper surface of the closure plug is flat.

8. The combination as defined in claim 1, wherein the upper surface of the closure plug is convex.

9. The combination as defined in claim 1, wherein one of said receptacle and closure plug members has some resilient quality, and they are in tongue and groove releasable engagement.

10. The combination as defined in claim 1, wherein the receptacle is wall mounted, and the aperture is in the rear and out of view but accessible for the pry.

11. The combination as defined in claim 10, wherein the means mounting the receptacle to the wall, is accessible only interior the receptacle.

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