Nov. 11, 1947. A. T. THOMPSON 2,430,542

RECEPTACLE CLOSURE

Filed Feb. 8, 1944

Fig. 1.

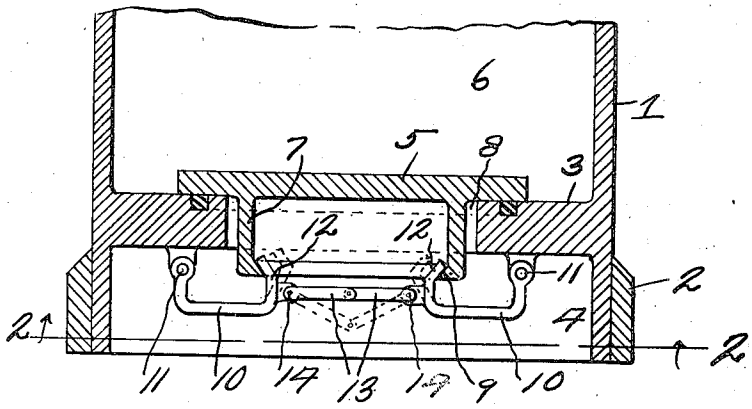


Fig. 2.

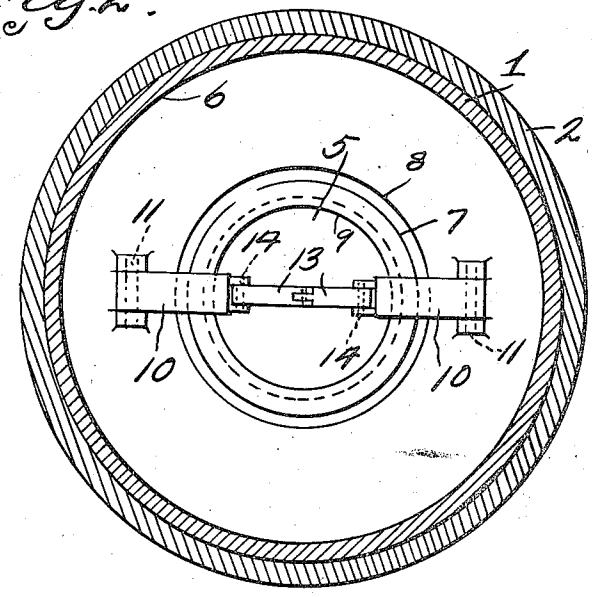


Fig. 3.

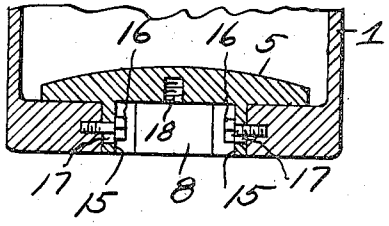
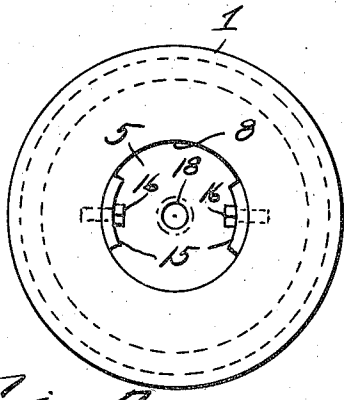


Fig. 4.



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RECEPTACLE CLOSURE

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3 Claims. (Cl. 220—25)

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The invention relates to receptacle closures particularly the metallic receptacle type, and of the pressure type, and has for its object to provide a closure within the chamber of the receptacle and cooperating with the inner side of the bottom thereof for closing a filling opening in the bottom and means controlled from the outside of the bottom for holding said closure in closed position.

A further object is to provide a closure for a receptacle opening extending through a wall of a receptacle and means comprising hinged members on the outer side of the wall and adapted to spring over a bevelled annular flange carried by the closure and disposed to the outside of the wall for holding said closure in closed position.

A further object is to provide a double link connection between the free ends of the hinged members for forcing said ends against their spring action away from each other and into engagement with the bevelled flange for holding the closure in closed position.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of the invention without departing from the spirit of the invention.

In the drawing:

Figure 1 is a vertical transverse sectional view through the lower end of a pressure receptacle, showing the cover in closed position.

Figure 2 is a horizontal sectional view taken on line 2—2 of Figure 1.

Figure 3 is a transverse sectional view through the lower end of a pressure receptacle showing a modified form of closure securing means.

Figure 4 is a bottom plan view of the device shown in Figure 3.

Referring to the drawing the numeral 1 designates a pressure receptacle in which expansive gases are placed for various uses. The lower end of the receptacle 1 is provided with a reinforcing band, welded or otherwise secured, thereto.

The bottom 3 of the receptacle is spaced upwardly from the bottom of the receptacle for forming a chamber 4, in which chamber the operating mechanism for the closure 5, disposed within the chamber 6, is placed, clearly shown in Figure 1. The underside of the closure 5 is provided with an annular flange 7 extending downwardly through the filling opening 8, and terminating in an inwardly extending annular bevelled flange 9 below the bottom 3 of the receptacle. In devices of this character the receptacle is inverted for the filling operation, for instance, beverage ingredients are placed within the receptacle and then carbon dioxide, which builds up a pressure, and this pressure is utilized partially for holding the closure 5 in closed position over the filling opening 8. However in the initial stages of the forming of the gas it is necessary to provide additional means for holding the closure in closed position. To accomplish this result U-shaped spring arms 10 are hingedly connected at 11 to the outer side of the bottom 3 and on opposite sides of the filling opening 8. The free ends of the U-shaped arms 10 extend towards each other and terminate in upwardly extending arms 12, the ends of which incline outwardly. The spring action is sufficient to allow the free ends 12 of the U-shaped arms to pass to the inner sides of the bevelled flange 9 so they can be expanded outwardly into engagement with the bevelled flange 9 when the double link connections 13 are forced to alined position as shown in full lines in Figure 1. It will be seen that the engagement is maintained because the hinged points 14 are below the flange 9 and the hinged points 11. When it is desired to release the closure the double link connection 13 is broken outwardly to the dotted line position shown in Figure 1.

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Referring to the modified form shown in Figures 3 and 4, the closure 5 is provided with downwardly extending arcuate flanges 15, concentrically arranged and these flanges engage opposite sides of the filling opening 8 and are secured thereto by means of bolts 16, which bolts extend through elongated slots 17 in the flanges 15. Closure 5 in this form is placed in position by means of a tool inserted in the threaded filling opening 18. However any form of tool may be used.

From the above it will be seen that a closure is provided for a pressure receptacle, which is simple in construction, the parts reduced to a minimum and one which cooperates with the internal cover from the outside of the receptacle.

The invention having been set forth what is claimed as new and useful is:

1. The combination with a receptacle closure disposed on the inner side of a wall of said receptacle over a filling opening, an extension member carried by the closure and extending through the filling opening and terminating outside the wall, of means disposed on the outside of said wall for holding said closure in closed position, said means

comprising members hinged on the outer side of the wall, double link connections between said hinged members, said double link connections forming means for expanding portions of said hinged members into and out of interengagement with the extension member carried by the closure and maintaining said closure in close engagement with the inner side of the wall.

2. A device as set forth in claim 1, wherein the extension member is an annular flange carried by the closure and extending through the filling opening, said hinged members carried by the outer side of the wall cooperating with said annular flange and maintaining said closure in closed position.

3. A device as set forth in claim 1 wherein the hinged members are U-shaped and have their outer arms hinged to the receptacle wall, the other arms of said U-shaped members extending upwardly towards the filling opening, an annular flange carried by the closure and extending downwardly through the wall and to the outer side thereof, a downwardly and inwardly bevelled flange carried by the inner peripheral edge of the closure flange, said inner arms of the U-shaped members cooperating with said bevelled flange and link connections between the inner arms of the U-shaped members and adapted to spring the inner arms into engagement with the bevelled flange or allow said arms to spring out of engagement with the bevelled flange.

ALBERT T. THOMPSON.

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