

C. SCHROEDER.
RECEPTACLE CLOSURE.
APPLICATION FILED NOV. 5, 1904.

Fig. 1.

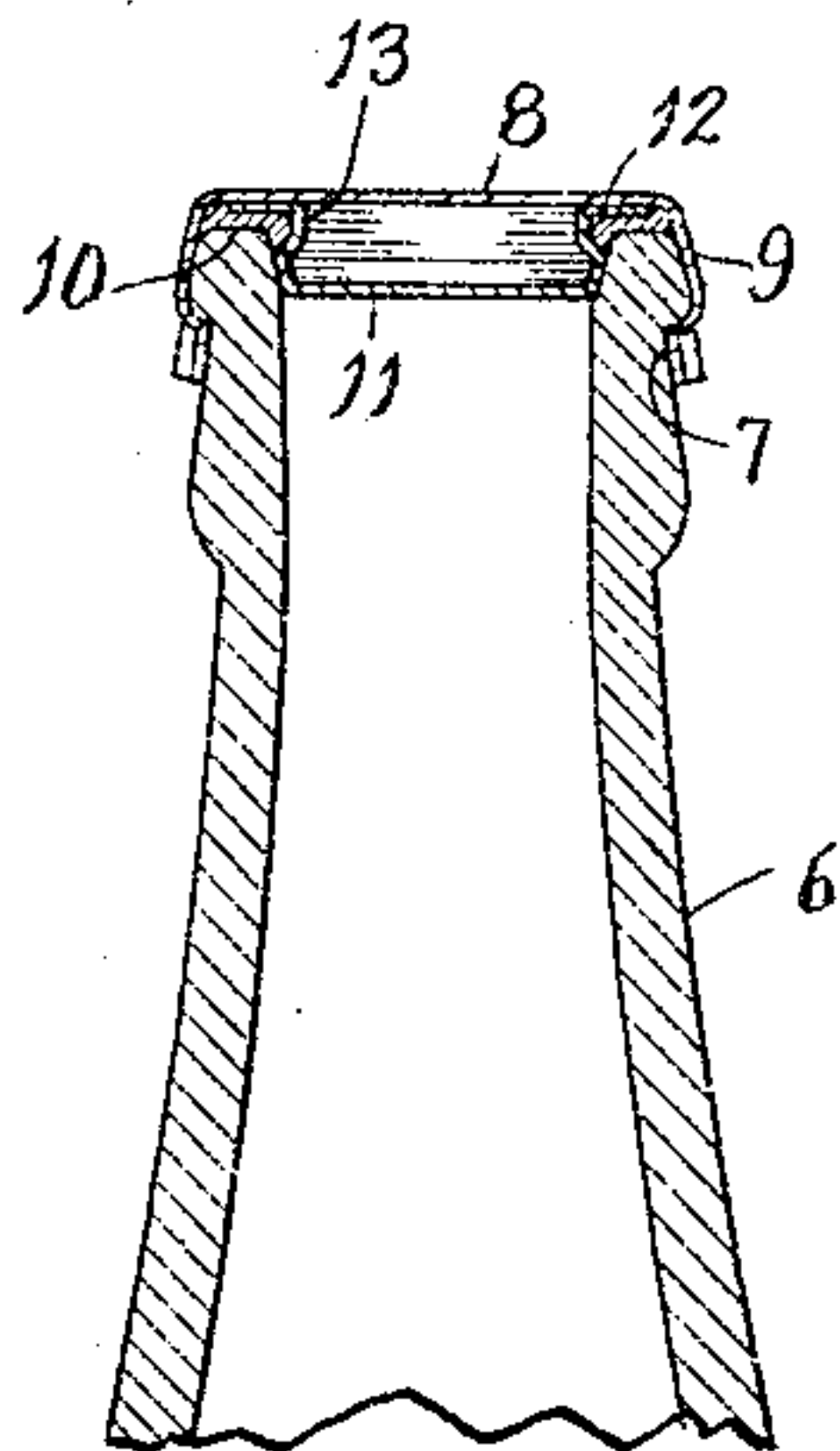


Fig. 2.

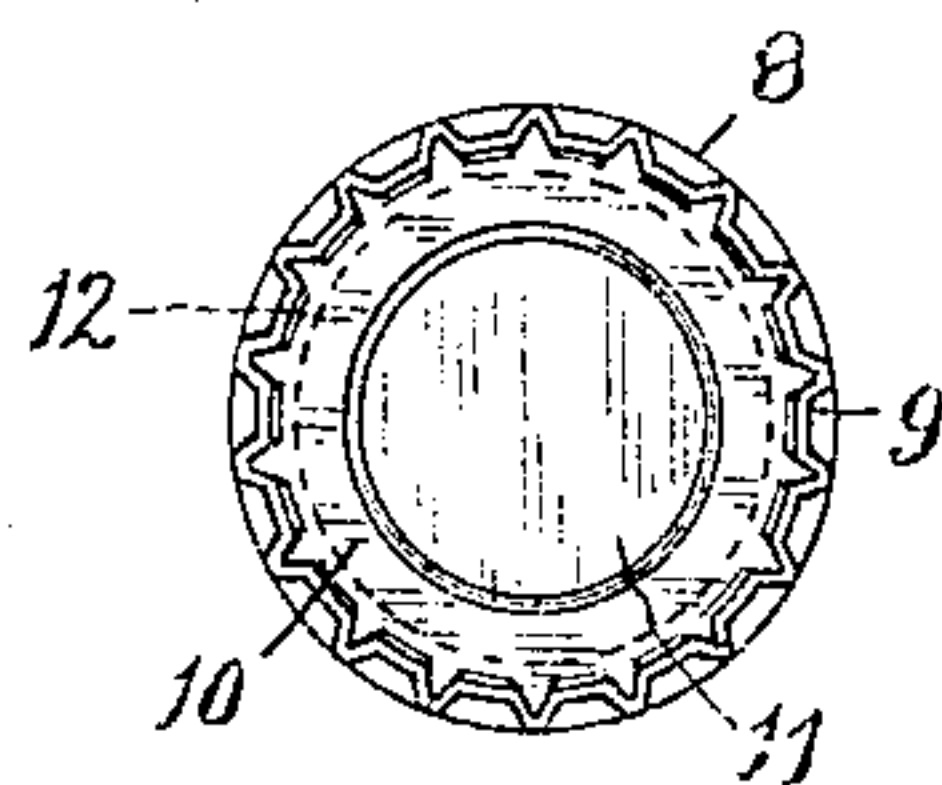


Fig. 3.

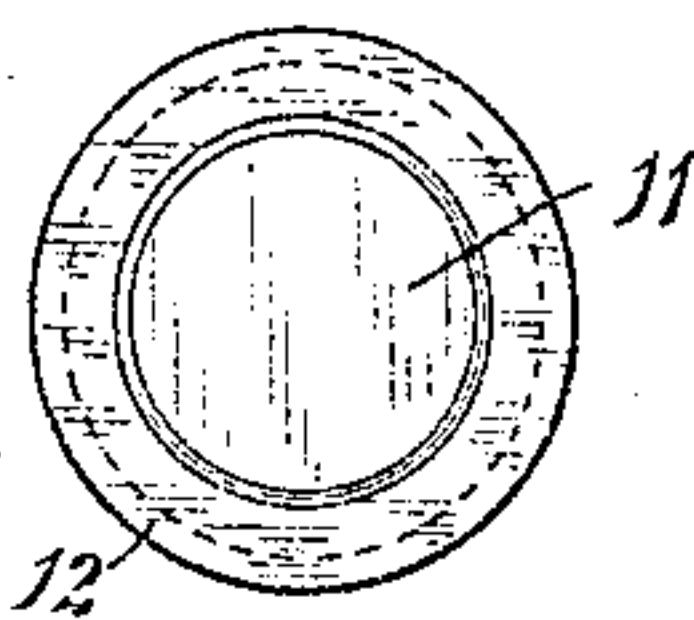
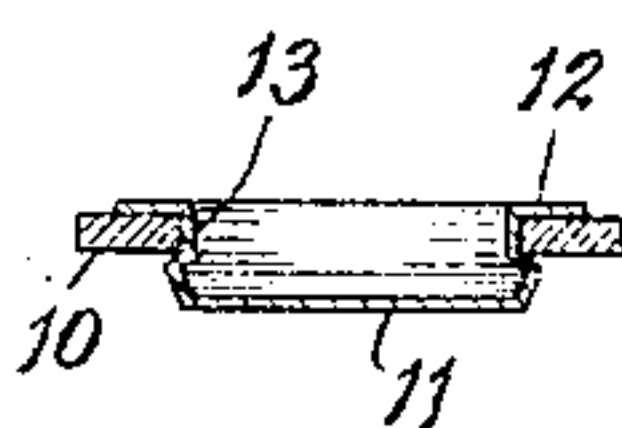


Fig. 4.

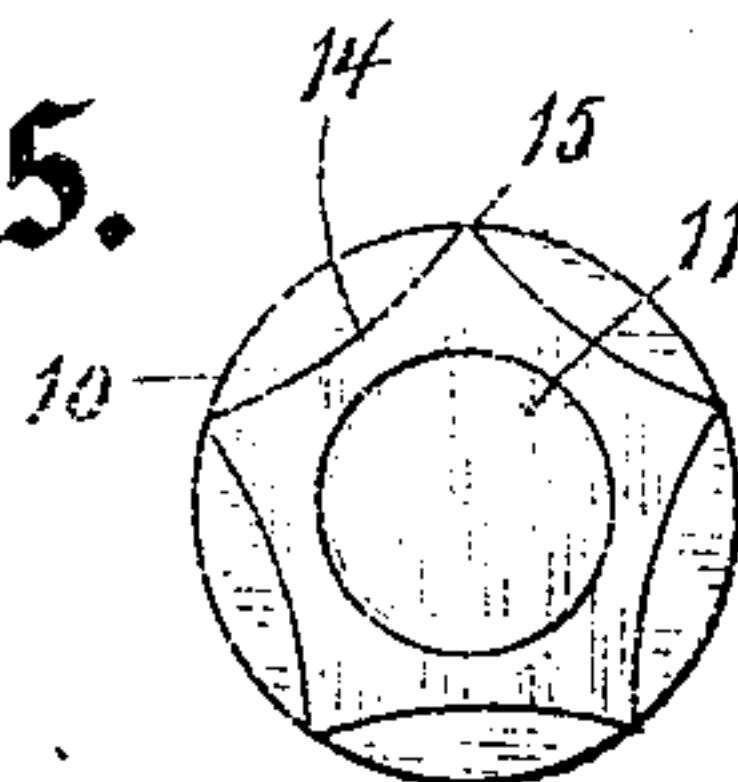


Witnesses.

A. H. Keeney,

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Fig. 5.



Inventor.

Conrad Schroeder

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UNITED STATES PATENT OFFICE.

CONRAD SCHROEDER, OF MILWAUKEE, WISCONSIN.

RECEPTACLE-CLOSURE.

SPECIFICATION forming part of Letters Patent No. 786,521, dated April 4, 1905.

Application filed November 5, 1904. Serial No. 231,533.

To all whom it may concern:

Be it known that I, CONRAD SCHROEDER, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Receptacle-Closures, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in receptacle-closures.

The object of my invention is to provide a construction whereby not only an effective closure is obtained over the top edge of the receptacle-mouth, but also a plurality of closures within the receptacle-mouth.

In the accompanying drawings, Figure 1 is a vertical sectional view through a fragment of a bottle, showing my improvements applied thereto. Fig. 2 is an under view of the cap and the improved devices fitted therein. Fig. 3 is a view similar to Fig. 2 with the cap removed. Fig. 4 is a cross-section through Fig. 3, and Fig. 5 is a top plan view of the gasket and a modified form of the protecting-plate.

Referring to the drawings, the numeral 6 indicates the bottle to which my improvements are applied, the said bottle being of the form wherein an annular external shoulder 7 is formed therearound just below the upper edge of the mouth of the bottle. The metallic cap shown in connection with the bottle consists of a top portion 8 and a depending crimped flange 9, which surrounds the upper edge of the neck of the bottle, with the lower end of the flange pressed in beneath the shoulder 7.

Referring to the improvements which are shown in connection with this cap, the numeral 10 indicates an elastic ring or gasket, which is preferably of cork, but may be composed of rubber, leather, or any other elastic material capable of effecting a tight closure. This ring or annular gasket is of the proper circumference to fit snugly within the annular depending flange 9 of the cap.

Fitted against the under side of the top of the cap is a disk or plate, preferably composed of some suitable substance which is impervious to the passage of liquid therethrough and which will not deleteriously affect the con-

tents of the bottle—as, for instance, aluminum. This disk is of sufficient circumference to cover the opening of the ring or gasket. The plate is provided with a downwardly-extending depressed portion 11 and an outwardly-extending flat portion 12, which is seated on the top of the gasket. The depressed portion is made to conform to and closely fit within the mouth of the bottle, preferably having a wedging fit therein, as shown, while the flat portion is seated on top of the gasket. In different forms of bottles the inner surfaces of the mouths of said bottles vary—that is to say, in some instances the walls are straight, while in other instances the walls are tapered. It is therefore desirable in order to effect a close fit that the depressed portion of the protecting-plate be made to conform to the shape of the wall of the bottle-mouth of the particular bottle to which the improvements are applied.

The upper end of the depressed portion 11 of the cap is provided therearound with a groove 13. This groove is adapted when the outer cap is forced over the mouth of the bottle by pressure to receive the inner edge of the gasket, which is compressed into the said groove.

From the construction above described it will be seen that a closure is obtained at three points—that is to say, the portion of the depression of the cap below the groove 13 and which is in contact with the inner surface of the bottle-mouth forms one closure, the inner edge of the gasket which is forced into the groove 13 forms another closure, and the portion of the gasket which lies over the top edge of the bottle-mouth forms a third closure. The contents of the bottle therefore are not only protected against coming into contact with and being deleteriously affected by the tin or other material of which the outer retaining-cap is composed, but said liquid contents of the bottle are also prevented from coming in contact with the gasket 10.

The various functions accomplished by my invention may be given full effect by a stopper of the character above described, and hence the one form of stopper shown is a full illustration of the several features of the in-

vention, although it is to be understood that this invention is not limited except as indicated by the claims.

The cap shown in the accompanying drawings is only adapted for a bottle having an exterior shoulder 7. Other forms of bottles may not be adapted for this particular form of cap. I therefore do not wish to be understood as restricting myself to the use of my invention in connection with the particular form of cap shown, inasmuch as any desirable device adapted for retaining the gasket and plate over the mouth of any form of bottle is deemed to be within the spirit and scope of my invention.

Where the protecting-plate is composed of expensive material—as, for instance, aluminum—it is desirable, of course, to effect as much saving as possible of material, in order to decrease the expense to the minimum. In Fig. 5 I have therefore shown a modified form of protecting-plate, wherein the outwardly-extending portion is cut away at the points 14, leaving projections 15 between the cut-away portions and which projections extend over the casing instead of a full or non-recessed edge extending thereover, as in the other figures of the drawings.

What I claim as my invention is—

1. In a receptacle-closure, the combination of a gasket fitting over the top edge of the receptacle-mouth and provided with an opening, a cup-shaped device fitting in the opening of the gasket and extending into the mouth of the receptacle and contacting with the inner wall of the receptacle-mouth, the wall of said cup-shaped device which extends into the mouth of the receptacle being provided with a recess to receive the inner edge of the gasket, and means for holding the gasket and cup-shaped device in place.

2. In a receptacle-closure, the combination of a gasket fitting over the top edge of the receptacle-mouth and provided with an opening, a cup-shaped device fitting in the opening of the gasket and extending into the mouth of the receptacle and contacting with the inner wall of the receptacle-mouth, the wall of said cup-shaped device which extends into the mouth of the receptacle being provided with a recess to receive the inner edge of the gasket, and also provided with an outwardly-extending portion fitting upon the gasket, and means for holding the gasket and cup-shaped device in place.

3. In a receptacle-closure, the combination of a gasket fitting over the top edge of the receptacle-mouth and provided with an opening, a cup-shaped device fitting in the opening of the gasket and contacting with the inner wall of the receptacle-mouth, and provided with a recess to receive the inner edge of the gasket, and a cap fitting over the mouth of the receptacle and holding the gasket and cup-shaped device in place.

4. In a receptacle-closure, the combination with a gasket fitting over the top edge of the mouth of a receptacle and provided with an opening, of a cup-shaped device adapted to be forced into the receptacle-mouth and held in wedging contact with the inner wall of the receptacle-mouth, the wall of said cup-shaped device which extends into the mouth of the receptacle being provided with a recess to receive the inner edge of the gasket.

In testimony whereof I affix my signature in presence of two witnesses.

CONRAD SCHROEDER.

Witnesses:

ANNA F. SCHMIDTBAUER,
A. L. MORSELL.