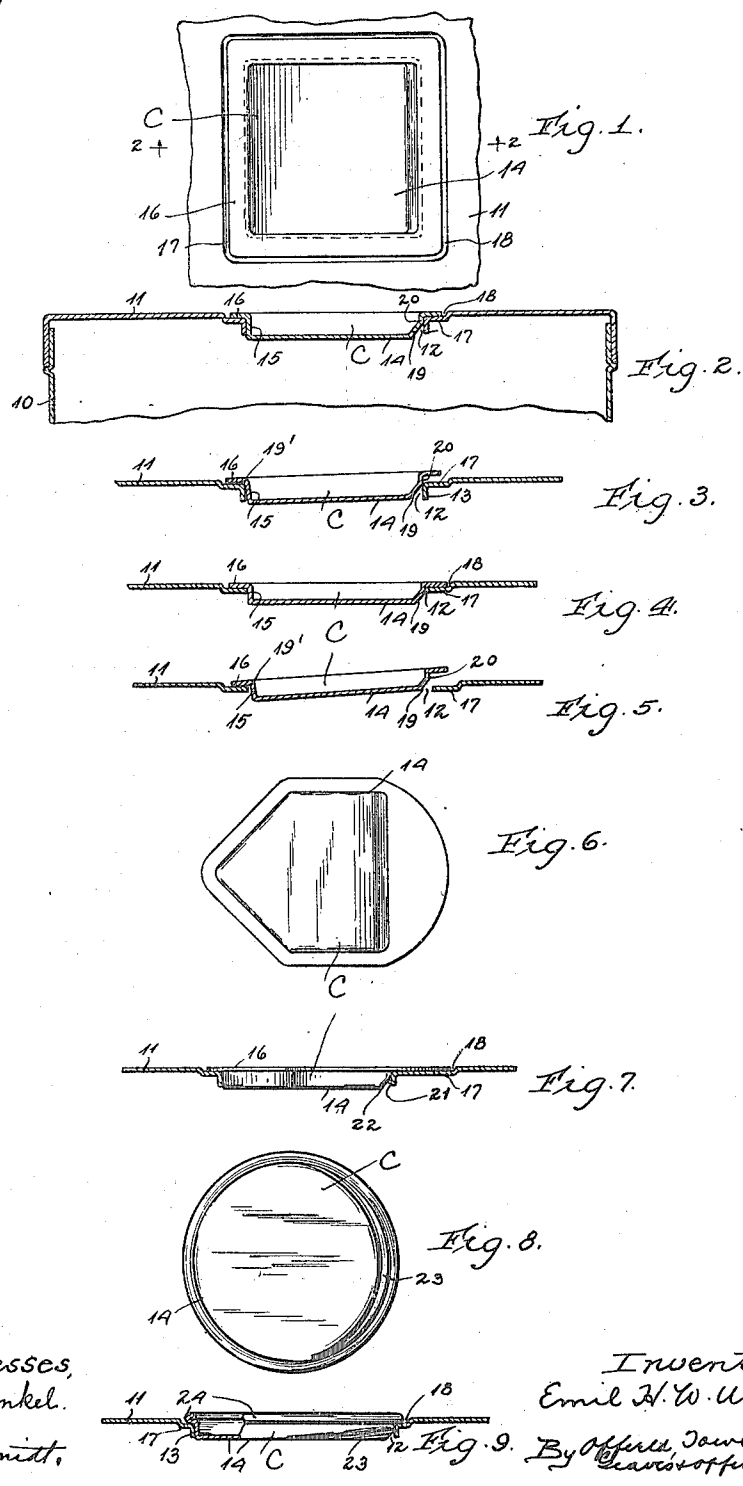


E. H. W. ULLRICH.
RECEPTACLE.
APPLICATION FILED JUNE 23, 1915.

1,208,240.

Patented Dec. 12, 1916.



Witnesses,
L. Bullwinkel.
C. J. Schmitt.

Inventor,
Emil H. W. Ullrich
By Alfred J. Sawyer,
Attys.

UNITED STATES PATENT OFFICE.

EMIL H. W. ULLRICH, OF CHICAGO, ILLINOIS.

RECEPTACLE.

1,208,240.

Specification of Letters Patent.

Patented Dec. 12, 1916.

Application filed June 23, 1915. Serial No. 35,825.

To all whom it may concern:

Be it known that I, EMIL H. W. ULLRICH, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Receptacles, of which the following is a specification.

My invention relates to sheet metal receptacles or packages and particularly to that class in which an opening is provided in the top for receiving a plug fit cap. In the usual arrangement in receptacles or packages of this class the cap, which may be round or polygonal, has plug fit along the entire extent of its sides with the flanged or unflanged edge surrounding the opening, the cap having usually a laterally extending flange or bur surrounding its upper edge between which and the receptacle body some prying point may be inserted for prying the cap from the opening. With this arrangement it is of course evident that when the cap assumes a diagonal position when pried up at one side it will engage corner-wise or diagonally in its seating opening and will become jammed or wedged in the opening so that in many cases it cannot be removed by prying only at one side but must be pried up first on one side and then on the other before it can be removed. In other words, its jamming or wedging engagement must be gradually overcome by prying first on one side and then on the other. Not only will such jamming or wedging engagement make it difficult to readily remove the cap but the cap may become bent and distorted and its seating opening spread or enlarged by the prying action so that the cap after having been removed will not again accurately fit and seal the opening.

The object of my invention is therefore to provide construction and arrangement which will facilitate removal of a plug fit or friction cap and will enable its ready removal by comparatively light prying at only one point. This I accomplish by rounding off or beveling a section of the lower corner in order that the diagonal extent of the cap in its seating opening will not become greater than the width of the opening when the cap is

pried up on one side. Sufficient seating engaging surface is, however, retained at the upper part of the rounded or beveled side to assure snug and sealing fit when the cap is in closing position in the opening.

My invention will be clearly understood by reference to the accompanying drawing in which—

Figure 1 is a plan view of a section of the top of a receptacle showing the cap in closed position, Fig. 2 is a sectional view on plane 2—2, Fig. 1, Fig. 3 is a similar sectional view showing the cap pried up at one side, Fig. 4 is a similar sectional view showing an unflanged opening and the cap in closed position, Fig. 5 is a similar sectional view showing the cap raised at one side, Fig. 6 is an under side view of a modified shape of cap, Fig. 7 is a sectional view of a can top showing the cap of Fig. 6 in closing position thereon, Fig. 8 is an underside view of another modified shape of cap, and Fig. 9 is a sectional view of a can top showing the cap of Fig. 8 in closed position and partly in section.

10 represents in diametral section the upper end of a sheet metal can body and 11 represents the top which may be permanent or in the form of a detachable slip cover. This top has the rectangular opening 12 for which the cap structure C is provided. In Figs. 1, 2 and 3, the sections adjacent the opening are deflected downwardly to form the seating flange sections 13. The cap is formed integral of sheet metal and comprises the base 14 and substantially vertical side sections 15. Preferably the upper edge section is deflected laterally to form an abutment flange 16 for limiting the closing movement of the cap. The section 17 surrounding the opening 12 may be depressed as indicated to form a depressed seat for the cap flange sections 16, the depression being substantially equal to the thickness of such flange. The width of the cap across the flange is also preferably less than the width across the depressed sections in order to leave space 18 for enabling the application of a suitable prying point below the cap flange.

55

60

65

70

75

80

85

90

95

100

The outer surfaces of the cap side sections have plug engagement with the seating flange sections 13. In prior arrangements such plug fit engagement with the seating flange was throughout the extent of the cap sides, and therefore when the cap was pried up on one side it would assume a diagonal position within the seating opening and the lower corner of the cap at the pried up side would immediately encounter the seating flange at that side and, the diagonal line of the cap being longer than the horizontal width of the seating opening, there would be considerable friction between the raised corner and the seating flange and jamming or wedging action would take place. In most cases this jamming or wedging action was so great that it was impossible to remove the cap by prying only at one side thereof and after prying up as far as possible at one side it was necessary to pry on the other side to relieve the friction and jam action and thus to gradually work the cap out of the opening.

In accordance with my invention I round or bevel away sufficiently the cap corner at one side so that when the cap is pried up a short distance at that side and assumes a diagonal position in the opening the diagonal extent of the cap will be less than the horizontal distance between the opposite seating flange sections, the section of the cap side above the rounded or beveled corner retaining its vertical condition in order to afford sufficient frictional engagement to assure complete closure and sealing when the cap is in closed position.

Referring to Figs. 1, 2, and 3, the corner of the cap is rounded or beveled along one side as indicated at 19, the section 20 above this rounded or beveled corner remaining straight. In Fig. 2, the cover is shown fully closed but when the cap at the rounded or beveled side is pried up a slight distance the short straight section 20 is readily withdrawn from the adjacent seating flange section, and then, as indicated in Fig. 3, the rounded or beveled corner section 19 will permit ready full removal of the cap without jamming of the diagonally opposite corner 19' of the cap against the upper edge of the adjacent seating flange section.

In Figs. 4 and 5 the seating flange for the cap is omitted, the cap having frictional engagement with the edge of the metal adjacent the opening 12, Fig. 4 showing the cap in closed position and Fig. 5 showing it pried up at one side and illustrating the advantage of the rounded or beveled corner.

The invention is applicable to other shapes of caps as well as to those of rectangular shape. In Figs. 6 and 7 a cap is shown having five sides adapted for plug engagement

in a similarly shaped opening 21. As shown, the corner 22 is rounded or beveled to prevent jamming when the cap is first pried up on the corresponding side.

In Figs. 8 and 9 a circular cap is shown and provided with a rounded or beveled jam preventing section 23 which may extend one half way around the cap or less. The arrangement also shows that the upper edge of the cap may be burred over as indicated at 24 instead of being flat as in the other figures. In order to indicate where to pry in order to remove a cap some indication or directions may be printed or otherwise indicated on the package.

I thus provide an improved form of cap which will have accurate and sealing fit with a seat surrounding an opening and which can be readily loosened for entire removal by prying upwardly a distance at a certain indicated point. The rounded or beveled corner or section for permitting such ready removal can be easily and without additional expense provided in the cap during formation thereof.

I do not desire to be limited to the exact construction and arrangement I have shown and described as changes and modifications could no doubt be made which would still come within the scope of the invention.

I claim as follows:

1. In a receptacle, the combination of a body and a top therefor having an outlet opening, a cap for said opening in the form of a plug which when in closing position engages for a short distance at its upper part intimately with the outlet opening sides at all points to thereby seal the opening, a section of the lower peripheral edge of said cap being deflected to be spaced away from the vertical plane of the adjacent outlet opening side whereby to prevent wedging or jamming when the corresponding side of the cap is pried up and the cap tilted preparatory to removal from the opening.

2. In a receptacle, the combination of a body and a top therefor having an outlet opening, a seating flange surrounding said opening, a cap having plug fit at its upper section with said seating flange at all points thereof, a section of the lower peripheral corner of said cap being beveled and spaced away from the seating flange whereby to prevent binding and jamming when the corresponding side of the cap is raised and the cap tilted.

3. In a receptacle, the combination of a body and a top therefor having an outlet opening, a cap for said opening in the form of a plug engaging at its upper part intimately with the outlet opening sides at all points, a section of the lower peripheral edge of said cap being deflected to be spaced away

from the vertical plane of the adjacent outlet opening side whereby to prevent wedging or jamming when the corresponding side of the cap is pried up and the cap tilted, said cap having a lateral flange at its upper end for abutting against the receptacle top when the cap is in closing position.

In witness whereof I have hereunto set my hand this 21st day of June, A. D., 1915.

EMIL H. W. ULLRICH.

Witnesses:

CHARLES J. SCHMIDT,
LURLINE BULLWINKEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."