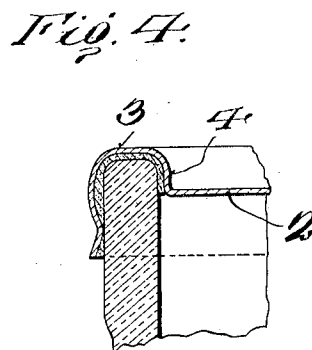
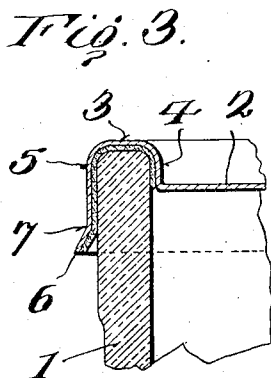
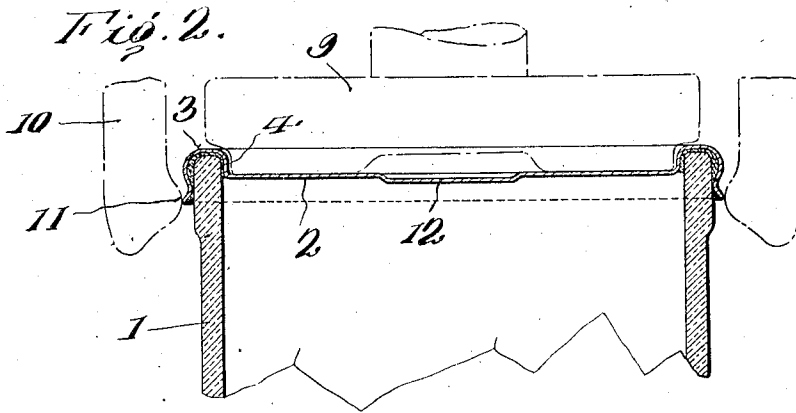
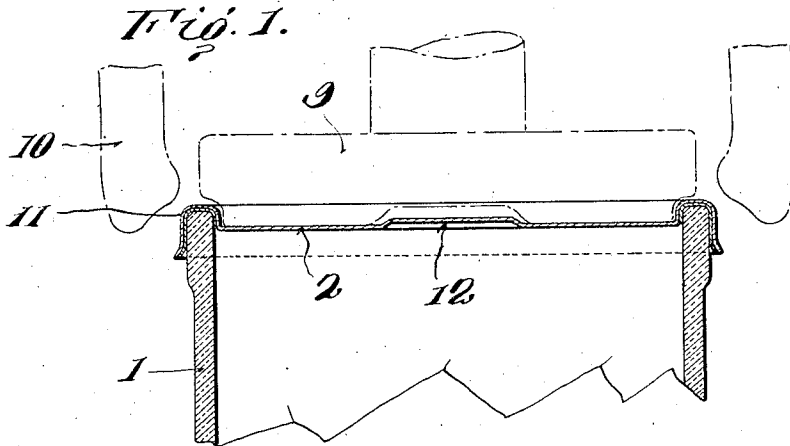


T. L. TALIAFERRO.
SHEET METAL COVER FOR RECEPTACLES.
APPLICATION FILED JUNE 4, 1913.

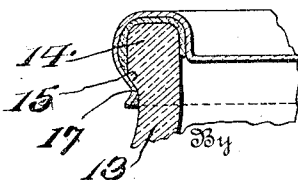
1,109,484.

Patented Sept. 1, 1914.



Witnesses

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UNITED STATES PATENT OFFICE.

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SHEET-METAL COVER FOR RECEPTACLES.

1,109,484.

Specification of Letters Patent.

Patented Sept. 1, 1914.

Application filed June 4, 1913. Serial No. 771,723.

To all whom it may concern:

Be it known that I, THOMAS LUCIEN TALIAFERRO, a citizen of the United States, residing at Wheeling, in the county of Ohio, State of West Virginia, have invented certain new and useful Improvements in Sheet-Metal Covers for Receptacles, of which the following is a description, reference being had to the accompanying drawing, and to the figures of reference marked thereon.

The invention relates to new and useful improvements in closures for receptacles and more particularly to a sheet metal closure for a receptacle of glass, porcelain or the like.

An object of the invention is to provide a cover or closure for a receptacle of the above character, which is so shaped that the same may be attached to the receptacle and firmly retained thereon by pressure applied to the outer extreme edge of the cover or closure, and which cover or closure is also so shaped that when attached to the receptacle an annular sealing shoulder will be caused to embed or press against the sealing material and form an effective sealing line.

A further object of the invention is to provide a cover of the above character with a restricted dished central portion normally projecting outwardly from the cover, which dished portion is so constructed as to be flexed inwardly by atmospheric pressure, when said receptacle is under vacuum.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings,—Figure 1 is a sectional view showing my improved cover applied to a receptacle before said cover is bent to close the same; Fig. 2 is a similar view showing the cover bent into closing contact with the walls of the receptacle; Fig. 3 is an enlarged detail in section showing the cover when first applied to the receptacle and before the outer wall of the channel is bent into contact therewith; Fig. 4 is a view similar to Fig. 3, showing the outer wall of the U-shaped channel bent into closing position; Fig. 5 is a view similar to Fig. 4, showing a receptacle having a shoulder at its upper end and my improved cover applied thereto.

In carrying out the invention I have provided a sheet metal cover which comprises a circular portion having its periphery bent

to form a U-shaped annular channel, which is adapted to engage the upper edge of the receptacle to be closed. This channel is lined with a sealing material. The outer wall of the channel is formed with a substantially vertical portion at the upper part thereof, and the lower edge of this wall is curved outwardly so as to form with the vertical wall an annular sealing and gripping shoulder, which is adapted to press the sealing material when the lower edge of the outer wall is bent inwardly toward the wall of the receptacle. This particular shaping of the channel formed at the outer periphery of the metal cover not only secures a more effective sealing of the receptacle, but forms an open or flared mouth for the channel, which facilitates the placing of the cover on the upper edge of the receptacle.

As above noted, my improved cover is especially adapted for closing receptacles formed of glass or porcelain or the like, and receptacles of this character are often slightly irregular in contour and the surface of the glass or porcelain may also contain uneven sections. These irregularities or imperfections in the mouth of the receptacle to be closed make the use of a cover having its outer wall vertical throughout impracticable. My improved cover, however, as above noted, with its open or extended entrance to the U-shaped channel, permits covers of uniform sizes to be readily placed upon receptacles having irregular contours and slight imperfections in the side walls or edges of the mouth of the receptacle to be closed.

Referring more in detail to the drawings, I have shown a receptacle 1, which is circular in cross section and the side walls of the receptacle at the upper edge thereof are substantially vertical. The receptacle is preferably made of glass, porcelain or the like, as above noted, and is adapted to be closed by my improved cover. This cover is made of metal and consists of a circular portion 2. This circular portion has its periphery bent to form a U-shaped channel 3, which is adapted to engage the upper edge of the side walls of the receptacle 1. The inner wall 4 of the U-shaped channel is substantially vertical. The upper portion 5 of the outer wall of said U-shaped channel is also substantially vertical, and the lower edge of this outer wall is curved outwardly

as at 6, forming with said vertical wall an annular shoulder 7, which may be said to be a sealing shoulder. The inner wall of this U-shaped channel throughout its entire extent is provided with a sealing material 8, which is preferably a plastic sealing material of any suitable character. The inner wall of said U-shaped channel is joined to the central circular portion 2 by a curved section, which, together with the lower curved edge of the outer wall, forms an open or extended mouth, which is adapted to receive the upper edge of the receptacle to which it is applied. As above noted, this shaping of the mouth of the U-shaped channel permits the cover to be readily placed on receptacles which may be slightly irregular in contour or formed with slight imperfections in the surface of the glass or porcelain. Then again, the bending of the metal outwardly at the lower end of the outer wall of the U-shaped channel tends to strengthen the metal and I have, therefore, in effect, a strengthened annular shoulder 7 which becomes embedded in the sealing material and also serves to grip the vertical wall of the receptacle and retain the cover on the receptacle.

In Fig. 1 of the drawings I have shown the cover applied to the receptacle and said cover held seated thereon by a chuck 9. The crowding of the cover on to the receptacle by the chuck 9 tends to open the channel or bend outwardly the outer wall. A closing tool 10, indicated diagrammatically in this figure, is formed with a cam shoulder 11, which is so positioned that after the cover is firmly seated by the chuck, a downward movement of the tool will cause said shoulder to engage the outer wall of the channel and as this cam shoulder moves down the outer wall, the sealing shoulder will be bent inwardly toward the wall of the receptacle. The greatest pressure of the closing tool is applied to the outer extreme edge of the curved portion of the outer wall, and the forcing of this outer edge in toward the receptacle causes the shoulder 7 to become embedded in the sealing material, and said shoulder serves, in a measure, as a fulcrum, causing the upper portion of the outer wall to bulge or curve outwardly, as clearly shown in Figs. 2 and 5. This curving of the outer wall causes the sealing shoulder to move upward slightly in the sealing material, and crowds the sealing material upwardly, thus filling the part of the U-shaped channel directly above the sealing shoulder. This embedding of the sealing shoulder in the sealing material and the upward crowding of the same will cause the crizzles, edge-blisters, press-overs and other imperfections in the glass or porcelain to be filled and thus effectively seal the receptacle.

The outward bending of the outer wall of

the channel as the sealing shoulder is pressed inwardly toward the wall of the receptacle positions the metal so as to more effectively retain the sealing shoulder embedded in the sealing material and in close contact with the vertical wall of the receptacle. This holding of the sealing shoulder in close gripping contact with the side wall of the glass or porcelain receptacle is very efficient in holding the cover on the receptacle, regardless of whether there is any sealing material used in connection with the cover. It will be understood, therefore, that this stiffened annular shoulder may be used in connection with the closing of a metal cover on a glass or porcelain receptacle without the use of a sealing material.

My improved cover is especially adapted for the closing of a receptacle which is to be put under a vacuum. While the cover is resting loosely on the receptacle, as in Fig. 1 of the drawing, and perhaps before the chuck has engaged the cover to crowd the same onto the receptacle, said receptacle is placed under a vacuum and while in the vacuumizing chamber the cover is preferably bent into closing position, as indicated in Figs. 2 and 5.

At the center of the circular portion 2, I have provided a restricted dished section 12, which normally projects outwardly from the plane of the cover. When, however, the cover is placed under vacuum, said dished section is so shaped that it will be flexed inwardly to the position shown in Fig. 2, and said dished section will remain in this position as long as the receptacle is under proper vacuum. This dished section, therefore, provides an efficient and readily accessible means for determining whether the receptacle is under proper vacuum.

In Fig. 5 of the drawing I have shown my improved cover as applied to a receptacle 13, wherein the upper edge 14 is thickened so as to form a ledge 15 in the outer wall of the receptacle. This ledge is preferably so disposed relative to the sealing shoulder 7 of the cover that when the lower edge of the outer wall of the U-shaped channel is bent inwardly said sealing shoulder will lock underneath the projecting shoulder 15 on the receptacle.

It is obvious that minor changes in the details of construction and the arrangement of parts may be made without departing from the spirit of the invention, as set forth in the appended claims.

Having thus described my invention, what I claim is:

1. A receptacle having a vertical wall at its outer upper edge and a sheet metal cover therefor comprising a circular portion having the periphery thereof bent to form a downwardly projecting wall, the lower portion of said wall of the cover being normally

bent outwardly relative to the upper portion of said wall and forming with said upper portion an inwardly projecting shoulder when said cover is secured to the receptacle, 5 which shoulder is adapted to grip said vertical wall of the receptacle and hold said cover thereon, the vertical wall above said gripping shoulder being bulged outwardly when said cover is closed on the receptacle 10 whereby said gripping shoulder is held in contact with the receptacle.

2. A receptacle having a vertical wall at its outer upper edge and a sheet metal cover therefor comprising a circular portion having 15 its periphery bent to form a downwardly projecting wall, the inner surface of said wall of the cover having a lining of plastic sealing material thereon, the lower portion of said wall of the cover being normally bent outwardly relative to the upper 20 portion thereof and forming with said upper portion an inwardly projecting shoulder when said cover is secured to the receptacle, which shoulder is adapted to be embedded 25 in the sealing material thus forming a con-

tinuous sealing line therein, said shoulder also being adapted to grip said vertical wall of the receptacle and hold the cover thereon.

3. A receptacle having a vertical wall at its upper edge and a sheet metal cover therefor, comprising a circular portion having 30 its periphery bent to form a U-shaped channel engaging said vertical wall of the receptacle, said channel having a lining of sealing material on the inner surface thereof, 35 the lower portion of the outer wall of said channel being bent outwardly relative to the upper portion of said outer wall and forming with said upper portion an inwardly projecting shoulder which is embedded 40 in the sealing material and forms a continuous sealing line therein, and which grips said vertical wall of the receptacle and holds the cover thereon.

In testimony whereof, I affix my signature, 45 in the presence of two witnesses.

THOMAS LUCIEN TALIAFERRO.

Witnesses:

E. G. MASON,

A. L. METZNER.