No. 781,534. PATENTED JAN. 31, 1905.

J. A. LANDSBERGER.

COVER FOR RECEPTACLES.

APPLICATION FILED JULY 1, 1904.

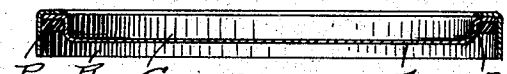


Fig. 1.

Fig. 2.

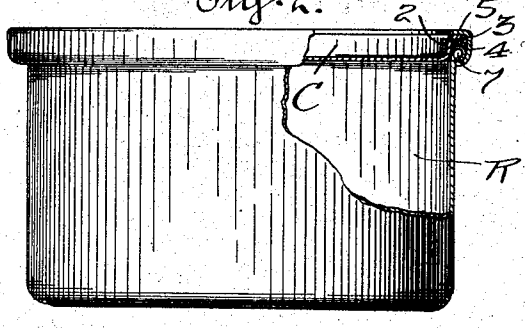


Fig. 3.

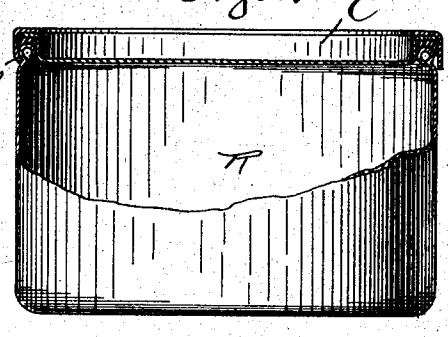


Fig. 4.

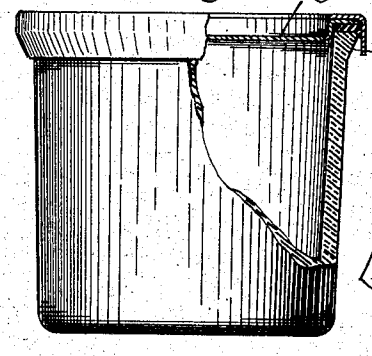


Fig. 7.

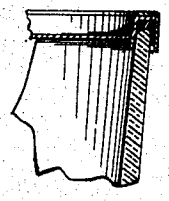


Fig. 5.

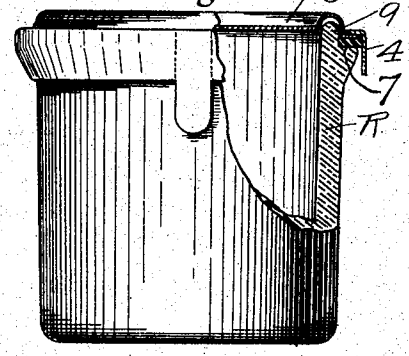


Fig. 6.

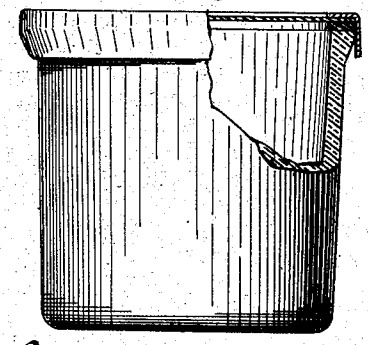


Fig. 12.



Fig. 13.



Fig. 10.



Fig. 8.

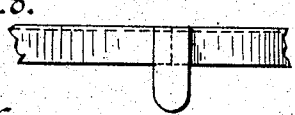
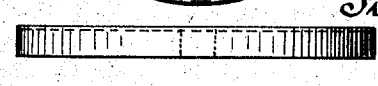


Fig. 9.



Fig. 11.



Witnesses.

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Fig. 14.

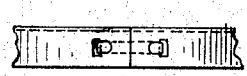


Fig. 15.



By Spear & Seely

Attorneys

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No. 781,534. Patented January 31, 1905.

UNITED STATES PATENT OFFICE.

JULIUS A. LANDSBERGER, OF ALAMEDA, CALIFORNIA.

COVER FOR RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 781,534, dated January 31, 1905.

Application filed July 1, 1904. Serial No. 215,024.

To all whom it may concern:

Be it known that I, JULIUS A. LANDSBERGER, a citizen of the United States, residing at Alameda, in the county of Alameda and State of California, have invented certain new and useful Improvements in Covers for Receptacles, of which the following is a specification.

My invention relates to improvements in closures for receptacles, and more particularly to those closures in which a retaining-band is employed for securing the cap or cover to the receptacle; and the objects of my improvements are, first, to produce a cover for receptacles which without departing from any of the advantages of the arrangement referred to shall be capable of being handled and used with the same security and convenience as if made of a single piece; second, to utilize a minimum-sized packing-gasket with the greatest degree of efficiency; third, to prevent the contents of the receptacle from coming freely in contact with the packing; fourth, to form the closing cap or disk in such a way that it may still be used as a cover after the retaining-band has been removed. I attain these objects by the formation and arrangement of the parts and the novel manner in which they are assembled.

Broadly speaking, my invention consists of a cover for receptacles comprising three elements—namely, a cap or closing disk, a retaining-band for securing the cap to the receptacle, and a packing or gasket associated with and in adhesion to both cap and band, so that when properly assembled the cover may as a new, separate, and distinct article of manufacture be shipped, stored, handled, and used without danger of separation and with the same convenience and security as if composed of a single piece.

For convenience I will refer to the cap or closing disk as the "cap," the retaining-band as the "band," and the packing or gasket as the "packing." The band may be any of the known forms having a bearing edge for engaging the cap, a depending flange capable of being turned or seamed beneath a shoulder on the receptacle, and some simple means for being opened or separated at some point on its circumference for releasing and thus removing it. The packing may be any suitable composition or material for making an air-tight joint that may be caused to adhere strongly to the other two elements composing the cover.

My invention comprises also several special features of construction in harmony with its general principle, which are embodied in the accompanying drawings, in which—

Figure 1 is a sectional view of a cover properly assembled in one of the preferred forms. Fig. 2 is a view of a tin can, partly in section, showing the cover applied. Fig. 3 is a similar view of a tin can of modified form, showing the band crimped beneath the shoulder on one side and not on the other. Fig. 4 shows the cover applied to a glass jar, which is substantially a tumbler, except that the rim is flared out sufficiently to engage the band of the cover. Fig. 5 shows a modified cover applied to a suitable glass jar. Fig. 6 shows a jar similar to Fig. 4, but with a modified cover, in which the cap instead of having a depressed inner panel is a perfectly plain disk. Fig. 7 shows the cover of Fig. 1 applied to a perfectly plain drinking-tumbler without any shoulder for engaging the flange of the band. Fig. 8 shows a form of connecting-band in which the ends are abutted together and joined by a separate strip soldered thereon. Fig. 9 is a cross-section through the tongue and band of Fig. 8. Fig. 10 shows a connecting-band having an internal tongue and with weakened lines for tearing or rupturing the band. Fig. 11 is a side elevation of Fig. 10. Fig. 12 shows a connecting-band having its ends connected by a tongue and slot. Fig. 13 is a top view, partly in section, of a portion of Fig. 12. Fig. 14 is a modified form of connecting-band in which a separate link is employed for connecting the ends. Fig. 15 is a top view, partly in section, of Fig. 14.

Similar letters and figures refer to similar parts throughout the several views.

The cap C, the band B, and the packing P properly assembled constitute the cover.

R represents the receptacle.

For purposes of economy and efficiency both it is desirable to stamp or form the cap C in such a way that when combined with the

retaining-band B and applied to the receptacle the packing P will be closely confined. In Figs. 1, 2, 3, 4, and 7 this is accomplished by forming the cap in the manner shown and in which the upper and outer circumferential flange 3 is connected with the depressed or sunken inner panel 1 by the depending flange 2. When the parts are assembled, the depending flange or wall 2 of the cap, the flange 4 of the band, and the overlapping rims 3 and 5 of the cap and band, respectively, form an annular groove into which the packing is placed. When the cover is placed on the receptacle R and the depending flange 4 of the band turned or seamed under the shoulder thereon, the packing P is closely confined vertically between the overlapping rims 3 and 5 of the cap and band, respectively, from above and the rim or sealing-seat 7 of the receptacle from below and horizontally between the wall 2 of the cap and the flange 4 of the band.

In Fig. 5 the receptacle R is formed with an upwardly-projecting wall or rim 9 adjacent to and at right angles with the sealing-seat 7. The cap in this instance instead of being formed with a depressed inner panel has a raised body part for surrounding and inclosing the rim 9 of the jar, so that when the cover is applied and the flange 4 of the band seamed beneath the shoulder of the receptacle the packing is closely confined vertically in the same manner as stated for Figs. 1, 2, 3, 4, and 7 horizontally between the upper rim 9 of the receptacle and the flange 4 of the band. As stated above, the retaining-band may be any of the known forms, several of which are illustrated by Figs. 8, 9, 10, 11, 12, 13, 14, and 15.

Preferably the cap C should be formed as shown in the several figures of the drawings, in which the rim 3 has no flange depending from its outer edge, but meets the flange 4 of the band at right angles, permitting the packing-gasket to come freely in contact with both members, so as to connect them together in consequence of its adhesion to both. If the rim 3 of the cap had a depending flange from its outer edge, the packing would become wedged between such flange and the rim of the receptacle, making it difficult to remove the cap after releasing the band; nor could a knife be slipped easily under the rim 3 for breaking the vacuum and prying off the cap.

To assemble the parts composing the cover, the cap C is placed within the band B (the detachable ends of the band being connected together) and the packing P then inserted and caused to adhere strongly to both, thus securing the cap and band together.

The packing-gasket might be made to adhere to the rim 3 of the cap and the flange 4 of the band by means of glue or cement; but preferably the packing is composed of a substantially solid composition or material that will soften with heating and which when soft becomes adhesive to metal, of which the cap and band are generally composed. By slightly heating the cover packing rings or gaskets made of such a material can be made to adhere with sufficient strength to securely hold the cap and band together.

The cap is preferably formed so that after the retaining-band has been removed it may still be used conveniently as a cover. This is possible with all of the forms shown except that in Fig. 6, in which the cap is a perfectly flat disk. Fig. 6 is also undesirable for the reason that the packing is not closely confined on all sides and because the packing is exposed to the action of the contents of the jar.

For certain purposes it is neither necessary nor desirable to turn or seam the depending flange 4 of the band under a shoulder of the receptacle. In such instances the cover may be applied to an ordinary drinking-tumbler and the seal made by forcibly pressing the cover into place, so that the packing is forced downwardly between the flanges of the cover and the sides of the tumbler, with the result that the cover is practically wedged onto the receptacle. If the seal is to be made in this way, it is best that the flanges 2 and 4 of the cap and band, respectively, should fit the sides of the receptacle closely. In all of the figures it is desirable to have these flanges close-fitting; but in Fig. 7 it is especially desirable.

In practice the receptacles to which my covers are applied may be sealed in any of the usual ways. They may also be closed conveniently by the so-called "vacuum" process, in which the air is exhausted from the interior of the receptacle and the cap held in place by the atmospheric pressure. After the cap has been vacuum-sealed in this manner the crimping-flange 4 of the retaining-band may be turned or seamed under the shoulder 8 of the receptacle as an additional safeguard. To remove the cover, it is only necessary to separate and remove the retaining-band, thus releasing the cap. If the air has been exhausted from the receptacle, a knife or other instrument may be slipped under the rim 3 of the cap, so as to break the vacuum and pry off the cap.

The band B being securely attached to the cap C by the adhesion to both of the intermediate packing P, the combined cover may be used and subjected to ordinary handling with the same security and convenience as if formed of a single piece.

The packing being attached to the cover directly over the sealing-seat of the receptacle and by the novel arrangement of the parts being closely confined on all sides when the cover is applied, a mimimum-sized gasket may be employed with the greatest degree of efficiency.

The wall or flange 2 of the cap C fitting closely to the adjacent rim of the receptacle, the contents cannot come freely in contact

with the packing-gasket, and in all of the principal figures, except Fig. 6, the cap C is so formed that it may still be used as a cover after the retaining-band has been removed.

I am aware that retaining-bands such as I employ have been used heretofore in combination with a disk-holder and a packing-disk. I therefore do not claim such a combination broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. A cover comprising a closing portion, a holding or retaining portion, and a sealing medium connecting said portions, substantially as described.

2. A cover comprising a closing portion, a holding or retaining portion adapted to be opened at a point on its circumference, and a sealing medium connecting both portions, substantially as described.

3. A cover comprising a closing portion or cap, a holding-ring overlapping the edge of said cap and having a downwardly-turned flange for encircling a jar, and an adhesive sealing material serving to connect said closing portion and ring, substantially as described.

4. A cover comprising a closing portion having a circumferential outer flange, a depending flange, and a sunken center, a ring having an inwardly-extending flange overlapping the circumferential flange and having a depending flange, and a sealing medium interposed between and connecting the said depending flanges, substantially as described.

5. A cover for receptacles, comprising a closing portion having an outer circumferential flange and an inner depending flange forming a sunken panel, a holding-ring overlapping said closing portion and having a flange for encircling the periphery of the receptacle, whereby a groove or channel is formed; and a packing in said groove or channel, in adhesion to both said closing portion and said holding-ring.

6. In combination with a jar, a cover comprising a closing portion adapted to overlap the upper edge of the jar, a holding ring or portion overlapping the closing portion and having a depending flange encircling the outer periphery of the jar, and a sealing medium interposed between said cover and jar, and contacting with both the closing portion and ring and holding them together, substantially as described.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 8th day of June, 1904.

JULIUS A. LANDSBERGER.

Witnesses:
M. R. SEELY,
M. B. CHURCHILL.