

L. O. BROWN & L. BAUROTH.
CLOSURE FOR METALLIC PACKAGES.
APPLICATION FILED JUNE 26, 1909.

1,005,934.

Patented Oct. 17, 1911.

Fig. 1.

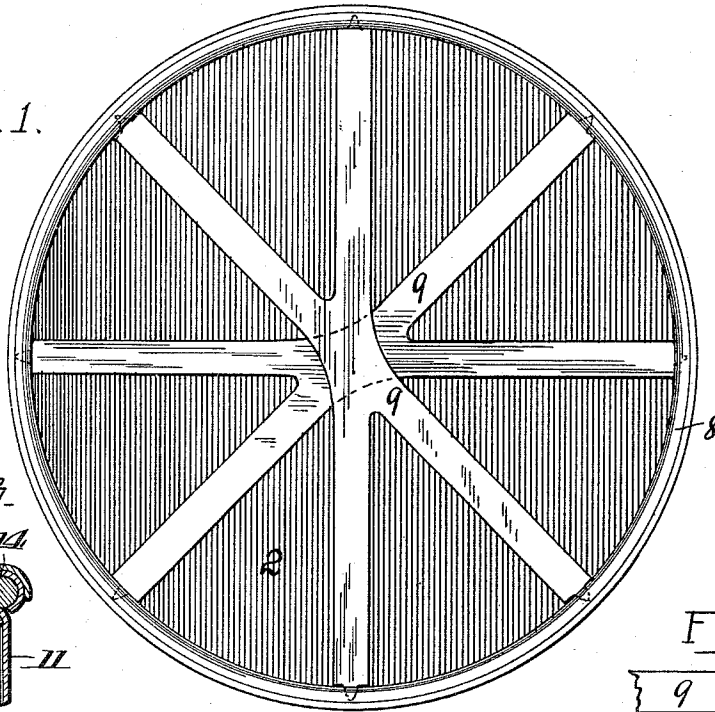


Fig. 6.

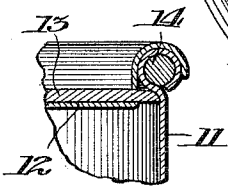


Fig. 4.

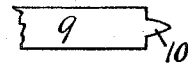


Fig. 2.

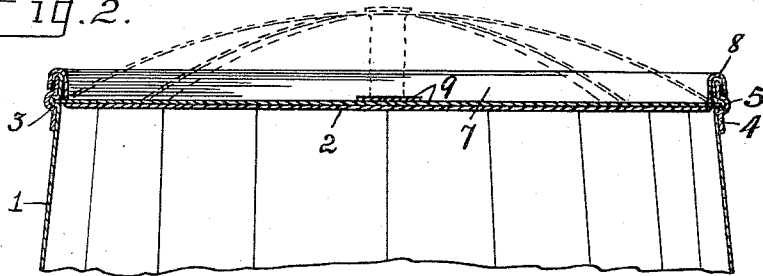


Fig. 3.

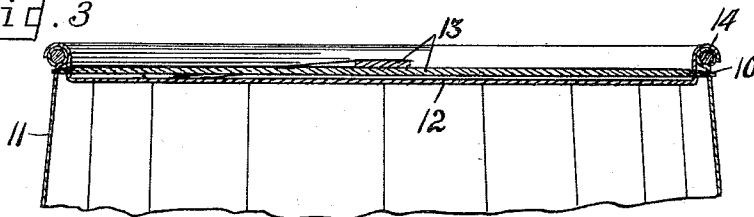
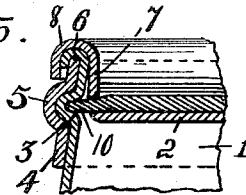


Fig. 5.



WITNESSES:

S. C. Walter
Chas. Wheeler

INVENTORS

Louis O. Brown and
Leonard Bauroth,
By Owen & Owen,
His attys.

UNITED STATES PATENT OFFICE.

LOUIS O. BROWN AND LEONHARD BAUROTH, OF TOLEDO, OHIO, ASSIGNORS TO THE METALLIC BARREL COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF MAINE.

CLOSURE FOR METALLIC PACKAGES.

1,005,934.

Specification of Letters Patent.

Patented Oct. 17, 1911.

Application filed June 26, 1909. Serial No. 504,454.

To all whom it may concern:

Be it known that we, LOUIS O. BROWN and LEONHARD BAUROTH, citizens of the United States, and residents of Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Closure for Metallic Packages; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to closure means of the class particularly adapted for use in connection with metallic packages, such, for instance, as nail-kegs or the like, but may be used in any other connection for which it may be appropriate.

In the manufacture of metallic packages of this type considerable effort has been expended in an endeavor to provide a closure for the end openings thereof which is not only strong, durable and cheap in its construction, and when applied to the package is capable of withstanding very great internal and external stresses, such, for instance, that a keg filled with nails would be subjected to if dropped during handling, but which is also capable of easy and quick application to and removal from the opening of a package.

The object of our invention is the provision of a simple and highly efficient closure of the class described and the securing means therefor, which will meet the requirements above set forth, and which is also capable of being repeatedly used on the same or different packages, thus enhancing its utility and commercial value.

The operation, construction and arrangement of the parts of the invention are fully described in the following specification, and two forms thereof illustrated in the accompanying drawings, in which,—

Figure 1 is a top plan view of a closure secured within the head of a keg or other package. Fig. 2 is a partial central longitudinal section of the same. Fig. 3 is a similar view of a slightly modified form of the invention. Fig. 4 is a view of the outer end portion of one of the locking bars. Fig. 5 is an enlarged section of a portion of

the form shown in Fig. 2, and Fig. 6 is an enlarged section of another form of the invention.

Referring to Figs. 1, 2 and 5, in which the preferred form of the invention is shown, 1 designates the casing or side wall of a sheet metal package, such, for instance, as a keg, which is preferably, but not necessarily, round in cross-section and has an end opening which is closed by a cover or closure-member 2 of sheet metal. The casing 1 is annularly rolled or otherwise suitably acted on near its open end to form the internal groove 3, which groove is externally reinforced, as is also the end of the casing, by a band or hoop 4 having an annularly bulged portion 5, which forms a groove complementary to the rib formed externally of the casing by the groove 3. The outer edge of the casing is preferably rolled over the outer edge of the band 4, as indicated at 6, to give the end of the package a finished appearance. The cover or closure member 2 is drawn in pan-form to adapt it to fit into the open end of the package with its side wall or flange 7 in close frictional contact with the casing edge, as shown. The side wall or flange 6 is also preferably rolled outwardly and downwardly, as shown at 8, to adapt it to hook over the rolled edge 6 of the casing to limit the insertion of the cover within the package opening. The means employed for retaining the cover or closure 2 securely within the package opening consists in the provision of one or more cross-bars 9, which are of slightly greater length than the diameter of the cover bottom and have their ends terminating in points or spurs 10, which are intended to pierce the wall or flange 7 of the cover and to project into the groove 3 of the casing whereby to cooperate therewith to prevent a displacement of the cover. The bars 9, which, in the present instance, are shown as two in number with their ends forked to each provide four arms having the points or spurs 10 at their ends, are formed of a suitable pliable material which is adapted to have a permanent set in whatever position it may be bent, or substantially so. It is to be understood, however, that the particular construction of the bars 9 is not important as they may be forked or not as desired.

In securing the cover within the package opening, the bars 9 are bowed as indicated

by dotted lines in Fig. 2, with their points 10 in contact with the base of the side wall or flange 7 of the cover. Any suitable compressing force is then applied to the centers or raised portions of the bars to effect a straightening thereof, which is permitted due to the points 10 piercing the wall or flange 7 of the cover, and entering the groove 3 in the casing. The compressing force being withdrawn the bars 9 remain in their straightened positions due to their tendency to set in whatever position they may be bent. It is apparent that if desired the flange 7 of the cover may be perforated in advance to receive the prongs or points 10.

In the modified forms shown in Figs. 3 and 6, 11 designates the casing or side wall of the package, 12 the cover or closure member, and 13 the cross-bars for securing the cover in the package opening. These forms are the same as that above described except that in lieu of the groove 3 in the casing, such casing has its end edge beaded or rolled around a reinforcing wire, as at 14, to provide a shoulder for the ends of the crossbars to engage under, as in Fig. 6, or the pointed ends of such bars may pierce the casing beneath such bead, as indicated in Fig. 3.

It is apparent that our invention provides a simple, strong and durable means for securing a closure within a receiving opening, and one which is inexpensive and capable of easy and quick manipulation to close or open the package.

We wish it understood that our invention is not limited to any specific construction or arrangement of the parts except in so far as such limitations are specified in the claims.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is,—

1. A metallic package having an opening in an end thereof, a pan-like closure fitted into such opening, and a pliant bar disposed across the closure with its ends piercing the side wall of the closure and cooperating with the wall of the opening to retain the closure therein, said bar being adapted to remain in whatever position it is bent.

2. A metallic package having an opening in an end thereof, a closure fitted into such opening and having an integral marginal flange projecting outwardly through such opening, and an initially-bowed pliant bar disposed across the closure within its flange and having its ends sharpened whereby on a straightening of the bar the ends thereof pierce the closure flange and cooperate with the wall of the opening to prevent a removal of the closure.

3. A metallic package having an opening

in an end thereof, a closure fitted into such opening and having an integral marginal flange projecting outwardly through such opening, and a plurality of bars disposed over the closure within its flange and crossing each other, said bars being initially bowed and when straightened adapted to expand their ends to cause them to penetrate the closure flange and to cooperate with the opening wall to retain the closure therein.

4. A metallic package having an opening in an end thereof, a closure fitted into such opening and having an integral marginal flange projecting outwardly through the opening, and a pliant bar disposed across the closure within the flange and having its ends forked from adjacent its center to provide radially-disposed arms, said bar being initially bowed and adapted when straightened to have the ends of its furcations radially thrust through said closure flange and to cooperate with the opening wall to retain the closure therein.

5. A metallic barrel or package, having an opening in an end thereof, a pan-like closure fitted into such opening, and a nonresilient pliant bar disposed across the closure with its ends forked and penetrating the side wall of the closure and cooperating with the wall of the opening to retain the closure therein.

6. A metallic package having an end opening the side wall of which is provided with an annular internal groove, a reinforcing member embracing the grooved portion of the package, a closure fitted into said opening and having an outwardly projecting marginal flange, and a nonresilient pliant bar disposed across the closure and having its ends passing through the flange thereof and seating in said groove to retain the closure within the opening.

7. A metallic package of the class described having an opening therein, a closure fitted into such opening, and a plurality of pliant bars disposed transversely of the closure and crossing each other, said bars being adapted to set in substantially whatever shape they may be bent and having their ends provided with spurs which, when the bars are straightened within the closure, are adapted to pierce the side wall of the closure and cooperate with the opening wall to retain the closure therein.

In testimony whereof, we have hereunto signed our names to this specification in the presence of two subscribing witnesses.

LOUIS O. BROWN.
LEONHARD BAUROTH.

Witnesses:

C. W. OWEN,
CORNELL SCHREIBER.