E. H. LUCKETT.

CONTAINER COVER RETAINING MEANS.

APPLICATION FILED AUG. 11, 1917.

1,331,470.

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Fig. 1,

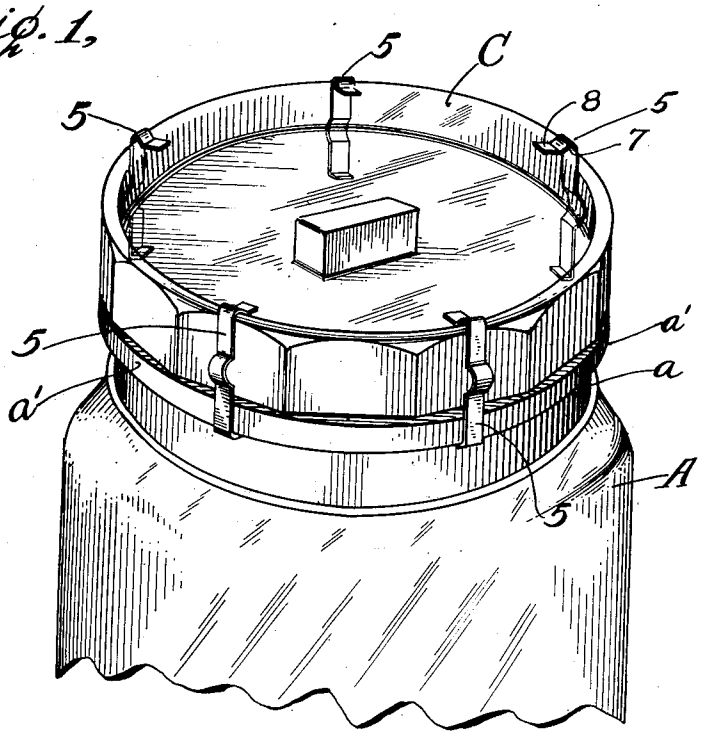


Fig. 3,

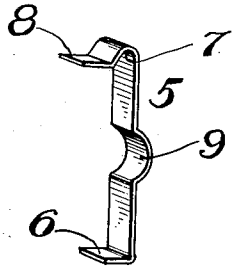
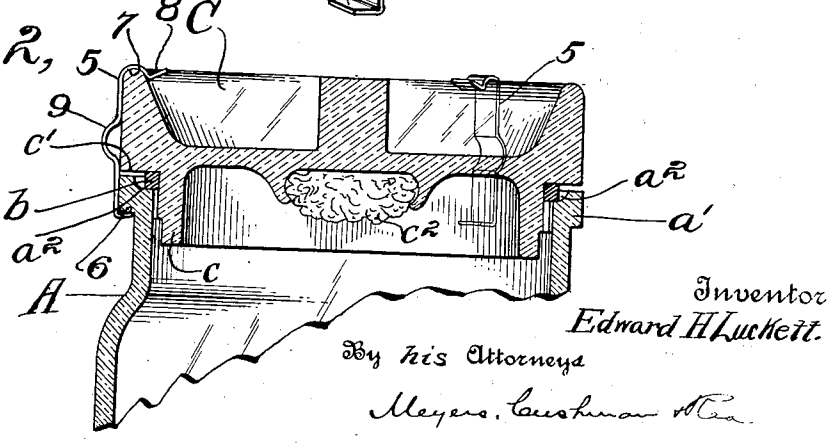


Fig. 2,



Inventor

Edward H Luckett.

By his Attorneys

Meyers, Lustman & Lee

UNITED STATES PATENT OFFICE.

EDWARD H. LUCKETT, OF CHICAGO, ILLINOIS, ASSIGNOR TO LIGGETT & MYERS TOBACCO CO., OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

CONTAINER-COVER-RETAINING MEANS.

1,331,470. Specification of Letters Patent. Patented Feb. 17, 1920.

Application filed August 11, 1917. Serial No. 185,743.

To all whom it may concern:

Be it known that I, EDWARD H. LUCKETT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Container-Cover-Retaining Means, of which the following is a specification.

My invention relates to improvements in container cover retaining means, pertaining more particularly to devices for temporarily retaining the container top or cover in closed position

Containers, formed of glass or of ceramic ware, are now generally employed in the packaging of various products in bulk, these containers being more or less fanciful in appearance and having a cover which, under ordinary conditions, rests more or less loosely on its seat, generally having sufficient weight to retain the seated position. Such containers are generally designed to provide a pleasing external appearance, and hence are formed on more or less symmetrical and uniform lines to produce ornamental effects. Since such loose seating is, however, insufficient to insure a closed, air and moisture-proof condition when the container is in transit from the manufacturer of the contents to the dealer or the customer, temporary retaining means are employed for positively holding the cover to its seat, these means being of different forms, a common type being by the use of a plurality of clips.

Owing to the fact that the retaining means is temporary only, the clips being generally discarded and thrown away after serving the purpose of delivering the container to the dealer or customer in practically a sealed condition, the cost of the clips should obviously be as low as possible in order that the cost of the package may not be materially increased by the presence of the temporary clips. At the same time, the clips must be of a type to positively hold the cover seated without liability of causing breakage of the container or cover.

In providing these results, certain difficulties are presented through the fact that the containers and covers necessarily vary to some extent in manufacture, due to a great extent to the material of which they are formed, so that these variations may affect, to some degree, the character of the clip which can be employed, since variations may result in preventing proper engagement of the clip or clips with the container and cover, in which case the desired sealed condition is practically lost, or excess pressure is applied with liability to damage the parts. While these difficulties may possibly be overcome to some extent by special forms of covers or containers or both, in which, for instance, the clips are adapted to extend in and engage the walls of special forms of recesses provided in the cover or container or both, such arrangement is more or less undesirable, due to the fact that the symmetrical and ornamental appearance of the container is practically lost by the presence of these special recesses or depressions which remain exposed in the parts after the clips have been removed.

The present invention is designed more particularly to meet these conditions by the use of a clip structure which can be efficiently employed with container and cover structures bearing no special clip-engaging configurations which would affect the ornamental appearance, and at the same time take care of the variations in container or cover formation which result from the character of the material employed. In addition, the clip structure is simple and efficient in operation, durable in construction, and capable of manufacture at an exceedingly low cost.

To these and other ends, the nature of which will be readily understood as the invention is hereinafter disclosed, said invention consists in the improved construction and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the accompanying drawings, in which similar reference characters indicate similar parts in each of the views:

Figure 1 is a perspective view of one form of container and cover with which the clip may be employed, several clips being shown in position.

Fig. 2 is a cross-sectional view of parts shown in Fig. 1.

Fig. 3 is a perspective view of one of the clips.

In the drawings A designates a container shown as having a neck *a* and a flange *a'*,

the latter having an internal annular recess a^2 to receive a gasket b carried by cover C, the latter being formed with a depending flange c adapted to be loosely received within the neck of the container. As shown in Fig. 2, gasket b is preferably of a size to retain the shoulder c' of the cover out of contact with the top of the container, thus not only tending to reduce liability of chipping but, in addition, permitting a more or less compressing action on the gasket when the cover is clamped to position.

The cover shown in the drawings is of a more or less special useful and ornamental form which carries a moisture retaining element c^2, thus enabling the container to act as a humidor for tobacco products. At the same time, the cover is of such form that it may be entirely removed from the container and used as an ash receiver and a match box carrier if desired. As will be obvious, the configuration of the parts is more or less ornamental to produce a neat and attractive appearance to the container which is of comparatively large size and is generally exposed. However, the invention is not limited to use in connection with a cover of this particular type, as it may obviously be used with other types, the particular cover shown indicating several of the general difficulties which are presented in attempting to temporarily clamp the cover and container into clamped relation so as to enable transportation without likelihood of breakage of the container or cover formed of glass or ceramic ware, and at the same time tend to maintain the air and moisture-proof conditions. This latter feature is a comparatively important factor, since the length of time which may intervene between the placing of the contents in the container to produce the package and the time when the package is being opened for inspection or purchase by the customer, is more or less indeterminate, and the ability to maintain the air and moisture-proof condition during such period is of importance.

To clamp the cover in position, I employ a suitable number of independent clamping members 5 having substantially the configuration shown in Fig. 3. In Fig. 1 I have shown the use of five of such members, but it is obvious that this number may be varied to any desired extent, the particular number employed being dependent on the size of parts, etc.

The clamping members are formed from strips of resilient sheet metal. Each member has one end bent angularly to form a toe 6 which is to engage beneath the flange a' of the container, the opposite end being formed with a curved portion 7 and a lip 8, curved portion 7 being positionable over an annular bead-like configuration at the top of cover C and extending into a depression on such top, lip 8 projecting inwardly. Where the cover is of the form shown in Fig. 3, lip 8 acts to form a finger by means of which the clamp can be readily shifted out of position. Obviously, lip 8 may be employed in connection with any cover in which the top surface does not place any material pressure on the under surface of the lip when the member is in clamping position. At a point intermediate the length of the member, I preferably provide a curved portion 9 which, as shown in Fig. 2, projects outwardly away from the face of the cover.

The position of the member in use is approximately as shown in Fig. 2, and the member is generally applied in the following manner: Toe 6 is first positioned beneath flange a', after which the member is swung inward to carry lip 8 over the bead of the cover to locate the annular bead structure of the cover to seat within curved portion 7.

The distance between toe 6, which is preferably inturned at an angle slightly less than a right angle to the straight portion of the member, and curved portion 7 is generally less than the average distance between the top of the cover and the bottom of flange a', so that, when the member is in position, there will be a tendency to draw the cover in a direction to compress gasket b, thereby insuring the desired air and moisture-proof closure between the cover and container. Obviously, to produce this result, the clamping member must be able to produce the pressure required in providing this result, and this must be provided without liability of toe 6 being forced out of its position under flange a'. In addition, the curved portion 7 projects below the top plane of the cover, so that during movement of the member to position there must be a yielding sufficient to permit this curved end to pass over the cover into engaging position. While there may be a slight tendency of the ends of the member to yield during the application of the pressure and during the time the member remains in position, a large portion of the spring action is provided by curved portion 9 which may yield sufficiently to relieve the more or less sharp bends at the ends from the strains which the clamping action places on the member, thus reducing liability of the ends being broken or strained in such manner as to tend to decrease the compressing action on the gasket. In addition, curved portion 9 forms an efficient finger piece in moving the member to its seat.

As will be readily understood, the general configuration of the member and its resilient character will practically take care of the conditions which result from the inability to produce an absolutely perfect cover or container, these generally varying from each other even though all are assumed to be

similar, this being a difficulty inherent in the manufacture of containers and covers of the sizes required for the purpose, especially when these parts are formed of glass or ceramic ware.

As will be seen, lip 8 is inclined outwardly. This is of advantage not only because of its formation as a finger piece, but also as a means tending to prevent accidental removal of the member in cases where the package is inclosed within a suitable packing case, a method of shipping packages of this type now generally employed. Where such packing is provided, the end of lip 8 will contact with a wall of the case before the lip end of the member can be moved a distance sufficient to disengage curved portion 7 from the bead of the cover so that in this form of package not only is the desired pressure being applied while the clamping members are in position, but, in addition, the arrangement is such as to tend to maintain this condition against accidental removal.

As will be readily understood, the members can be placed in position rapidly and with assurance that they will remain in position, the toe 6 engaging under flange a' and forming a fulcrum by means of which the lip end can be quickly sprung to position by pressure applied on curved portion 9, the under face of lip 8 having a cam-like action to spring the parts during this movement. When in position, curved portion 9 projects outwardly from the cover and may therefore serve to more or less protect the cover.

Obviously, the clamping member is of a form which can be manufactured at a relatively low cost, so that the required number can be applied to a package of this type without materially increasing the cost of the package.

Having thus described my invention, what I claim as new, is:

1. As a means for clamping container covers in closed position wherein the container is formed with an annular flange and the cover with an annular marginal bead, a clamping device comprising a stiff resilient member having substantially straight coaxial upper and lower side portions lying in the same plane, a short arcuate bent portion therebetween, a flat inturned toe at the extremity of the lower side portion, a curved bead engaging lip at the extremity of the upper portion terminating in a flat finger piece, said lip and finger piece lying in the same plane as the toe.

2. As a means for clamping container covers in closed position and under clamping pressure, and wherein the container is formed with an annular flange and the cover with an annular bead, a clamping device comprising a metallic strip-like member having one end bent to provide a toe adapted to engage the container flange the toe bend producing an angle less than a right angle, said member having its opposite end formed with a curved portion adapted to coöperate with the cover bead, said curved portion terminating in a lip, the intermediate portion of the member being bent to form a curved bulge extending outwardly, said toe and curved portions being positioned to locate the portions of the member intermediate said bulge and the toe and curved portions in approximate contact with the container and cover.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDWARD H. LUCKETT.

Witnessed by—
D. F. FORLINE,
W. SCOTT.