

No. 779,678.

PATENTED JAN. 10, 1905.

J. C. WANDELL.

JAR CLOSURE.

APPLICATION FILED FEB. 5, 1904.

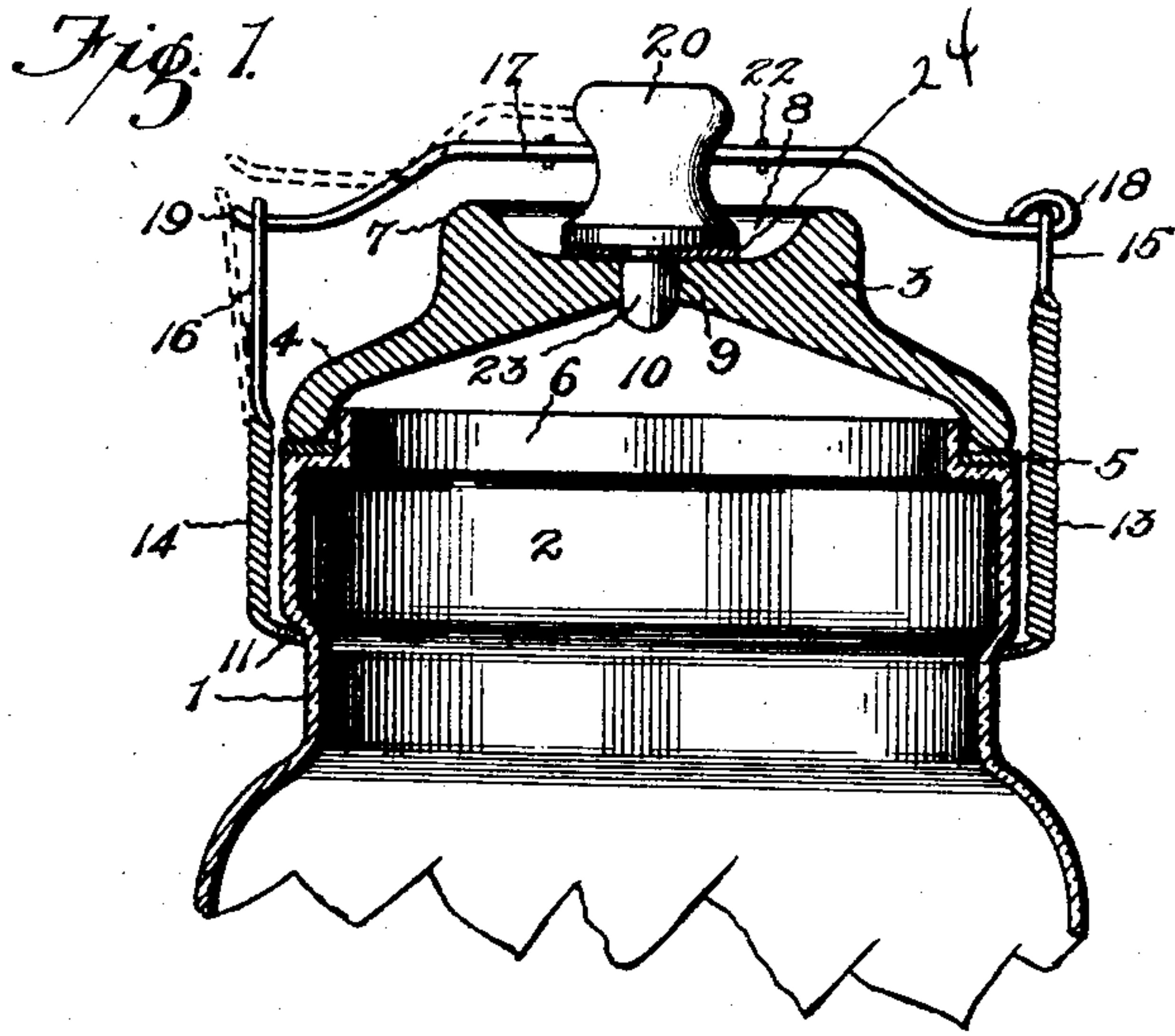


Fig. 2.

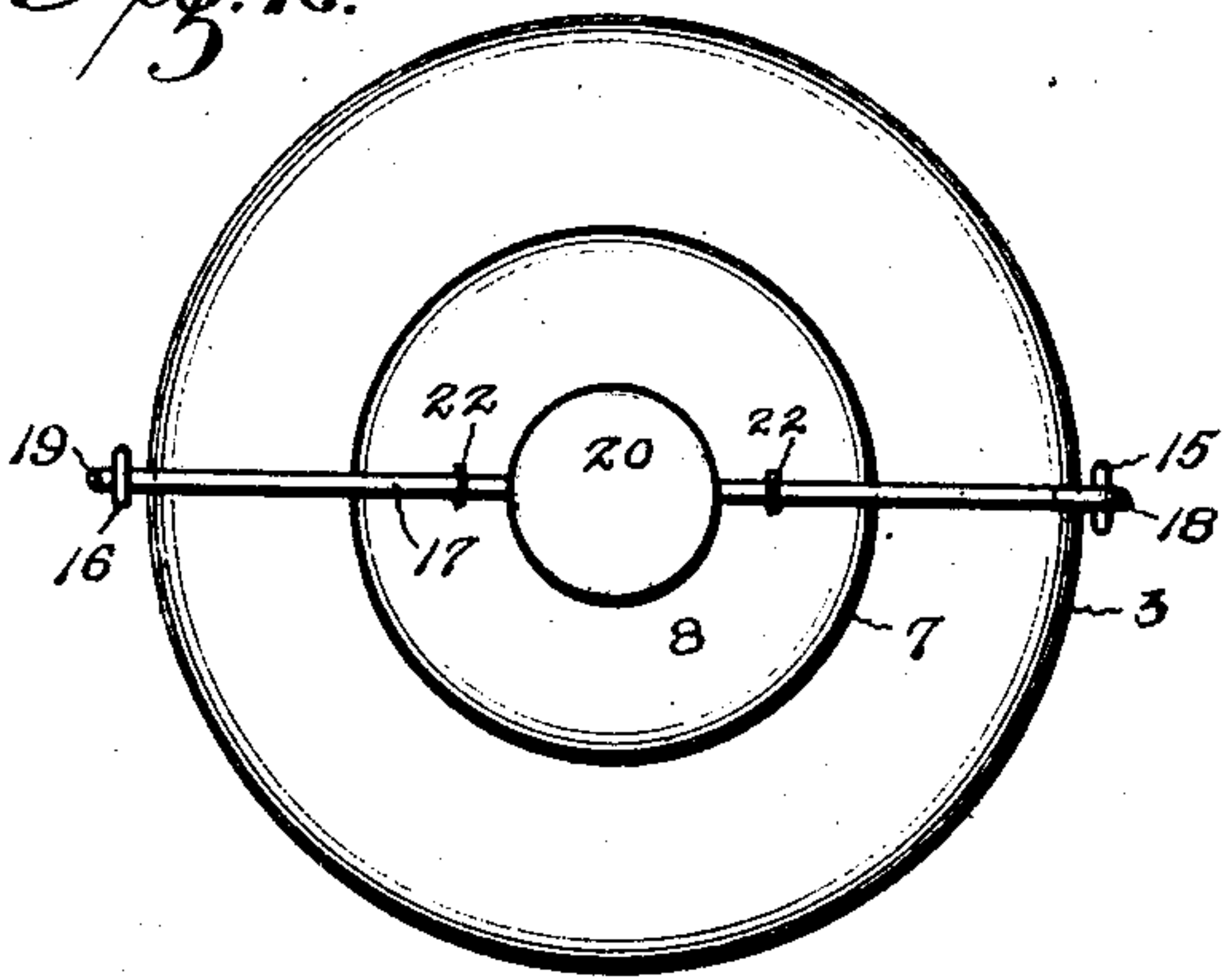


Fig. 4.

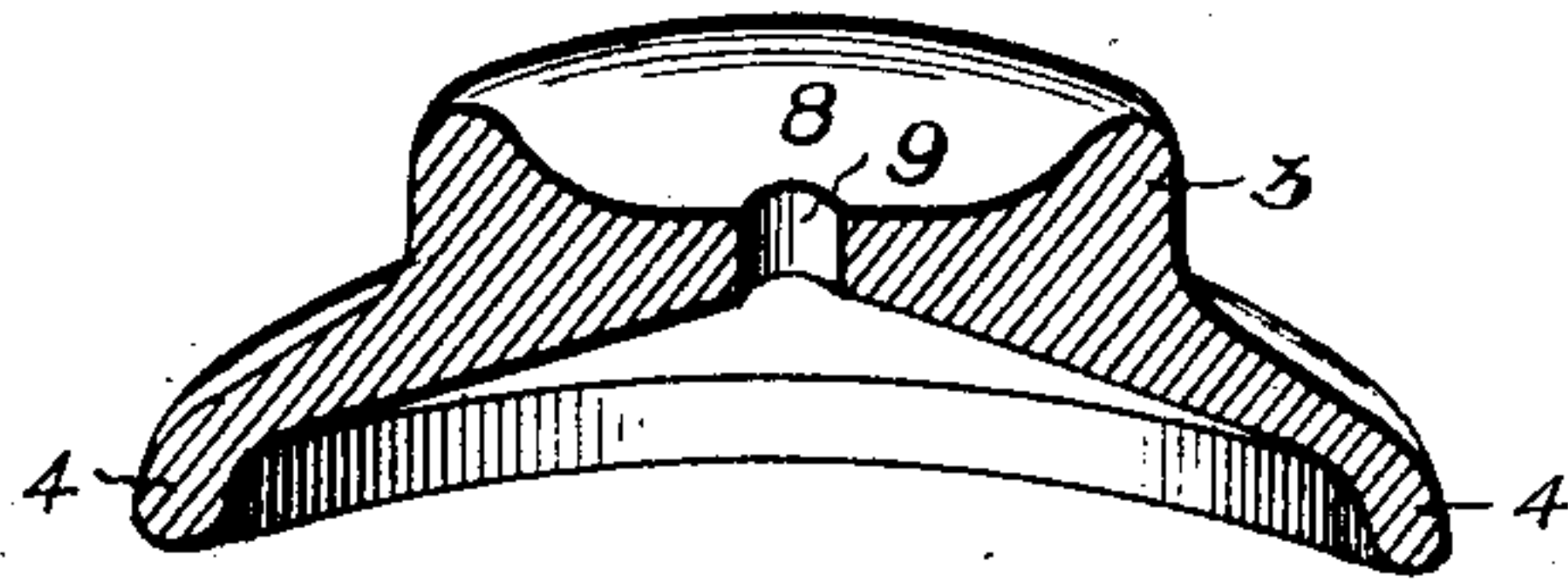


Fig. 3.

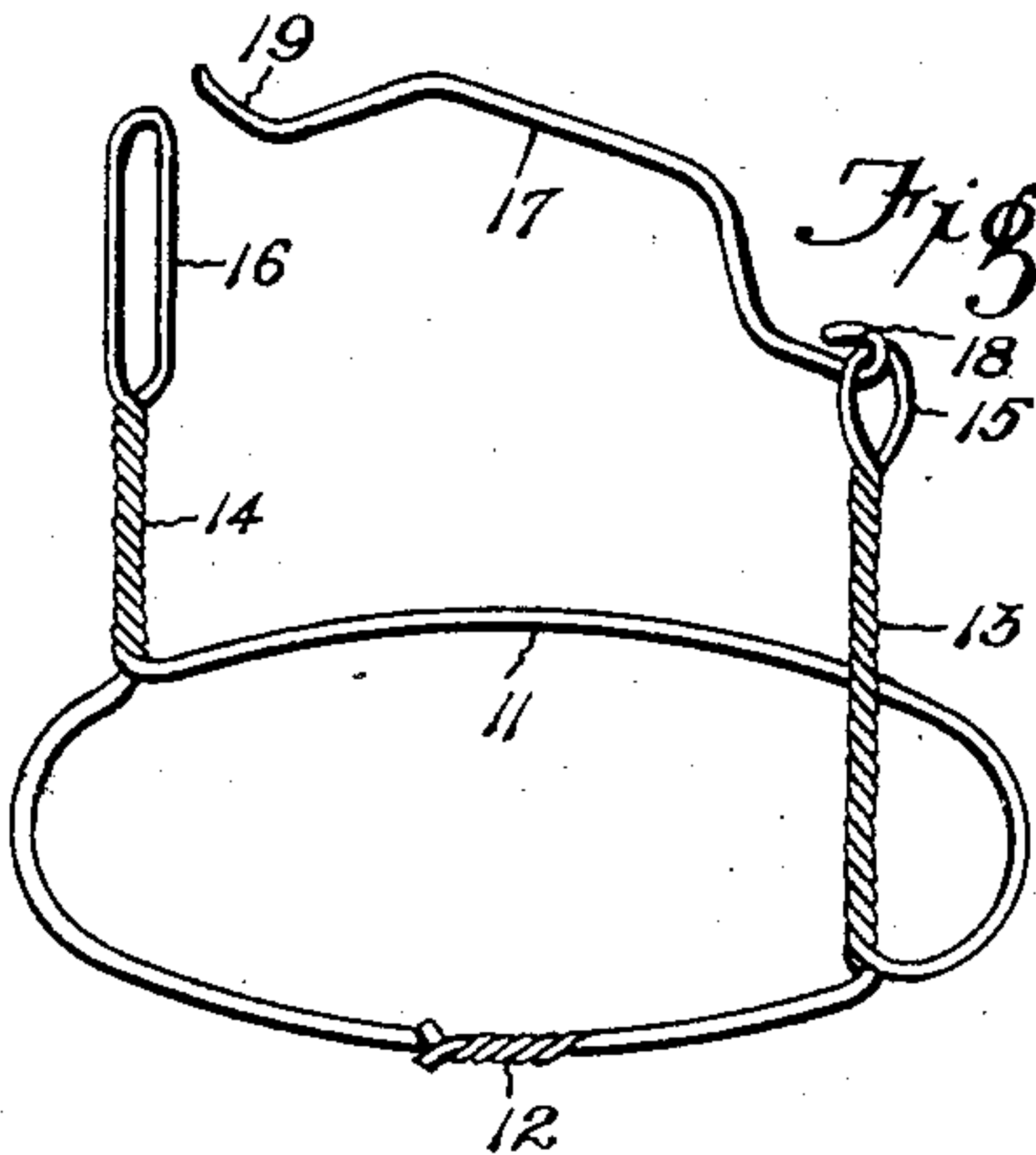
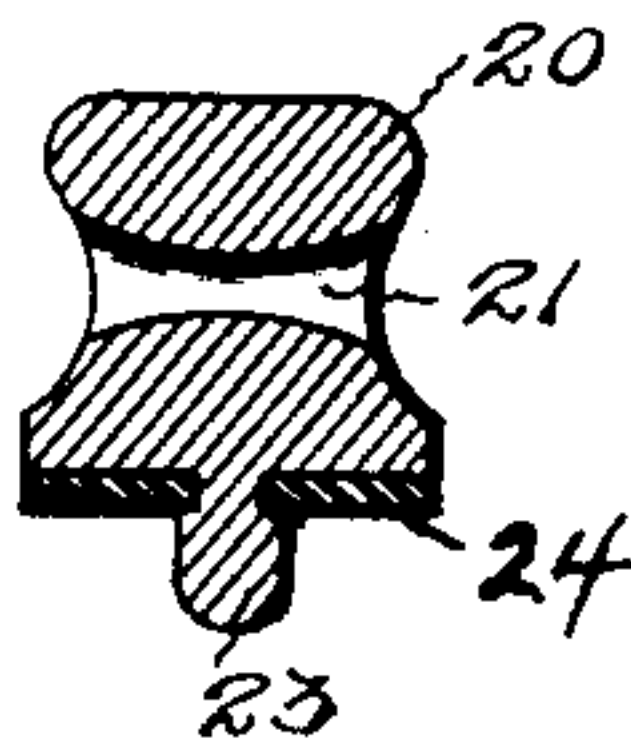


Fig. 5.



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JAR-CLOSURE.

SPECIFICATION forming part of Letters Patent No. 779,678, dated January 10, 1905.

Application filed February 5, 1904. Serial No. 192,164.

To all whom it may concern:

Be it known that I, JOHN C. WANDELL, a citizen of the United States, residing at Norwalk, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Jar-Closures, of which the following is a specification.

This invention relates to jar-closures, and while it has been particularly designed for application to fruit or preserving jars it is of course applicable to bottles, jars, and vessels of any character without requiring any change or alteration therein.

It is an important object of the present invention to provide for the convenient attachment of the clamping member of the closure to the neck portion of the jar, so that it will remain permanently thereon in position for convenient manipulation. It is furthermore designed to provide for the convenient release of the clamping member without prying off the latter, thereby avoiding damage to the clamping member and the jar.

Another object of the invention is to provide an improved form of cover which is arranged to facilitate the filling of the jar and to cooperate with the clamping member in a manner to secure an air-tight closure and to effectually expel such air-bubbles as may have collected at the under surface of the cover after the jar has been filled.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a central longitudinal sectional view of the neck portion of a jar equipped with the present form of closure. Fig. 2 is a top plan view thereof. Fig. 3 is a detail perspective view of the clamp member of the closure. Fig. 4 is a sectional perspective view of the cover or cap.

Fig. 5 is a vertical sectional view of the sealing-plug.

Like characters of reference designate corresponding parts in each and every figure of the drawings.

For an understanding of the application and operation of the present device I have shown in the accompanying drawings a portion 1 of the neck of a fruit or preserving jar of conventional form having the usual external annular enlargement 2 to form a shoulder or ledge. These parts are common and well known, and as they form no part of the present invention it will be understood that the shape and size thereof may be varied at will.

In carrying out my invention in its embodiment as shown in the accompanying drawings I employ a cap or cover 3 of suitable size and shape and preferably formed of glass or porcelain. This cover is provided with an outer pendent peripheral flange 4, which is designed to rest upon the rubber or other packing-ring 5, seated upon the top of the jar and embracing the usual inner upstanding peripheral rim 6. The upper central portion of the cover is provided with an upstanding peripheral rim 7, constituting, in effect, a dished or funnel portion 8, the center of which is pierced by a vent opening or perforation 9, through which air-bubbles are designed to be expelled, as will be hereinafter explained. Particular attention is invited to the fact that the inner or under face 10 of the cap or cover converges in straight lines from its outer periphery to the lower peripheral edge of the vent-opening 9, for the reason that this is a very important feature, as will hereinafter appear.

For retaining the cap or cover upon the jar I employ a clamping device embodying a band or collar 11, preferably of wire, which snugly embraces the neck of the jar close up beneath the ledge or shoulder 2. This band is preferably formed of a single piece, the ends of which are twisted or otherwise connected, as indicated at 12, while diametrically opposite portions of the band are twisted or coiled into upstanding shank portions 13 and 14, rising above the top of the jar. One of

these shanks—as, for instance, the one indicated by the reference character 13—terminates at its upper end in an eye 15, while the other shank terminates in an elongated loop 16. Extending between the eye 15 and the loop is a clamping-lever 17, the intermediate portion of which is substantially straight and horizontal, with its opposite end portions inclined downwardly and outwardly in opposite directions. One end of the lever is bent into a hook or eye 18, which is linked with the eye 15 to form a pivotal or hinged connection therewith, while the opposite end, 19, of the lever constitutes a latch member to be entered through the loop 16, which forms a keeper for holding the lever in its clamped or locked position. Carried intermediately by the lever is a sealing-plug 20, the upper end portion of which has a transverse opening 21 for the loose reception of the lever, and the latter is provided with stops 22 at opposite sides of the plug to limit movement of the latter and prevent displacement thereof from the lever. While these stops may be formed in any manner, it has been found convenient to apply a drop or two of solder to the lever to produce projections or shoulders of a size to limit the play of the plug. The lower end portion of the plug is reduced to form a central pendent pin or stem 23 of a size and shape to substantially fill the vent-opening 9 in the cap or cover and of a length to project below the bottom of the vent-opening. A suitable packing-ring or washer 24 snugly embraces the stem or pin 23, so as to seal the joint between the top of the vent-opening and the under side of the head of the plug, and the lower end of the stem or pin is slightly enlarged to prevent displacement of the washer.

In employing the present closure the jar is first filled with the fruit or other material. The cover is then applied to the jar. Juice or water is poured into the funnel or depression 8, so as to run through the vent-opening and entirely fill the jar and said opening, after which the clamping-lever is swung downwardly so as to enter the stem of the sealing-plug in the vent-opening, and then the free extremity or latch portion of the lever is engaged with the keeper 16, whereby the cover is held snugly upon the jar and the sealing-plug is tightly seated in the vent-opening. It will of course be understood that the sealing-plug, the lever, and the keeper are so proportioned as to require the downward forcing of the free end of the lever to engage the same with the keeper, whereby sufficient tension is placed upon the plug and the cover to obtain an airtight sealing thereof. At this point attention is called to the fact that by reason of the lower face of the cap or cover being sloped or converged upwardly and inwardly in straight lines to the peripheral edge of the bottom of the vent-opening the highest points of the

under face of the cap or cover are at the bottom of the vent-opening, wherefore no air-bubbles can collect within the cover after the sealing-plug has been applied, for the reason that whatever bubbles may have previously collected will be displaced through the vent-opening. This peculiar formation of the under face of the cap or cover in conjunction with the vent-opening and the funnel or depression in the top of the cover constitute an important feature of my invention, for the reason that they jointly provide for the convenient and complete filling of the jar and operate to expel air-bubbles, whereby an airtight closure is secured and maintained and the contents of the jar are effectually preserved in their original condition.

Another important feature of the present device resides in the fact that when the free end of the lever is not engaged with the keeper 16 the latter stands away from the jar in an inclined position, as indicated by dotted lines in Fig. 1 of the drawings, wherefore it is necessary to snap or spring the keeper into engagement with the lever. In other words, the member 16 is a spring-keeper, so that when the free end of the lever is pressed downwardly within the slotted portion of the keeper until the upper end of latter is free from the lever said keeper will automatically spring outwardly and out of engagement with the lever, thereby leaving the latter free to be elevated for the release of the cover. When the lever is swung upwardly upon its hinged support, the sealing-plug 20 is of course carried with it, whereby the vacuum within the jar is relieved and the cover may be conveniently removed by hand from the jar. By this manner of relieving the vacuum it is not necessary to introduce a knife-blade or the like beneath the bottom edge of the cover to pry the latter from the jar, and the damage commonly incident to such an operation is effectually obviated.

From the foregoing description it is apparent that the device of the present invention is exceedingly simple, inexpensive, and effective for the purposes designed and may be readily applied to any common or ordinary form of jar without changing or altering the latter in any manner whatsoever. Therefore it will be understood that the device is complete in itself and may be manufactured and sold independently of the jar.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. A jar-closure comprising a cover having a central vent-opening with the under face of the cover converged upwardly and inwardly in straight lines to the peripheral edge of the vent-opening, a cover-clamping lever fulcrumed at one end, a keeper for the opposite end of the lever, and a vent-closure plug carried by the lever and provided with a portion

of a size and shape to fit within and entirely close the vent-opening.

2. A cover for jars and the like having a vent-opening with the under side of the cover converged in straight lines to the peripheral edge of the bottom of the opening, and a closure-plug having a portion of a size and shape to fit within and entirely occupy the vent-opening.

3. A cover for jars and the like having a socket or depression in its top with a central opening at the bottom of the socket to constitute a funnel, the under face of the cover being converged in straight lines to the periphery of the bottom of said vent-opening, and a closure-plug to rest upon the bottom of the socket or depression and provided with a portion of a size and shape to fit within and occupy the entire vent-opening.

4. As a new article of manufacture, a jar-cover provided in its top with a socket or depression having a central vent-opening in the bottom thereof to constitute a funnel, the cover also being provided at its outer peripheral edge with a pendent annular flange with the under side of the cover converged upwardly from the flange in straight lines to the peripheral edge of the bottom of the vent-opening, a closure-plug to rest upon the bottom of the depression in the top of the cover and having a reduced stem portion of a size and shape to fit within and occupy the entire vent-opening, and a washer carried by the stem portion with the latter projected below the washer.

5. A jar-closure comprising a band to embrace the neck of a jar and provided at diametrically opposite points with upstanding shank portions, one of said shanks terminating in a loop to constitute a keeper, a lever fulcrumed upon the other shank with its free end capable of engagement with the keeper to lock the lever, a cover having a socket or depression in its top with a vent-opening in the bottom of the socket to constitute a funnel, the under side of the cover being converged in straight lines to the peripheral edge of the bottom of the vent-opening, a closure-plug carried by the lever and having a pendent reduced stem portion of a size and shape to fit within and occupy the entire vent-opening, and a washer carried by the stem portion and fitting against the bottom of the plug, the stem being projected below the washer.

6. In a jar-closure, a band to embrace the neck of a jar and provided at diametrically opposite points with upstanding shank members, one of which is provided with an upper terminal eye and the other, a spring member, having an elongated loop and disposed to normally spring outward, a cover provided with a vent-opening, a closure-plug for the vent-

opening, a clamping member fulcrumed upon the eye of one of the upstanding shanks with its intermediate portion disposed to bear upon the closure-plug with stops on each side of such plug adapted to prevent removal but to permit a limited movement thereof, and the free end of said lever adapted for engagement with the spring-keeper.

7. A jar-closure embodying a cover, a clamping member therefor and a keeper for the clamping member capable of automatically springing out of engagement with the clamping member when the latter is depressed.

8. A jar-closure embodying a band to embrace the neck of a jar and having a portion formed into an upstanding shank terminating in an elongated loop to form a keeper, a cover, and a clamping-lever fulcrumed upon the band and disposed to engage and be locked by the spring-keeper, the latter capable of automatically springing away from the lever when the end of the lever is depressed.

9. A jar-closure, comprising a band having diametrically opposite portions twisted into upstanding shank portions, one of the shanks terminating in an eye and the other a normally outward-curved spring member terminating in an elongated loop forming a keeper, a cover, a clamping-lever fulcrumed upon the eye with its intermediate portions disposed to bear upon the cover and its outward free end disposed for engagement with the loop of the keeper, the latter capable of automatically springing out of engagement with the lever when the end of said lever has been depressed.

10. A jar-closure comprising a cover having a vent-opening, a cover-clamping lever fulcrumed at one end, a keeper for the opposite end of the lever adapted to spring normally outward, stops upon such lever adapted to prevent removal but to permit a limited movement of, a vent-closure plug carried by the lever between such stops and provided with a portion of a size and shape to fit within, project below the bottom of and entirely close the vent-opening.

11. A cover for jars and the like having a continuously-regular depression in the top with a central opening at the bottom of such depression to constitute a funnel.

12. A cover for jars and the like having a continuously-regular depression in its top with a central opening at the bottom of the depression to constitute a funnel, the under face of the cover diverging from such central opening in straight lines oblique to the axis of such cover to the inner periphery of such cover.

JOHN C. WANDELL.

In presence of—

C. H. JOHNSON,
H. J. SHEPARD.