

April 25, 1933.

C. S. BARON

1,905,628

CONTAINER AND IN SEALING CLOSURE THEREFOR

Filed March 4, 1931

2 Sheets-Sheet 1

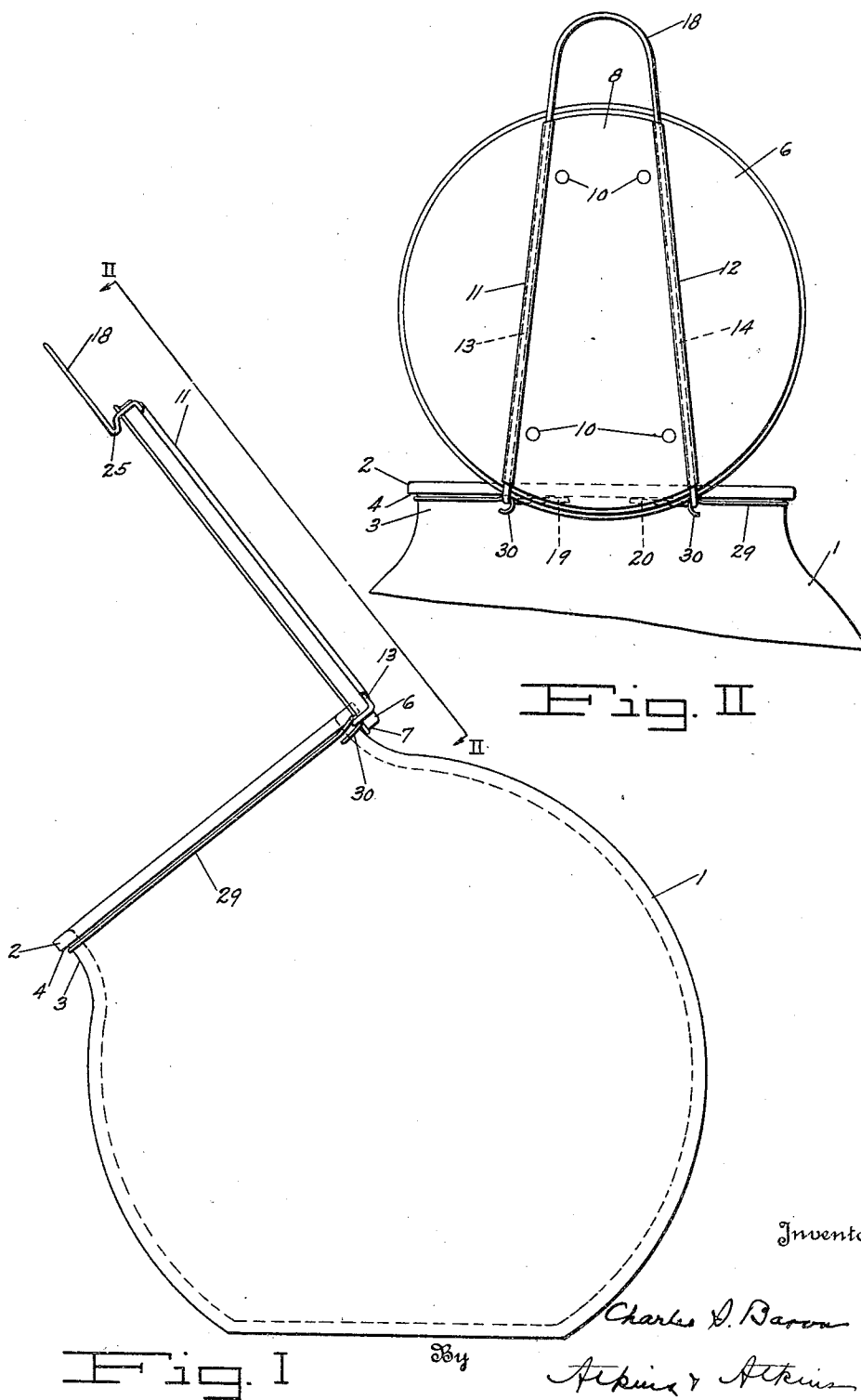


Fig. II

Fig. I

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2 Sheets-Sheet 2

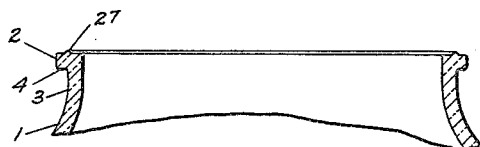


Fig. III

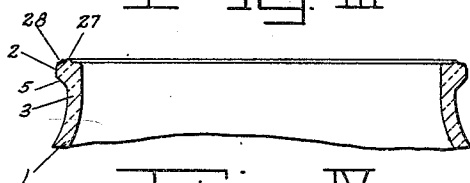


Fig. IV

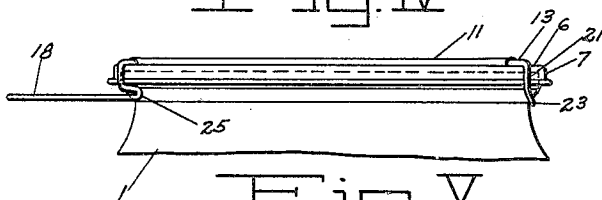


Fig. V

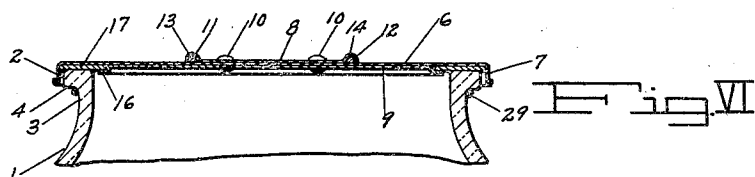


Fig. VI

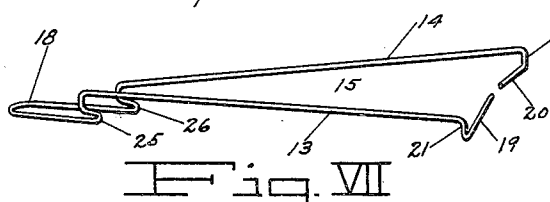


Fig. VII

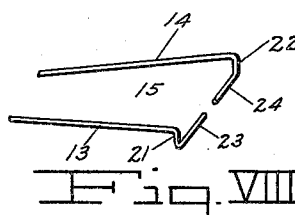


Fig. VIII

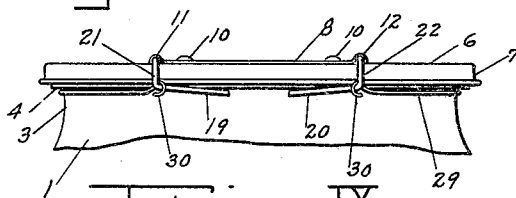


Fig. IX

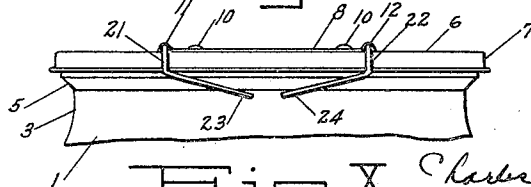


Fig. X

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UNITED STATES PATENT OFFICE

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CONTAINER AND IN SEALING CLOSURE THEREFOR

Application filed March 4, 1931. Serial No. 520,145.

This invention relates to containers, particularly of the wide mouthed type, and closures therefor. It has for its main object the production of a jar adapted for commercial display as well as for domestic use, and, in respect to the closure, provided with a cover possessing distinctive efficiency, novelty and utility in different degrees as occasion may demand.

What constitutes my present invention will be hereinafter described in detail and succinctly defined in the appended claims.

In the accompanying drawings,

Figure I is a side elevation of one of that type of my container, complete in the form at present preferred, its cover being shown in self-supporting open position.

Figure II is a rear view of the same.

Figure III is a diametrical sectional view of one form of container mouth.

Figure IV is a similar view of a slightly modified container mouth.

Figure V is a view similar to Figure I, showing the container cover closed.

Figure VI is a view similar to Figure V, but taken at right angles thereto.

Figure VII is a perspective view of a latch member detached from the cover, of which, in use, it forms a part.

Figure VIII illustrates a modification of the latch member shown in Figure VII.

Figure IX is a rear view of the subject matter of Figure V.

Figure X is a view similar to Figure IX but showing a combination including the form of latch member illustrated in Figure VII.

Referring to the numerals on the drawings, 1 indicates a container body which is preferably made of glass, having a wide annular mouth-defining rim 2 that preferably projects outwardly about the mouth of the container so as to demark a circular neck 3, defining in the rim above the neck a continuous annular retaining ledge 4.

The ledge may be disposed substantially at right angles to the outer perimeter of the rim 2, or it may be disposed at a slight deviation from a right angle, as indicated at 5 in Figure IV, in order to coactively adapt it

for the specific form of latch member shown in Figure X as well as shown detachedly in Figure VIII.

A cover comprising preferably a circular, disc-shaped cap plate 6, made integral with an annular peripheral skirt 7, is provided as a closure for the container mouth which the rim 2 defines, as aforesaid.

The cover is, for the sake of desirable economy of manufacture, conveniently made of thin sheet metal, despite the fact that, in itself, it affords little resistance to any force tending to bend or warp it. That feature in itself would be objectionable in use, but I practically eliminate it by providing upon opposite sides of the cap plate 6 reinforcing plates 8 and 9 that are firmly secured to it as by strong through going rivets 10 which hold said plates in close juxtaposition against the upper and lower faces, respectively, of the cap plate. Thus, the plates 6, 8, and 9 are economically united into one composite cover that is by the reinforcing plates made stiff enough to resist any force which in ordinary use might tend to warp it.

In addition to and in aid of the reinforcing function of the plates 8 and 9, the former, as by aid of lateral infolds 11 and 12, provides means for securing to the top of the cap plate 6 legs 13 and 14, respectively, of a distinctive latch member 15; and the latter provides on its perimeter an annular flange 16. Said flange is uplifted slightly from the surface of the inner face of the cap plate 6 so as to cause it to combine therewith and with the inner faces of the cover and the skirt 7, respectively, in such manner as to constitute a shallow seat for holding a flat annular gasket 17 that may be made of india rubber or any other yielding material that may be found suitable for sealing purposes. The extent of the uplift of the flange 16 above the face of the cap plate 6 is, for accommodation of the gasket, made substantially a very little in excess of the thickness of the gasket 17.

The gasket 17, when introduced into its seat, is held in place by frictional contact between its contiguous surfaces and the walls of its seat, and is effectually secured against

accidental displacement in use by overhang of the flange 16. At the same time, it is adapted to be easily removed as often as occasion may, from time to time, require, in order, for instance, to renew a worn gasket.

Besides what of novelty and utility is above set forth, an important feature of my invention relates independently to the relative construction of the latch member 15, itself. That member comprehends an element preferably made of resilient wire, which, as already specified, is provided with legs 13 and 14 that are fastened to and incorporated with the cap plate 6 of the cover. Said wire element is shaped, as by bending, so as to present on one side of the cover a loop handle 18, and on the opposite side of the cover to provide resilient terminals 19 and 20 which extend, one towards the other, from vertical deflections 21 and 22 formed at the ends of the respective legs 13 and 14, as by permanent flexure imparted to the resilient material of which each leg is formed.

The terminals 19 and 20, as shown in Figures I, II, VII and IX of the drawings, extend upwardly from the ends of the deflections 21 and 22, respectively, as clearly shown in Figure VII, and, in specified assemblage with the container, exert a spring pressure against the retaining ledge 4 in a downward direction and also, by virtue of their lateral deflection, exert at the same time a rearward lateral pressure against the neck 3 when the cap plate 6 is set in operative position to fit over the rim 2. The effect of the composite forces exerted by the specified member 15 is to pull the cover towards the rim 2, and, at the same time, in a direction away from the handle 18, with the result of promoting the latching function of the member 15, as hereinafter specified.

In lieu of the upward deflection of the terminals 19 and 20, the same purpose may be accomplished, with perhaps better results, by substituting the angularly disposed ledge 5 for the ledge 4, for cooperative engagement with coaxial spring terminals 23 and 24, as shown in Figures VIII and X, instead of the terminals 19 and 20 that are disposed at an angle to each other.

In the construction shown in the figures last named, the resilient terminals 23 and 24 yield by their engagement with the ledge 5, so as to effect the result of a downward and backward pull upon the cover described in the last and in the next following paragraphs, the ledge 5 acting against the terminals 23 and 24 after the manner of a wedge to compel movement in two directions of the cover upon the container when the cover and container are in cooperative assemblage.

In respect to the function just indicated, the handle 18 is, in assembled position, disposed on the opposite side of the rim 2 from the terminals 19 and 20, or the terminals 23

and 24, whichever be employed, and is, by the conformation of the wire of which the member 15 is made, provided with resilient latches 25 and 26 having cam-acting sloping top faces that are conjoined by the interposition of the loop handle 18 between them. Now, if the cap plate 6 of the cover, assembled substantially as specified with the member 15, is properly adjusted and pressed down upon and against the top of the rim 2, the skirt 7 of the cover will, by its engagement with the outer perimeter of the rim, direct the movement of the cover so that continued pressure thereupon will cause the resilient terminals 19 and 20, or 23 and 24, of the latch member 15 to yield laterally until they slip over the rim 2 and then make effectual engagement with the bottom of the retaining ledge 4 or of the ledge 5, as the case may be. Afterwards, by cooperation therewith, they will exert a spring action between the cover and the rim 2 which will tend to draw one side of the cover towards the body 1 and to effect thereby, closure at the adjacent portion of the gasket 17 against the top of the rim. At the same time, the inward inclination of the terminals 19 and 20, acting in addition to their said upward inclination, will cause their resiliency to exert, on the diametrically opposite side of the gasket from that last indicated, a pull on the member 15 to compel latching engagement of the latches 25 and 26 with the retaining ledge 4 or 5 of the rim, either of which, in respect to the latches, functions as a keeper.

The upper face of the rim 2 may be provided with a small annular bead 27 which, in some instances, may be employed as a means of contributing advantageously to the sealing contact between the rim and the superposed gasket; but the employment of the bead is not indispensable. The bead 27, when employed, may be disposed on the top of the rim 2, which may be of any preferred contour in cross-section, but I prefer in that regard, to provide, in association with it, on the outside of the rim 2, an annular face 28 that slopes downwardly in curvilinear cross-section from the bead 27, as shown in Figure IV.

From the foregoing it may be inferred that my invention, in part, is applicable to a cover that is detachable from the container of which it serves as a closure.

For some purposes, however, it is desirable to hingedly secure the cover to the container. That is readily accomplished by my invention through the employment of a wire collar 29, confined tautly about the neck 3. The collar 29 terminates at its opposite ends in loops 30 adapted for reception of the terminals 19 and 20, or 23 and 24, respectively, and thus serves to secure the cover to the collar, and through it to the container.

The securing of the cap plate 6 to the neck 3 by aid of the collar 29 not only effects a desirably simple hinge relationship between

the cover and the container, but also the resiliency of the terminals 19 and 20, acting against the ledge 4, or of the terminals 23 and 24 acting against the ledge 5, when fastened to the collar 29, produces a composite spring action which serves to normally support the cover in the open position as shown in Figure I. It is for this reason that the subject matter illustrated in that figure is preferred because it is of a most highly organized and efficient type.

A distinctive feature of my closure may be defined to be the provision therein of means for obtaining the application of such spring pressure at opposite sides of the container as will tend to compel uniformity of sealing engagement between the gasket 17 and the top of the rim 2 against which the gasket makes contact. The lateral resiliency of the terminals 19 and 20 serves to insure that result by the proper functioning of the latches 25 and 26 against the retaining face of the ledge 4.

It may be further observed that the employment of the gasket is not indispensable, and may be omitted in the manufacture of a cheap form of container in which closure to air tight degree between the container and cover is not a desideratum.

What I claim is:

1. The combination with a container body having a continuous annular latch-member retaining ledge formed upon a mouth-defining rim for the container, of a cover having a yielding gasket and a latch member extending across it and provided at one end with two separate resilient ledge-engaging members extending toward each other, and at the opposite end with cam acting resilient ledge-engaging latches, said oppositely extending resilient member being hingedly secured to the container body by a collar confined to a neck formed therein below said rim.

2. The combination with a container body having a continuous annular latch-member retaining ledge formed upon a mouth-defining rim for the container, of a cover having a yielding gasket and a latch member extending across it and provided at one end with two separate resilient ledge-engaging members extending toward each other, and at the opposite end with cam acting resilient ledge-engaging latches, said oppositely extending resilient members being hingedly secured to the container body by a collar confined to a neck formed therein below said rim, and being adapted to exert spring pressure against the neck to hold the cover open normally when in open position.

3. A container cover having a yielding gasket and a latch-member extending across it and latches disposed below the cover at one end of said member and oppositely extending resilient members at the other end

of said member, said resilient members being disposable, respectively, in different planes for the purpose of securing for the cover, when applied to a container, spring pressure in transverse and lateral directions, substantially for the purpose specified.

4. A container cover having a yielding gasket and a latch member extending across it, in combination with cam-acting latches disposed below the cover at one end of said member and oppositely extending resilient members at the other end of said member, said resilient members being disposable, respectively, in different planes for the purpose of securing for the cover spring pressure in two directions, substantially for the purpose specified, said latches being also resilient for effecting in them the cam action desired.

5. A container cover having a disc-shaped cap plate and a peripheral skirt, made of thin metal and provided with a reinforcing plate united to the cap plate to lend stiffness to it, the upper reinforcing plate being provided with infolds adapted to secure in place a latch member provided on the cap plate.

6. A container cover in combination with a disc-shaped cap plate and a peripheral skirt thereon, the cover being made of thin metal and provided on opposite sides with reinforcing plates united to the cap plate to lend stiffness to it, the reinforcing plate inside the cap being circular and provided with an upstanding annular flange forming with the skirt an annular gasket seat, and a yielding gasket removably confined within said seat by engagement with said flange and skirt.

In testimony whereof, I have hereunto set my hand.

CHARLES S. BARON.