No. 663,616. Patented Dec. 11, 1900.

A. SMELKER.

FRUIT JAR CLOSURE.

(Application filed May 12, 1900.)

(No Model.)

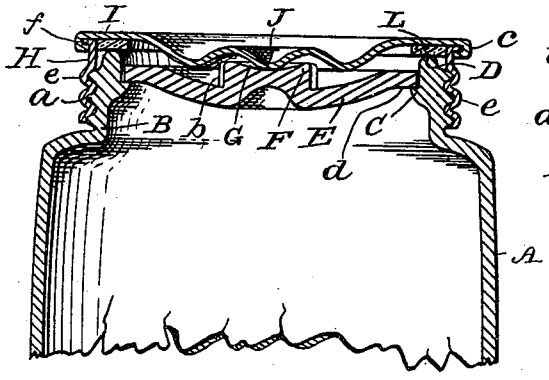


Fig. 1.

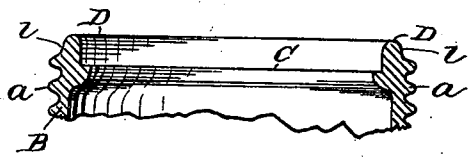


Fig. 2.

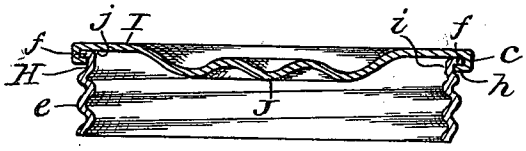


Fig. 3.

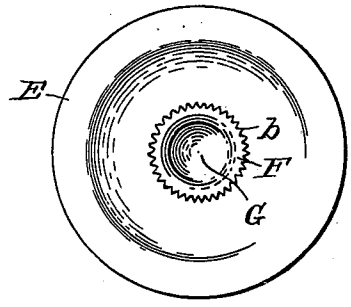


Fig. 4.

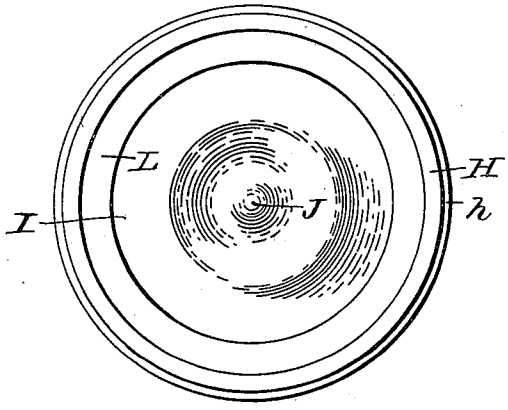


Fig. 5.

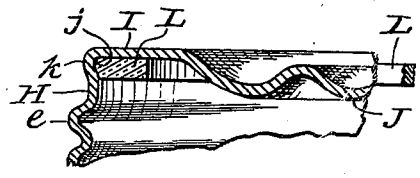


Fig. 6.

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FRUIT-JAR CLOSURE.

SPECIFICATION forming part of Letters Patent No. 663,616, dated December 11, 1900.

Application filed May 12, 1900. Serial No. 16,406. (No model.)

To all whom it may concern:

Be it known that I, ANGELINE SMELKER, a citizen of the United States, residing at North Star, in the county of Darke and State of Ohio, have invented certain new and useful Improvements in Fruit-Jar Closures; and I do 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 letters of reference marked thereon, which form a part of this specification.

This invention relates to devices for closing and sealing the necks or orifices of jars, particularly those employed in preserving fruits and vegetables, the object of the invention being to generally improve the details of construction of such devices, and thus provide the most desirable and cheaply-made jar which may be reliably sealed, so that the contents of the jar may not readily have access either to metallic parts or to the rubber packing-ring, and which may be easily opened after having been sealed a considerable length of time.

The invention consists in a jar-neck, a lid, and a retaining-cap of new and novel form of construction and arrangement, the cap being provided with a sealing-ring adapted to form a tight joint upon the neck and also adapted at the same time to elastically bear upon the lid for holding it to its seat.

Referring to the drawings, Figure 1 represents the upper portion of a jar and closing devices as constructed in accordance with my invention and shown in a vertical central sectional view; Fig. 2, a like view showing only the upper end of the neck; Fig. 3, a similar view showing only the retaining-cap; Fig. 4, a top plan view of the lid; Fig. 5, an inverted plan view of the retaining-cap with the sealing-ring therein; and Fig. 6, a fragmentary view similar to a portion of Fig. 3, but illustrating the manner in which the sealing-ring is retained by the cap and also showing one way in which the cap may be constructed.

Similar letters of reference in the several figures indicate like parts.

In construction the jar A may be made in any suitable shape, preferably of glass, and it has a circular neck B, having exterior screw-threads *a*, and an internal ledge C, which may be either continuous or broken for supporting the lid, the ledge being situate a short distance below the upper edge of the neck and in a plane parallel to the plane of such edge. At the exterior of the upper edge of the neck is a short plain portion *l*, devoid of threads and having a diameter, measured at the exterior of the neck, less than the diameter of the neck at the bottom of the groove between the thread *a*, so that the point of contact between the neck and the sealing-ring may be removed from the side of the cap-flange sufficiently to insure a safe joint nearly central with the joint or sealing-ring. The upper edge of the neck is the sealing-ring seat D and is "rounded" or semicircular in cross-section, so as to present a convex surface to the sealing-ring, which is desirable in case the cap-plate I should spring somewhat, and it further insures a perfect joint by reason of its narrow surface readily sinking into the surface of the flexible and elastic ring L.

The lid E is preferably made of glass or similar material and is adapted to fit neatly into the orifice of the neck, its bearing-face *d* resting upon the ledge C. The lid is preferably depressed centrally to clear the cap-plate I, and at the center it has an elevated finger-hold F, preferably having a depression G in its upper surface as a bearing-face for the lid. The sides of the finger-hold are vertical, or nearly so, in order to easily draw from a mold and are provided with teeth or serrations *b* in order to afford a firm hold in twisting and lifting the lid should it stick to the juices of the contents of the jar. The top of the finger-hold is lower than the edge D of the neck, so that when the cap is removed the jar and lid may be used together, when sealing may not be necessary, and one jar may be placed firmly upon another.

For holding the lid E firmly upon its seat and at the same time effecting the sealing I employ a cap comprising a plate I and a flange H, which together inclose the top of the lid and the neck, the two parts being formed either integral or separately, as may be desired. When formed in two parts, the

plate I is preferably made of spring metal and has a central depression or "ball" J, adapted to bear upon the finger-hold F, and it is also preferably corrugated in circles, the edge being turned down as a flange *c*. The flange or rim H has a flange *f* turned over at its upper edge and is fitted into the flange *c*, the latter being then turned down over it, as at *h*. This form of construction is for the purpose of easily securing a clear or recessed corner *j*, so that the rubber ring L may spring into it and be retained thereby; but I may provide this when forming the plate and rim from one piece of metal by pressing or spinning the corner in the shape of a bead *k*, so as to enlarge the rim diametrically at its junction with the plate. The rim H has screw-threads *e*, adapted to engage the threads *a* of the neck.

Rubber sealing-rings L are cut from sheet-rubber or may be molded to the proper diameter as washers, and it is designed that a ring should be slightly greater in external diameter than the internal diameter of the rim H, so that when forced therein it may spring into the recess *j* in the cap and be thereby held in close contact with the plate I, the greater bearing-surface of the cap readily carrying the ring with it when the ring slides upon its seat D, which is narrow and smooth.

In practical use the lid E may be placed upon the ledge C and the cap then screwed down over the neck, the ball J and the sealing-ring L finding bearings simultaneously, the lid intercepting the contents and preventing contact with the cap and practically with the rubber ring. When the jar shall have been opened, the cap and sealing-ring may be cleansed and laid away for future use, while the lid may be employed as a temporary cover that may be quickly handled while the fruit is being used or afterward when other articles may be kept in the jar, such as spices or the like, thus serving two purposes.

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

1. A jar-closure including a neck having a sealing-ring seat formed at the upper edge thereof having a convex surface in cross-section whereon a sealing-ring may roll or tilt, a lid, and a retaining-cap bearing upon the lid and engaging the neck and having a sealing-ring sprung therein and bearing upon such sealing-ring seat.

2. In a jar-closure, the combination of the neck, the ledge, the lid supported on the ledge, the sealing-ring seated upon the neck in a plane above and independently of the lid, and the cap having the annular corrugations and bearing simultaneously upon the lid and upon the sealing-ring.

3. In a jar-closure, the combination of the neck, the sealing-ring seat at the upper edge of the neck convex in cross-section, the lid having the finger-hold provided with the recess at the top thereof, the cap-plate bearing in said recess and having the flange provided with the recess at the junction with said plate and said flange, and the sealing-ring secured in said cap and extending into said last-mentioned recess and bearing upon said convex seat, substantially as set forth.

4. In a jar-closure, the combination of the neck, the sealing-ring seat at the upper edge of the neck, the ledge in said neck, the lid resting upon said ledge and having the integral serrated elevated finger-hold, the cap-plate bearing upon said finger-hold and having the sealing-ring attached thereto and bearing upon the top of said seat in a plane above said lid.

5. In a jar-closure, the combination of the neck, the screw-threads upon the exterior of the neck, the ledge in said neck, the lid resting upon said ledge and having the serrated elevated finger-hold having the depression at the top thereof, the sealing-ring seat, the retaining-cap having the ball-bearing in said finger-hold depression and having the recess therein for retaining a sealing-ring, the threads in said cap engaging the threads upon said neck, and the sealing-ring in said cap elastically forced into the recess thereof and bearing upon the sealing-ring seat, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ANGELINE SMELKER.

Witnesses:
WM. C. THOMPSON,
E. T. SILVIUS.