

No. 680,072.

Patented Aug. 6, 1901.

H. K. PROSSER.

DEVICE FOR REMOVING CLOSURES FROM BOTTLES OR JARS.

(Application filed Apr. 1, 1901.)

(No Model.)

Fig. 1.

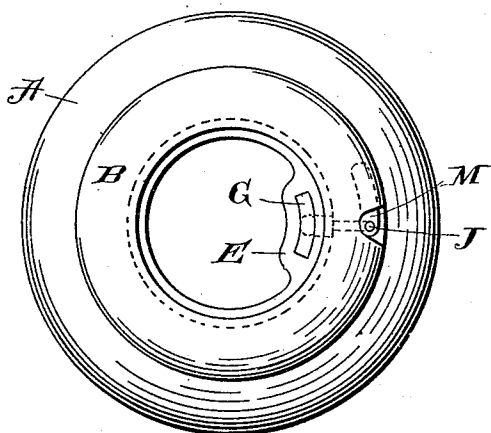


Fig. 2.

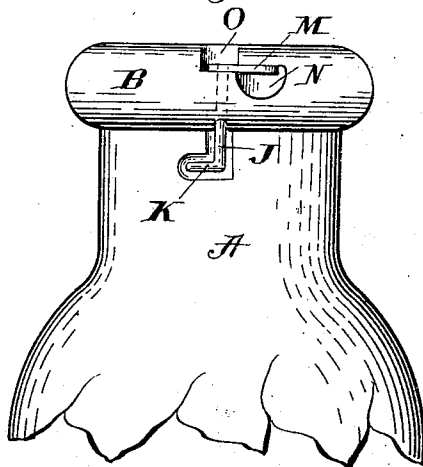


Fig. 3.

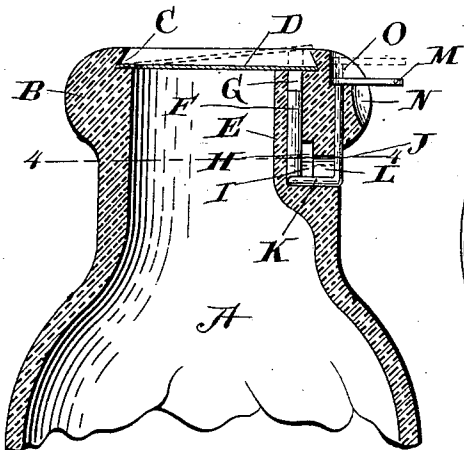


Fig. 4.

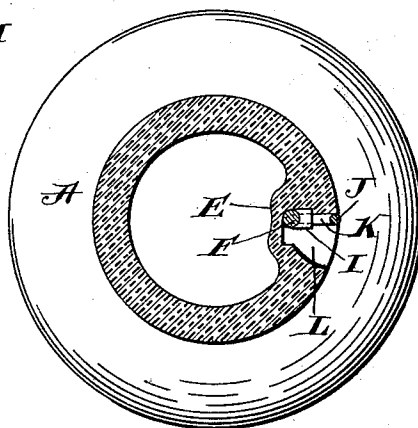


Fig. 5.

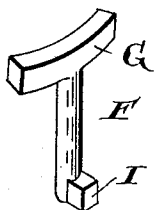
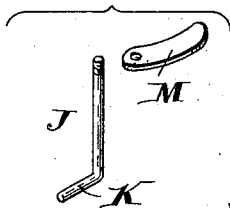


Fig. 6.



Witnesses

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DEVICE FOR REMOVING CLOSURES FROM BOTTLES OR JARS.

SPECIFICATION forming part of Letters Patent No. 680,072, dated August 6, 1901.

Application filed April 1, 1901. Serial No. 53,844. (No model.)

To all whom it may concern:

Be it known that I, HENRY K. PROSSER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented a new and useful Device for Removing the Closures from Bottles or Jars, of which the following is a specification.

This invention relates to improvements in devices for removing the closures from bottles and jars, and is designed to be used in connection with that class of closures in which a disk is employed to seal the jar or bottle, the same being forced into a retaining-groove at the mouth of the latter, the object of the invention being to provide simple and convenient means for quickly prying or forcing the disk from its groove.

A further object is to provide means for the purpose above specified which may be sold as a part of the bottle or jar without materially increasing the selling price of the latter.

With the above objects in view the invention consists in the novel features of construction hereinafter fully described, particularly pointed out in the claims, and clearly illustrated by the accompanying drawings, in which—

Figure 1 is a top plan view of a bottle or jar provided with my invention, the closing-disk being removed; Fig. 2, a side elevation of the top portion of the same; Fig. 3, a longitudinal sectional view, the positions of the parts when the disk is forced from its groove being indicated by dotted lines; Fig. 4, a transverse sectional view on the line 4 4 of Fig. 3; Fig. 5, a perspective view of the plunger, and Fig. 6 a perspective view of the operating member for the plunger.

For the purpose of sealing jars or bottles a disk of pasteboard or other yielding material has been provided, which disk is forced into a retaining-groove formed at the mouth of the jar or bottle, and this construction of closure, owing to its simplicity and cheapness, has become extensively used, especially in connection with milk jars or bottles. While this disk may be readily positioned to seal the jar or bottle, yet considerable difficulty is experienced in removing the same, it being necessary to pry it from its groove by means of a fork or similar handy implement. This consumes quite a little time and is attended

with a great deal of difficulty and inconvenience and also expense to the owner of the bottles and jars, as many of the latter are broken in the removal of the disks. To obviate the trouble now experienced in removing these flexible disks, I have produced the present invention, which is designed to form a part of the jar or bottle and be sold therewith and which can be quickly and conveniently operated to instantly unseat the closing-disk.

Referring now more particularly to the accompanying drawings, A designates a jar or bottle having at its mouth the usual rim or annular enlargement B. Formed upon the inner side of the mouth of the jar or bottle is an annular groove C to receive a disk D, of pasteboard or similar material. The bottom wall of this groove constitutes a seat against which the disk rests flatly when in position, while the other wall of the groove is inclined and acts as a retaining-wall to prevent the removal of the disk, excepting when considerable pressure is applied to the latter.

In carrying out my invention I form upon the inner side of the mouth of the jar or bottle an enlargement E, which is formed with a longitudinally-extending recess to receive the stem F of a longitudinally-movable plunger, and having at its outer end a depression forming a seat for the head G of said plunger. The outer end of said enlargement is flush with the seat of groove C, as is also the outer surface of the head G of the plunger when the latter is in its normal position, so that no obstruction is offered to the seating of the disk D. At its inner end the longitudinal recess of the enlargement is formed with a lateral enlargement H to receive a projection I on the stem F of the plunger. This projection prevents the displacement of the plunger, but does not interfere with a limited movement of the same outwardly, as said lateral recess H is formed considerably greater in extent than the projection. In positioning the plunger in the enlargement E, which constitutes a box therefor, it is turned with its head G transversely of the longitudinal recess and its stem moved inwardly in said recess until the lateral recess H is reached, when the plunger is turned to bring said pro-

jection into the lateral recess and its head G in position to fit into the depression which constitutes its seat.

Formed in the rim or enlargement B of the jar or bottle is a longitudinally-extending perforation in which the stem J of an operating member is positioned, so as to be rocked therein, said stem being bent at right angles at its inner end to form a lifting-arm K, which when the operating member is rocked in one direction swings beneath the inner end of the stem F of the plunger, a suitable opening L being formed in the side of the neck of the bottle or jar, which opening extends through and communicates with the inner end of the longitudinal recess of the enlargement E.

Stem J of the operating member is screw-threaded at its outer end to receive a handle M, which is disposed at right angles thereto and oppositely to arm K.

The arm M when the operating member is in its normal position is swung into a suitable recess formed in the outer side of the enlargement or rim B, which recess is enlarged to form a finger-nick N on the under side of the handle, whereby the latter may be conveniently engaged by the finger of the user and swung outwardly to swing the arm K inwardly beneath the stem of the plunger. When the said operating member is moved to bring the lifting-arm beneath the stem of the plunger, said member may be moved outwardly, a suitable opening O being formed in the rim B to permit said outward movement. This outward movement of the operating member effects the outward movement of the plunger, causing the head of the same to force the disk D from its groove, as illustrated by dotted lines in Fig. 3.

From the above description it will be seen that I have provided a very simple construction for conveniently and quickly removing the closing-disk of a jar or bottle from its seat.

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

1. A jar or bottle having a closure-removing member movable in the wall of the neck thereof, and means for operating said member from the exterior of the bottle or jar, substantially as described.

2. A jar or bottle having a longitudinally-movable plunger arranged adjacent to its

mouth, and a rocking member movable longitudinally and operable from the exterior of the jar or bottle and provided with a lifting-arm to engage the plunger, substantially as described.

3. A bottle or jar having a longitudinally-movable member near its mouth, a longitudinally-movable and pivotally-mounted operating member having an arm adapted to engage the inner end of the member and provided with a handle, substantially as described.

4. The combination in a jar or bottle having an outwardly-movable closing-disk, of an outwardly-movable plunger arranged adjacent to the mouth of the bottle or jar and adapted to engage the under side of the disk and unseat the same when moved outwardly, and an operating member for effecting the outward movement of said plunger, substantially as described.

5. A bottle or jar having a boxing formed upon the inner side of the mouth thereof, an outwardly-movable member positioned in said boxing, a swinging member mounted upon the exterior of said mouth and movable outwardly, a lifting-arm formed upon the inner end of said member and adapted to be swung beneath the inner end of the member, and a handle carried by said member and disposed oppositely to the arm, substantially as described.

6. A jar or bottle having an outwardly-movable closure-removing member mounted in the wall of the neck thereof, and a member for operating said first-mentioned member from the exterior of the bottle or jar, substantially as described.

7. A jar or bottle having a closure-removing member mounted to slide in the wall of the neck thereof, and means for operating said member from the exterior of the bottle or jar, substantially as described.

8. A jar or bottle having a closure-removing member carried by the neck thereof, and means for operating said member from the exterior of the jar or bottle, substantially as described.

HENRY K. PROSSER.

Witnesses:

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