H. B. TAYLOR.

BOTTLE CLOSURE.

APPLICATION FILED JAN. 21, 1909.

985,856. Patented Mar. 7, 1911.

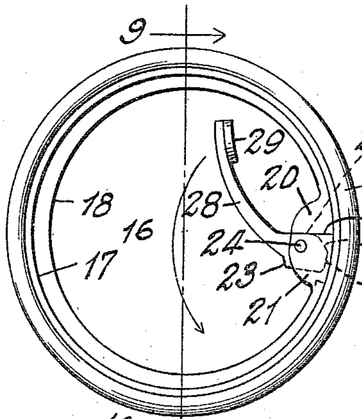

Fig. 1.

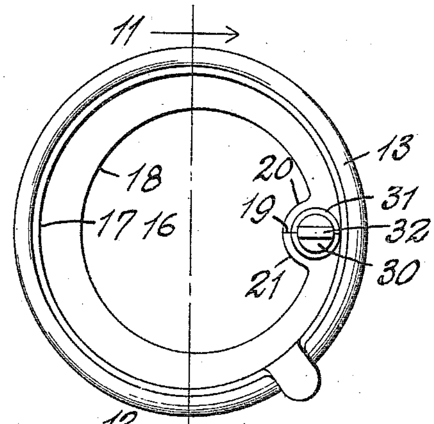

Fig. 4.

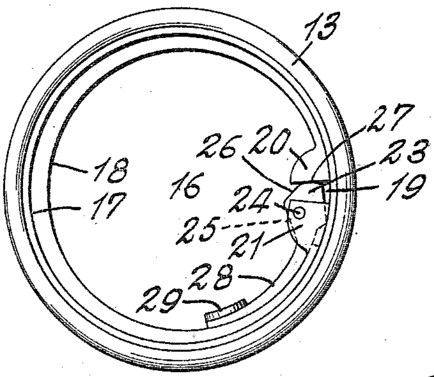

Fig. 2.

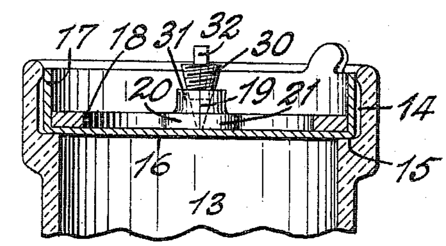

Fig. 5.

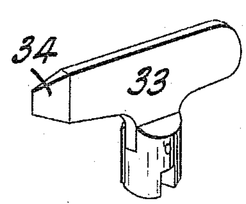

Fig. 6.

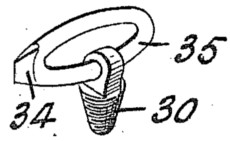

Fig. 7.

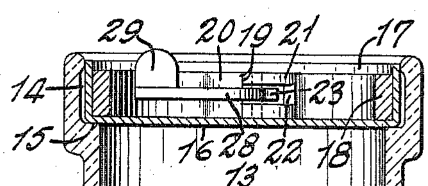

Fig. 3.

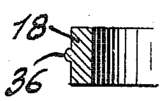

Fig. 8.

Witnesses

[illegible]

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UNITED STATES PATENT OFFICE.

HENRY B. TAYLOR, OF MONTREAL, QUEBEC, CANADA.

BOTTLE-CLOSURE.

985,856. Specification of Letters Patent. Patented Mar. 7, 1911.

Application filed January 21, 1909. Serial No. 473,570.

To all whom it may concern:

Be it known that I, HENRY B. TAYLOR, of the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Bottle-Closures, of which the following is a full, clear, and exact description.

This invention relates to improvements in bottle closures, and the object is to provide a simple and inexpensive device by means of which wide mouthed bottles, such as preserve, pickle jars, and the like, may be hermetically sealed with great ease and rapidity and opened with equal facility. To accomplish these objects I provide a flanged disk of air and moisture proof material adapted to fit in the mouth of the bottle and a circumferentially expansible ring for securing said disk in the mouth of the bottle.

In the drawings which illustrate my invention:—Figure 1 is a plan view of my device in position on a receptacle. Fig. 2 is a view similar to Fig. 1 and shows the device locked in position. Fig. 3 is a sectional view on the line 9—10 of Fig. 1. Fig. 4 is a view similar to Fig. 1 and shows an alternative form of ring. Fig. 5 is a sectional view on the line 11—12 of Fig. 4. Fig. 6 is a perspective view of a key used in connection with the form shown in Figs. 4 and 5. Fig. 7 is a perspective view of an alternative form of key. Fig. 8 is a partial cross-sectional view of a modification of the ring.

In the above defined figures, 13 designates a bottle or jar, preferably having an internal groove or recess 14 in the mouth thereof, and an inwardly extending shoulder 15 therebelow. A disk 16 is provided having an integral, upwardly extending, circumferential flange 17, said disk being adapted to enter the mouth of the bottle and abut the shoulder 15 therein. The disk is composed of any suitable fibrous material, such as heavy paper, impregnated with paraffin, or other air and moisture proof substance. A circular ring 18, of metal or other suitable material, is provided adapted to be pressed inside the flange 17 of the disk 16. The ring is preferably eccentric, that is, the exterior and interior peripheries thereof are eccentric to one another, so that one side of the ring is thicker than the other. The ring is split at 19, at its narrowest part, lugs 20 and 21 being formed at the ends. One of these lugs 21, is recessed at 22 and a small cam 23 pivoted in said recess on a pin 24. The cam 23 preferably has three contacting faces, 25, 26 and 27, at varying distances from its pivotal center, but may be circular or of any other contour. An operating lever 28 is formed integral with the cam and is approximately of the same curvature as the inner periphery of the ring. A small upturned catch 29 is formed on the end of the lever remote from the cam to enable the operator to readily grasp the lever.

In Figs. 1, 2, 3 and 8, I have shown a ring rectangular in cross-section, having the longer side of the rectangle for the thickness of the ring. The form of ring shown in Figs. 4 and 5, is substantially the same, the only difference being that the shorter side of the rectangle is the thickness of the ring. In these latter figures, the cam is replaced by a tapered screw 30, threaded into a split boss 31 formed half on the lug 20 and half on the lug 21, the depth of the boss serving to prevent the screw from perforating the disk when screwed down. The screw 30 is provided with an integral head 32 adapted to be gripped by a suitable key or wrench 33, shown in Fig. 6, in order to turn the screw. The key 33 is provided with a reduced or wedge shaped portion 34, which may be used, if necessary, in removing the ring and disk from the mouth of the bottle.

In Fig. 7 I have shown an alternative form of key having a loose handle portion 35.

Fig. 8 shows a section of the ring having a small flange or ridge 36 on the outer periphery of the ring in order that the same may grip the flange of the disk 16 more securely.

When it is desired to seal a jar, the ring 18 is placed inside the flange 17 of the disk 16, and the disk pressed into the mouth of the bottle until arrested by the shoulder 15. The face 25 of the cam, nearest the pivotal center and adjoining the concave side of the lever 28, lies normally flush with the end of the lug 21 so as to be in contact with the lug 20 when the lugs touch each other, the lever occupying the position shown in Fig. 1. The operator grasps the catch 29 and moves the lever in the direction of the arrow, Fig. 1, thus revolving the cam about its pivotal center and bringing the faces 26 and 27 thereof successively into contact with the lug 20. As the faces 26 and 27 are farther

from the pivotal center of the cam than the face 25, it is obvious that the lugs 20 and 21 will be forced apart and the ring 18 expanded circumferentially. The expansion of the ring, forces the flange 17 of the disk against the sides of the mouth of the bottle, thus preventing the disk from being removed and at the same time forming an air tight joint between the disk flange and the mouth of the bottle. The position of the parts when the bottle is sealed is illustrated in Fig. 2. To unseal the bottle, the lever is returned to its original position thus allowing the ring to contract and permitting the disk and ring to be removed in order that the expansion thereof may be equal at all points of its circumference. If a tight joint is obtained when the cam has been rotated only as far as the face 26, it may be left in this position, the flattened face holding it against movement.

In the form shown in Figs. 4 and 5, when the disk and ring are in position in the mouth of the bottle, the key 33 is applied to the screw and the latter rotated. It will be readily understood from the drawings that as the screw moves downwardly it will spread the lugs 20 and 21, and expand the ring as above described.

Having thus described my invention, what I claim is:—

1. A bottle closure comprising a disk having an upwardly extending flange, a split ring, and means for expanding said ring against the flange of said disk.

2. A bottle closure comprising a disk having a flange, a ring, and means for expanding the ring circumferentially against the flange.

3. A device of the character described comprising a flanged disk adapted to fit into the neck of a jar or bottle, a split circular ring, and means interposed between the abutting ends of said ring to expand same against the flange of the disk.

4. A device of the character described comprising a flanged disk adapted to be inserted in the neck of a jar, an expansible split ring, and means for adjoining the abutting ends of said ring whereby said ring will be expanded circumferentially against the flange of the disk.

5. A device of the character described comprising a flanged disk adapted to be inserted in the neck of a bottle, a split ring, and a cam lever adapted to separate the abutting ends of said ring and expand same against the flanged disk.

6. A device of the character described comprising a flanged disk adapted to be inserted in the neck of a bottle, a split ring adapted to be seated upon said disk, and a lever device adapted to coöperate with the adjoining ends of said ring to expand same against the flange of the disk.

7. A device of the character described comprising the combination with a jar or bottle having a shouldered neck, of a flanged disk, a split ring having lugs at the abutting ends thereof, and means for separating the abutting ends of said ring to expand same circumferentially against the flange of the disk, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

HENRY B. TAYLOR.

Witnesses:
C. W. TAYLOR,
E. R. MCKENZIE.