No. 771,017. PATENTED SEPT. 27, 1904.

J. A. JONES.

CAP FOR BOTTLES OR OTHER VESSELS.

APPLICATION FILED DEC. 17, 1903.

NO MODEL.

FIG. 1.

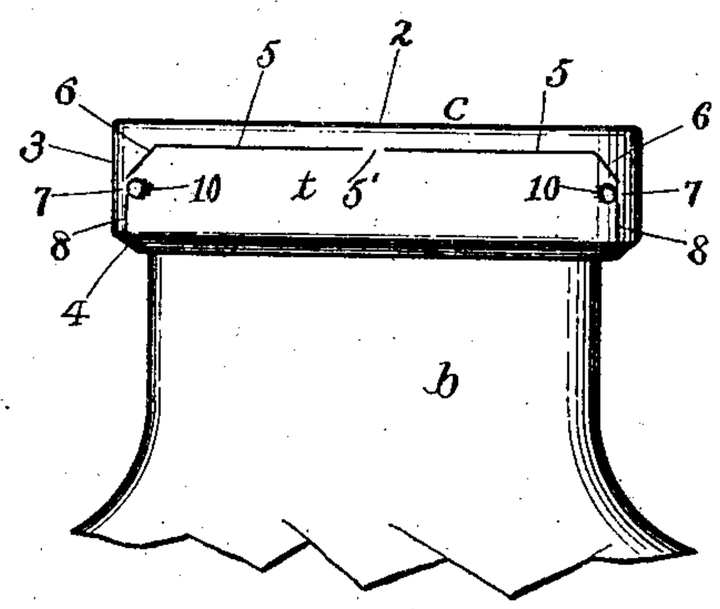


FIG. 2.

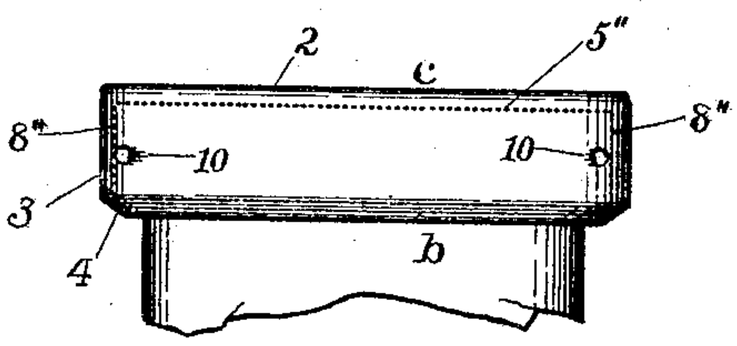
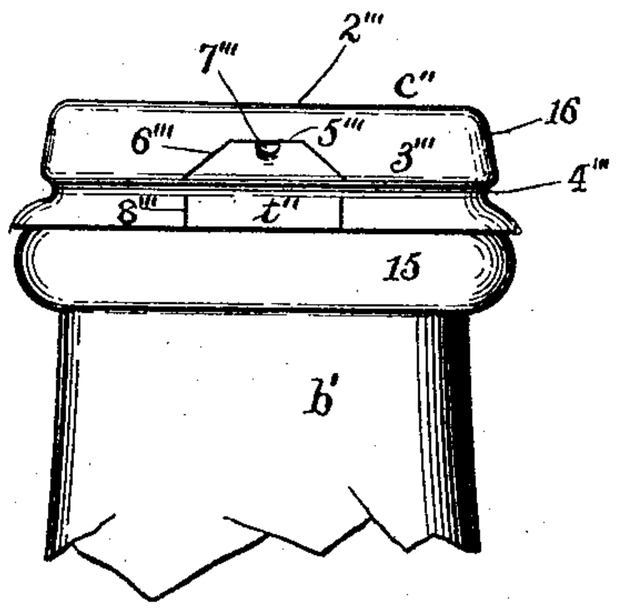


FIG. 3.



Witnesses
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No. 771,017. Patented September 27, 1904.

UNITED STATES PATENT OFFICE.

JOHN A. JONES, OF NEW YORK, N. Y.

CAP FOR BOTTLES OR OTHER VESSELS.

SPECIFICATION forming part of Letters Patent No. 771,017, dated September 27, 1904.

Application filed December 17, 1903. Serial No. 185,562. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. JONES, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented a certain new and useful Cap for Bottles or other Vessels, of which the following is a specification.

This invention relates to closures for bottles, jars, and similar vessels, and more particularly to a cap for sealing the mouths of such vessels, especially wide-mouthed bottles and jars.

The principal object of this invention is to provide a cap for securely sealing the contents of bottles, jars, &c., containing articles which must be covered, and particularly such articles as require to be put up in air-tight vessels, and yet can be easily opened to obtain access to the articles contained in such vessels. Such a closure must be simple in construction, cheap, and present a neat appearance when in position on the bottle, jar, or other vessel, and I provide an article embodying all of these qualities by making use of a one-piece cap, preferably of sheet metal, locked in place on the mouth of the vessel, and I also provide for removing this cap by tearing the same along one or more lines to release the cap at the point where it is locked to the mouth of the vessel.

In the preferred construction I provide a one-piece cap having a top and a depending rim which closes over and is brought into locking engagement with a wall or shoulder on the neck of the bottle or other vessel and may be removed from the vessel by tearing out a weakened strip the weakened line or lines of which intersect the edge of the rim of the cap.

Other features of my invention not hereinbefore referred to will be hereinafter described, and pointed out in the appended claims, and are illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a cap constructed in accordance with my invention and in operative position on a wide-mouthed vessel. Fig. 2 is a similar view of a modification of my invention adapted for the same and other styles of vessels. Fig. 3 is a similar view of another modification adapted more particularly for use on milk, cream, and similar bottles.

Similar characters designate like parts in all the figures of the drawings.

Referring first to Fig. 1, I have shown in this view a wide-mouthed bottle or jar having a cap applied thereto, which is designated generally by *c* and embodies as its main elements a top 2 and a rim 3. The top is or may be a flat disk of the simplest type, and the rim may be a plain deep flange with parallel walls projecting from the top 2, so that the cap as a whole may be formed by dies of the simplest construction. The cap itself may be made of any suitable material, usually, however, of sheet metal, and may be plain or ornamented in any suitable manner and may be printed with any suitable matter usually found on such closures or may be entirely plain, as may be desired or as may be best suited to the requirements of any particular line of goods. Whatever the particular construction of the top and the rim of the cap may be, the cap in every case will have a weakened line along which the cap may be severed when the vessel sealed thereby is to be opened. This weakened line or tearing-line may be made in any desired way, either by scoring the cap or by shearing the same entirely through or by perforating the same. I prefer, however, to shear the metal entirely through along lines of considerable length and to leave only enough metal at the point where the cap is not sheared in such line to enable the cap to be locked firmly in place on the vessel and prevent accidental unsealing after the cap has been so locked in place. My improved cap also embodies, when in place on a vessel, a locking member for securing the cap to the vessel. Before the cap is so secured in place this locking portion constitutes in the construction shown in Fig. 1 a portion of the rim 3; but after the cap has been forced down onto the mouth of the bottle or other vessel substantially in the manner well known in the art the lower edge of the rim in the construction shown in said figure is turned in, as indicated, and clenched under a wall or shoulder on the outside of the bot-

tle-neck to form a locking member or flange 4. This is usually done by spinning the edge of the rim under the shoulder on the bottle. My improved cap as thus applied to the mouth of a bottle or jar forms a tight seal, which is removable from the bottle or other vessel *b* by tearing it along a weakened line, as before mentioned. This weakened line is formed in the cap before the cap is locked in place on the mouth of the vessel, and it intersects the edge of the rim 3 and also intersects the locking member in order that the cap may be readily torn along the desired line and removed from the bottle. This tearing-line is preferably located wholly in the rim 3 and is of such length as to form a tearing-strip which intersects the edge of the rim and extends lengthwise of the rim a considerable distance. Usually the line is substantially parallel with the upper and lower edges of the rim, and it is preferably close to the upper edge of the rim, as shown, in order to facilitate the spreading of the walls of the rim at the ends of the tearing-strip. In Fig. 1 the rim 3 is sheared along the lines 5 5 parallel with the top of the rim and separated by a short space 5′ where the rim is not cut, these lines 5 5 at their ends having continuations 6 6 disposed at a suitable angle to the lines 5 5. At the ends of the lines 6 6 are other short uncut portions 7 7, and beyond these the rim is again sheared along the lines 8 8, which intersect the edge of the rim. Before the application of the cap to the vessel the lines 8 8 are parallel with each other; but after the turning of the edge of the rim under the shoulder on the bottle to form the locking member 4 they are of course located in a different position. The positions of the weakened or sheared lines 5 5 and 6 6 and 8 8 may be varied as desired, provided that the tearing-line is so disposed as to permit a strip to be torn out which intersects the edge of the rim and also intersects the locking member. The solid portions 5′ and 7 7 are sufficient to hold the tearing-strip firmly in place while the cap is being applied to the vessel; but the portions 7 7 are short enough to be torn readily when the cap is to be removed.

In order to facilitate the removal of the cap from the vessel, I provide at one or both ends of the tearing-strip *t*, formed in the cap *c* by the weakened lines just described, an opening for the reception of a suitable tearing instrument—such, for example, as the tine of a fork. When such an implement is inserted in such an opening, the strip of metal at either of the points 7 may be broken quickly, as will be clear, and the corresponding end of the tearing-strip rolled away from the bottle. Two such openings are provided in the construction shown in Fig. 1 and are designated 10 10, so that a tearing-strip may be broken at both ends thereof by breaking a single piece of metal at either of the points 7, it being unnecessary, although desirable, to entirely remove the tearing-strip by breaking the metal afterward at the point 5′.

In Fig. 2 I have illustrated a modification of my invention in which the construction of the cap and of the elements constituting the same are identical in every respect with the corresponding parts in Fig. 1, (and are designated by corresponding reference characters,) except that the tearing line or lines shown therein differ slightly from the tearing-lines shown in Fig. 1 and are formed by perforating the metal along the lines 5″ and 8″. The line of perforations 5″ is continuous, and so are the lines 8″, this construction providing a somewhat stiffer cap than that illustrated in Fig. 1. The openings for the reception of the tearing instrument are located in the same positions as in the cap shown in Fig. 1.

In Fig. 3 I have illustrated another modification of my invention, the cap shown in this view being of somewhat different construction from that shown in Figs. 1 and 2 in order to adapt it for use on a different type of bottle or vessel mouth. The vessel shown in this view is a milk-bottle having at the mouth thereof an external locking member in the form of a beveled and beaded projection 15, with a groove in the periphery thereof. The beveled face of this projection and the groove therein are not indicated in said view, as the cap *c*″ is made of sheet material and conforms substantially to the contour of such projecting portion of the bottle-mouth. The top of the cap is designed by 2‴ and is or may be similar to the top of the caps shown in Figs. 1 and 2; but the rim of the cap *c*″, which is designated by 3‴, is entirely different from the rims of the caps shown in the other views. The upper portion of the rim 3‴ is beveled at 16, and at the bottom of such beveled portion a locking member 4‴ is formed by the inner walls of a locking-ring formed by grooving the rim of the cap externally at this point. A considerable portion of the rim of the cap extends below the groove 4‴ and conforms substantially to the projection or bead 15 of the bottle-mouth. This type of cap is designed more particularly for use in sealing vessels containing what is known as "certified" milk, in which it is necessary to provide a seal that is destroyed by removing it from the bottle. The destruction of the cap *c*″ as a seal is accomplished in a manner substantially similar to that before described; but the tearing-strip shown at *t*″ is a short one—that is, it extends but a short distance lengthwise of the rim—the lines 5‴, 6‴, and 8‴ thereof being similar to the sheared lines of the cap shown in Fig. 1. This tearing-strip, however, may be provided with an opening 7‴, which intersects the line 5‴ and when a suitable tearing implement is inserted therein permits the tearing-strip to be torn out by a downward pull thereon.

In all of the constructions just described it

will be seen that I provide a cap which constitutes a tight seal when applied by machinery, as will usually be the case, and that this seal can be readily removed in a manner analogous to the opening of tins embodying tearing-strips. It will be noticed also that after any of the tearing-strips shown herein have been severed from the cap and the cap removed from the bottle or other vessel such cap may be applied to the vessel again to cover the mouth thereof until the contents have been used. This is particularly the case with the caps shown in Figs. 1 and 2.

What I claim is—

1. A cap for bottles, jars, &c., embodying a solid sealing top or disk and a rim having a locking member, said rim being weakened to form a tearing-strip intersecting, and lying wholly within, the edge thereof and constituting a section of said rim.

2. A cap for bottles, jars, &c., embodying a sealing-top and a rim having a locking member, said rim being also weakened to form a tearing-strip which intersects the edge of the rim and the general direction of which is lengthwise of said rim.

3. A cap for bottles, jars, &c., embodying a sealing-top and a rim having a locking member, said rim being also weakened along a line which intersects the edge thereof but the general direction of which is lengthwise of the rim to form a tearing-strip.

4. A cap for bottles, jars, &c., embodying a sealing-top and a rim having a locking member, said rim being also weakened to form a tearing-strip which intersects the edge of the rim and the general direction of which is lengthwise of said rim and the upper edge of which is close to the upper edge of the rim.

5. A cap for bottles, jars, &c., embodying a sealing-top and a rim having a locking member, said rim being also weakened to form a tearing-strip which intersects the edge of the rim and the general direction of which is lengthwise of said rim and which is of a length equal to or greater than the diameter of the rim.

6. A cap for bottles, jars, &c., embodying a sealing-top, a rim, and an inturned locking-flange at the edge of said rim, said rim being weakened to form a tearing-strip which intersects the edge of the locking-flange and the general direction of which is lengthwise of said rim and flange.

7. A cap for bottles, jars, &c., embodying a sealing-top and a rim having a locking member, said rim being also weakened to form a tearing-strip intersecting the edge thereof and being provided near the beginning of said tearing-strip with an opening for the insertion of a tearing implement.

8. A cap for bottles, jars, &c., embodying a sealing-top and a rim having a locking member, said rim being also weakened to form a tearing-strip intersecting the edge of the rim at both ends of the tearing-strip.

9. A cap for bottles, jars, &c., embodying a sealing-top and a rim having a locking member, said rim being also weakened to form a tearing-strip intersecting the edge of the rim at both ends of the tearing-strip and having near each of said ends an opening for the reception of a tearing implement.

Signed at New York, in the county of New York and State of New York, this 16th day of December, A. D. 1903.

JOHN A. JONES.

Witnesses:

C. S. CHAMPION,

R. CHAMPION.