April 22, 1930. J. E. GUNTER 1,755,441

CONTAINER

Filed April 1, 1926

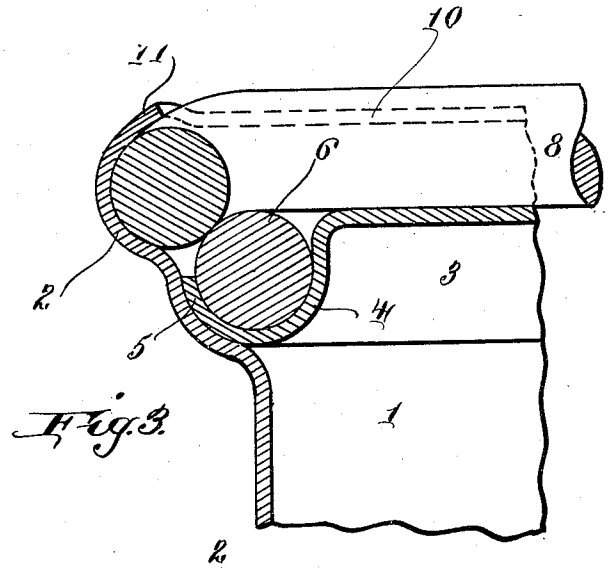

Fig. 3.

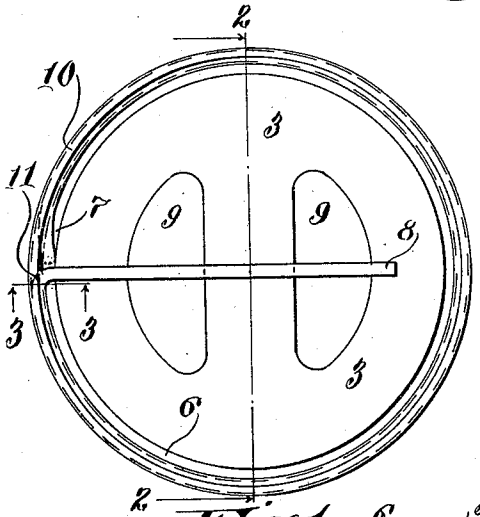

Fig. 1.

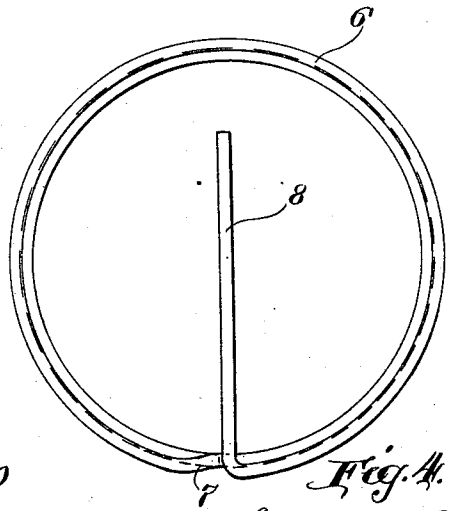

Fig. 4.

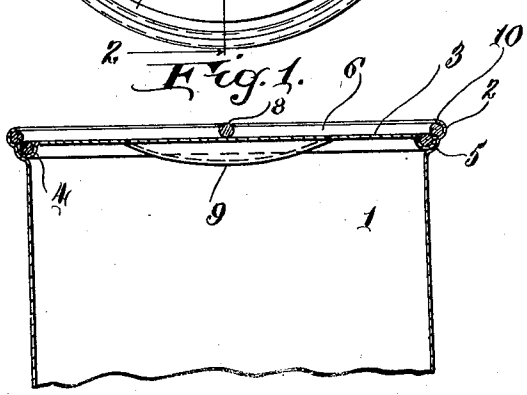

Fig. 2.

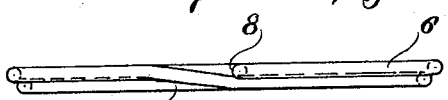

Fig. 5.

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Patented Apr. 22, 1930 1,755,441

UNITED STATES PATENT OFFICE

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CONTAINER

Application filed April 1, 1926. Serial No. 98,998.

My invention relates to new and useful improvements in closures for containers, and more particularly to one in which the closure retaining means may be readily removed, and that without destroying the further usefulness of the container.

An object of the invention is to provide a sealed closure which may be economically manufactured and applied, and which can be easily and certainly opened without the use of any tool, and a cap which, after the container is opened, may be satisfactorily used for closing the container while the contents are being used.

Another object of my invention is to make such a container the cap of which may be uniform over its surface, so that when the retaining ring or band is placed upon the cap it need not be definitely located in relation to any particular configuration of the cap.

Further objects and advantages will be apparent from the preferred form shown in the accompanying drawings:

Figure 1 is a plan view of the container and cap with a ring being shown partly in dotted lines.

Figure 2 is a cross sectional view on line 2—2 of Figure 1 looking in a direction of the arrows.

Figure 3 is a partial cross sectional view on line 3—3 of Figure 1.

Figure 4 is a plan view of the ring or band alone.

Figure 5 is a front view of the ring or band alone.

Similar numerals refer to similar parts throughout the several views.

The container body 1 has a flared mouth 2. The cover or cap 3 has an outwardly and upwardly directed shoulder 4 and the extreme lip 5 of the cap rests upon the lower part of the flared mouth 2 of the container and there is a tight seal between these two surfaces. The retaining ring or band 6 rests in the groove formed by the lip 5 and the shoulder 4 of the cap and presses inwardly and downwardly upon the cap, thereby forcing the cap into sealed relationship with the container body. The retaining ring or band 6 comprises two turns of a spiral in the shape of a section of an inverted cone, that is, the top perimeter is greater than the bottom, so that the upper turn of the spiral presses downwardly on the lower turn which as above stated presses the lid firmly against the container body. The lower end of the ring or band 7 is tapered as shown in Figure 5, and, returning upon itself the spiral on a slight angle rises to the second turn, as also shown in Figure 5 and the second turn is slightly larger than the first turn. The second turn above the point of the beginning of the spiral is directed inwardly towards the ring or band center thereby forming a handle 8 for the removal of the ring. The cap 3 has deep pressed portions 9 on each side, the facing sides of which are approximately at right angles to the cap, thereby forming a handle for the removal of the cap. Such deep pressed portions are often referred to as oyster ears. The upper portion of the flared mouth of the container is bent over the upper coil of the retaining ring or band as shown at 10. This bent over edge must extend far enough in toward the center of the container to pass beyond the line of force exerted upwardly by the container cap and the coils of the spiral ring or band. At the point where the handle projects from the ring or band this inturned flange of the container mouth is held upwardly slightly by the projecting handle as at 11, that is, the flange is not bent down into close contact with the ring or band at this point as it is throughout the rest of its course.

In assembling the container the cap may be placed within the mouth of the container and the ring or band dropped in with the handle projecting inwardly and it may be in any position around the cap since the projecting handle does not have to go into any slot in the cap. The mouth of the container is then bent over the upper part of the ring or band so that it overlaps it slightly. When it is desired to remove the cap, the handle is first pulled directly upward thereby prying out the in-turned flange at the point of the handle, and the ring or band is then pulled directly upward and around the can body, thereby prying the flange open around the

mouth of the body, until the ring or band is removed, and the cap is then removed by means of lifting on the oyster ears.

The retaining ring or band may be made any shape in cross section or of any material which will hold its form under the stresses to which it is subjected, and which has sufficient tensile strength to be pulled out.

As many changes might be made in the above arrangement, and as many variations may be made in the art above described without departing from the scope of the invention, it is intended that all features herein described or shown in the accompanying drawings shall be interpreted as illustrative only.

I claim:

1. In a container, a cap fitting within and being upheld by the container wall, an upwardly and outwardly directed shoulder on said cap, a retaining band having a top of greater perimeter than its bottom within the container and abutting against said shoulder, said wall partially overlapping the band, thereby holding it in its shoulder abutting position.

2. In a container, a cap fitting within an open end of the container, means formed upon the interior of the container wall adjacent said open end adapted to be engaged by and to support said cap, an upwardly and outwardly directed shoulder on said cap, a retaining band having a top of greater perimeter than its bottom within the container abutting against said shoulder, said wall partially overlapping the band, thereby holding it in its shoulder abutting position.

3. In a container, a cap fitting within and being upheld by the container wall, an upwardly and outwardly directed shoulder on said cap, a retaining band comprising two turns of a spiral within the container and abutting against said shoulder, said wall partially overlapping the band, thereby holding it in its shoulder abutting position.

4. In a container, a cap fitting within and being upheld by the container wall, an upwardly and outwardly directed shoulder on said cap, a retaining band comprising two turns of a spiral within the container and abutting against said shoulder, said wall partially overlapping the band, thereby holding it in its shoulder abutting position, a portion of one of the turns of said spiral projecting from said shoulder and overlapping wall, thereby forming a handle for the removal of said band.

5. In a container, a cap fitting within and being upheld by the container wall, an upwardly and outwardly directed shoulder on said cap, a partially rotatable retaining band having a top of greater perimeter than its bottom within the container and abutting against said shoulder, said wall partially overlapping the band, thereby holding it in its shoulder abutting position, and said band having a projecting handle by which to partially rotate a section of said band, and by which to remove said band.

JAMES EDW. GUNTER.