Nov. 5, 1929. W. G. BOND. 1,734,847

SEAL

Filed March 3, 1928

FIG. 1.

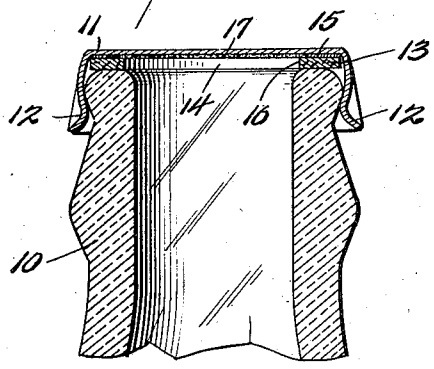


FIG. 2.

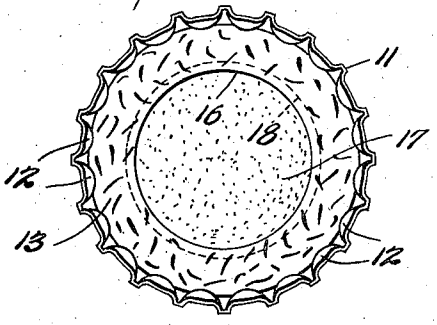
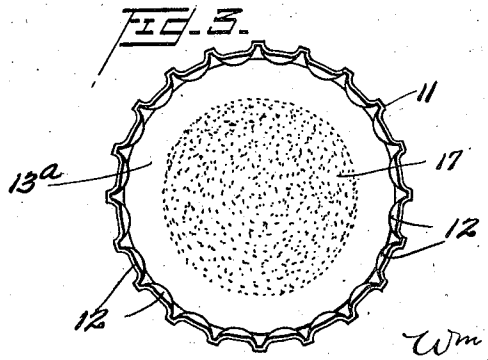


FIG. 3.



Inventor

Wm G Bond

By H. H. Snelling

Attorney

Patented Nov. 5, 1929

1,734,847

UNITED STATES PATENT OFFICE

WILLIAM G. BOND, OF HOLLY OAK, DELAWARE

SEAL

Application filed March 3, 1928. Serial No. 258,832.

The present invention relates to bottle closures and has for its principal object the provision of an inexpensive satisfactory seal.

In bottling liquids such as ginger ale for example, difficulty has been met in providing closures which are water, acid and alkali proof. In an attempt to overcome the usual difficulties a metallic cap has been used which was crimped over the mouth of the bottle and in which has been placed a disk of cork the peripheral edges of which rest on the edge of the container and engage the mouth of the bottle. A difficulty developed in the use of the cork disk in that the liquid in the container sometimes impregnates the cork and draws therefrom an extract which is objectionable to the taste and deleterious to the content of the container. Further the provision of cork disks extending entirely over the mouth of the container adds materially to the cost of production and to the final cost of the article.

Further objects of the invention, therefore, are to provide a closure for a container in which the above difficulties are overcome and in which the cost of manufacture is decreased below that of any known closure for containers of the above named character.

Still further objects and advantages will appear from the following specifications and will be included in the claims. The invention will be illustrated and described as embodied in a closure for a bottle although it is to be understood that this embodiment is to be taken as illustrative and not as limiting the invention to this particular form.

In the drawings:—

Figure 1 is a section of a cap embodying the principles of my invention and showing the same as applied to the neck of a bottle.

Figure 2 is a bottom plan view of the cap showing the same.

Figure 3 is a view similar to Figure 2 but omitting the cork ring.

Referring to the drawings in detail by reference characters, 10 designates the neck of a bottle to which is attached as by being crimped thereon, a cap 11 preferably of sheet metal and cup shaped as is usual in caps for ginger ale bottles, the crimps designated by the numeral 12.

To effectively prevent seepage past the closure and at the same time reduce the cost of materials used for this purpose and to eliminate effectively contamination of the liquid, an annular disk 13 of resilient material is provided of a diameter to fit snugly within the cap and to rest on the bottom thereof. The radial section of the ring is of a width to rest upon the upper edge of the defining walls of the opening of the container and preferably to lie in recessed relation to said opening as shown in Figure 1 of the drawings. With this construction the cut, flat faces of the disk are protected between the cap and the edge of the defining walls of the opening, leaving only the inner periphery of the disk exposed to the contents of the container.

The disk may be made of cork or it may consist of any other suitable material, as a composition of cork extruded with a suitable heat coagulated binder formed by a well known process which glazes both the inner and outer peripheries which are impervious to and unaffected by water, acid and alkali. This glazed surface designated at 16 in Figure 1 of the drawings, effectively prevents the dissolving all matter from the disk by the contents of the container of the disk and consequently prevents the contamination of the contents.

The disk is preferably secured to the cap by a thin film of cement represented in exaggerated dimensions at 15, and which is just sufficient in area to insure against loss of the disk. The portion of the metallic cap exposed by the opening 14 in the disk is covered by a film of protective material as shown at 17 in Figures 1 and 2 of the drawings, the film being in exaggerated dimensions in Figure 1 for purposes of illustration. This film 17 extends beyond the inner peripheral edge of the disk as indicated by the dotted line 18 in Figure 2.

While I prefer to apply the protective coating on the sheet metal from which the caps are made in circular spots only, it may possibly be found cheaper to coat the entire sheet

of metal in which case the protective coat will cover the entire inner surface of the cap and the disk retaining cement will be superposed on the coating, possibly by direct application of the cement to the disk. The material used for this coating should be proof against the action of the contents of the container thereupon and I find such substances as carnauba wax and cumar highly satisfactory in this connection. Cumar is a synthetic resin made from coal tar naphthas and is preferred because it gives a glossy surface which is water proof, acid proof and alkali proof to a high degree and is highly resistant to the weather.

It is obvious that various modifications of the use of the above materials may be adopted to suit varied conditions and I do not wish to be limited in the scope of my invention except as I shall be limited by the appended claims.

Having described my invention what I claim is:

1. In combination with a container having an opening therein, a closure therefor comprising a cap, a cork disk received in said cap and having a glazed surface presented to the contents of the container.

2. A closure for a container comprising a cap, an annular disk in said cap having a glazed inner periphery.

3. A closure for a container comprising a cap, a fibrous disk received within the side walls thereof and adapted to present an exposed glazed surface to the contents of the container, all other surfaces thereof being positioned to be protected either by the container or the cap when the cap is in place on a container.

4. In combination with a vessel having an opening, a cap, an annular disk snugly fitting within said cap and adapted to rest on the edge of the defining wall of said opening in recessed relation to the opening, the inner periphery of said disk being glazed.

5. In combination with a vessel having an opening, a cap, an annular extruded cork disk snugly fitting within said cap and adapted to rest on the edge of the defining wall of said opening in recessed relation to the opening, the inner periphery of said disk being glazed.

6. In combination with a vessel having an opening, a cap, an annular disk snugly fitting within said cap and adapted to rest on the edge of the defining wall of said opening in recessed relation to the opening, the inner periphery of said disk being glazed, and a liquid impervious coating covering the portion of the cap exposed by the opening in the disk.

7. A closure for containers having the surface thereof to be exposed to the contents of the container covered with a film of cumar.

8. A closure for containers comprising a cap having a resilient annular disk therein, the surface of the cap exposed by the opening of the disk being coated with cumar.

9. In combination with a container having an opening therein, a closure consisting of a metallic cap having a flat portion and side walls at right angles thereto, an annular extruded cork disk snugly fitting within the cap having its outer glazed periphery abutting the side wall, said disk being adapted to rest on the edge of the defining wall of said opening in recessed relation at all points to said opening, the inner periphery of the disk being provided with a glazed surface while the two parallel faces of the disk are cut and therefore unglazed, a coating of cumar on the portion of the cap exposed by the opening in said annular disk.

10. In combination with a bottle, a closure consisting of a metallic cap having a flat base portion and crimped side walls, an annular extruded cork disk snugly fitting within the cap having its outer glazed periphery abutting the side wall, said disk being adapted to rest on the edge of the defining wall of the opening in the bottle neck in recessed relation at all points to said opening, the inner periphery of the disk being provided with a glazed surface formed by the extruding of the hollow cork rod from which the cork disk is cut, while the two parallel faces of the disk are cut and therefore unglazed.

In testimony whereof I affix my signature.

WILLIAM G. BOND.