(No Model.)

J. WALTON.

BOTTLE.

No. 525,570. Patented Sept. 4, 1894.

Fig. 1.

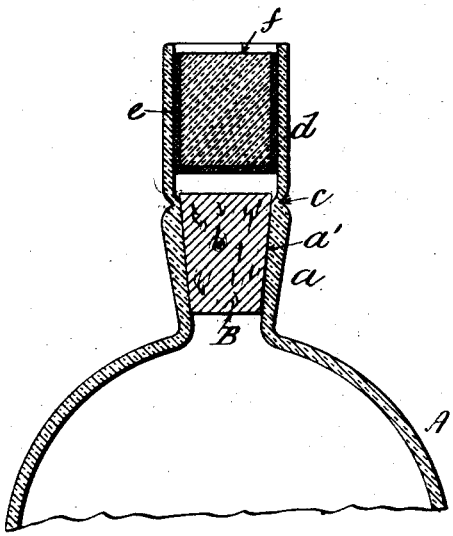


Fig. 3.

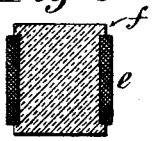


Fig. 4.

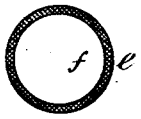


Fig. 5.

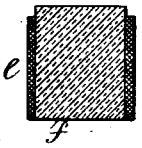


Fig. 6.

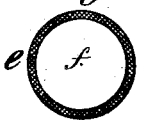
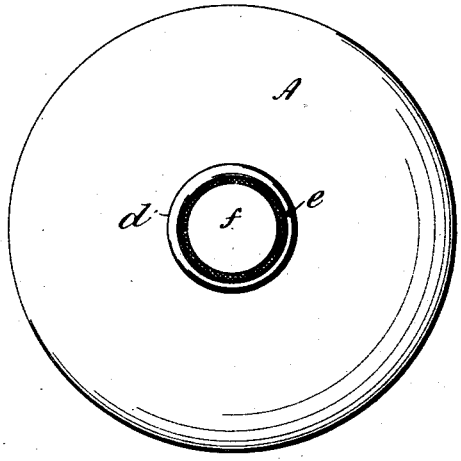


Fig. 2.



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UNITED STATES PATENT OFFICE.

JONATHAN WALTON, OF BROOKLYN, NEW YORK.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 525,570, dated September 4, 1894.

Application filed March 8, 1894. Serial No. 502,843. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN WALTON, a citizen of the United States, residing in the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Bottles, of which the following is a description sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

My invention relates to means for sealing the necks of bottles in such manner that their contents cannot be tampered with, or the bottles used a second time as an original package. I am aware that heretofore the corks of such bottles have been shielded by a hard substance cemented into an extension of the neck of the bottle above the cork; also that the extension of the neck in which said protector was cemented was joined to the neck by a circumscribing portion of reduced thickness. But the securing of the protector in the extension above the cork by the use of cement is a difficult operation, requiring so much skill and time as to render the method prohibitory in a majority of cases where it is desirable to prevent the use of a sealed original package a second time.

The object of my invention is to obviate this difficulty, and the essential feature of my invention consists in securing the protector in the extension of the neck of the bottle above the cork by means of a band or sleeve of rubber which may be quickly and conveniently slipped over the cylindrical surface of the protector and compressed into the extension of the neck as the protector is inserted therein, but which reacts by its resilience to prevent the withdrawal of the protector. Thus, when the protector and its encircling rubber sleeve have been forcibly inserted into the extension of the neck in such manner that there is no projection of either the protector or rubber band beyond the edge of the extension, it is practically impossible to withdraw the protector owing to the pressure exerted by the compressed rubber against the interior of the extension and the exterior of the protector.

Since the diameter of the protector is greater than the interior diameter of the passage in the neck proper of the bottle it is impossible to perforate or tamper with the cork by means of implements inserted through the rubber packing, and the package is effectually sealed and could only be tampered with by resort to means that would render such an expedient unprofitable or impractical in a commercial sense. The main desideratum in the application of seals of this class to original packages is simplicity and quickness in manipulation, so that the sealing can be performed by cheap, unskilled labor, and this result I accomplish effectually by my invention.

In the accompanying drawings, Figure 1, is a longitudinal section of the neck, extension, and upper part of a bottle sealed according to my invention. Fig. 2, is a plan of the neck end of the bottle. Fig. 3, is a central section of a modified form of protector and packing ring; Fig. 4, an end view of the same; Fig. 5, a central section of another modification in the use of a protector and packing ring. Fig. 6, is an end view thereof.

The extension *d*, is of a cylindrical form, its function consisting in affording a means for sealing the bottle in such manner that the sealed portion of the neck can be detached or knocked off without impairing the neck of the bottle proper *a*. Embedded in the extension *d*, is a cylinder of glass *f*, or other comparatively hard substance, which will so far resist the action of boring or drilling implements as to render their use inexpedient or impractical as a means of tampering with the contents of the bottle.

The cylinder of glass *f*, is of greater diameter than the interior diameter of the neck proper *a*.

The bottle A, is made of glass in the usual way, or other suitable material manipulated in a proper manner. Herein, for convenience of description, we will suppose it to be made of glass. The lower portion *a*, is comparatively thick, and its inner surface is adapted to receive and make a close joint with the cork B. Above this annular cork bearing surface *a'*, the neck is formed with the circumscribing ligament *c*, of reduced thickness, said circumscribing ligament separating the thicker portion of the neck from the extension *d*.

The protector *f*, is held in place within the extension *d*, by a cup or band *e*, of india rub-

ber. In Fig. 1, this packing *e*, is shown as in the form of a cup *e*, which receives the protector *f*, before insertion into the extension *d*,—the elasticity of the rubber allowing them to be forced into position within the extension *d*, but resisting their withdrawal therefrom with sufficient force to render it impracticable to tamper with the seal by means that would not be too laborious and expensive to render such tampering profitable.

Instead of the cup shaped packing *e*, shown in Fig. 1, a simple ring or band thereof may be employed in connection with the protector *f*, as shown in Figs. 3 and 5.

In Fig. 3, the protector *f*, is formed with a groove peripherally in which the band *e*, rests; but it will be sufficient ordinarily to surround the plain cylindrical protector *f*, with an annular band as shown in Figs. 5 and 6.

The circumscribing ligament *c*, of less thickness than the neck proper *a*, may be formed in the blowing or casting of the bottle, by grinding away the glass circumferentially, or by otherwise thinning the walls of the neck sufficiently to cause it to fracture with comparative ease just above the neck proper *a*.

In use the bottle is filled, and the cork B, inserted so as to bear tightly against the interior bearing surface *a'*, in the neck proper *a*. The elastic rubber sealing band *e*, being in place upon the protector *f*, they are both forced into the extension *d*, until their outer ends are on a level with or below the outer edge of the extension *d*, thus sealing the package effectively against all attempts to tamper with or withdraw the contents of the bottle until the extension *d*, is broken off. This latter operation may be readily effected by reason of the thin, fragile ligament *c*, which otherwise joins the extension *d*, with the neck proper *a*.

The protector *f*, cannot be forced through the neck of the bottle for the reason that it is purposely made too large to pass through the annular bearing surface *a'*; and it fits the extension *d*, with sufficient snugness to prevent access to the cork B, through the retaining band *e*. It will thus be seen that it is practically impossible in a commercial sense to remove the contents of the bottle without removing or destroying the extension *d*, thereby rendering the use of the bottle as an original package for a second time out of the question. The removal of the extension *d*, leaves the bottle, to all intents and purposes, in the condition of an ordinary bottle sealed with a cork.

What I claim as my invention, and desire to secure by Letters Patent, is—

A bottle formed in one piece with a cylindrical extension of the neck joined to the latter by a circumscribing portion of less thickness than the adjoining side walls, a cork in the neck of the bottle, a hard cylindrical protector of greater diameter than the interior diameter of the neck of the bottle, and a rubber packing encircling the said protector which permits of the insertion of the protector into the extension and retains it therein above the cork in the neck of the bottle substantially in the manner and for the purpose described.

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