(No Model.)

J. S. DETRICK.

BOTTLE SEALING DEVICE.

No. 524,890. Patented Aug. 21, 1894.

Fig 1.

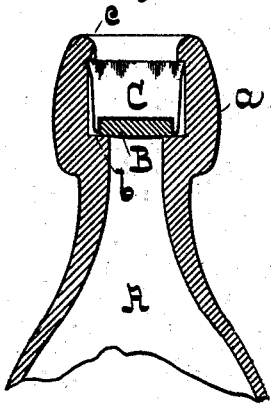


Fig 3.

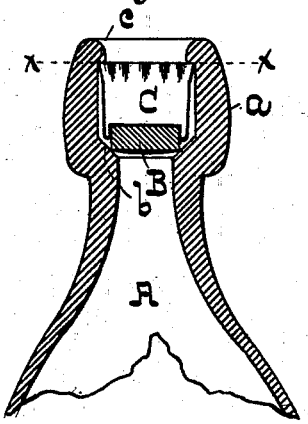


Fig 5.

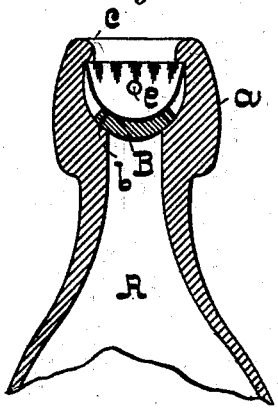


Fig 2.

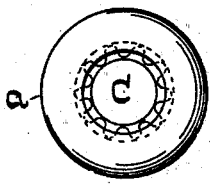


Fig 4.

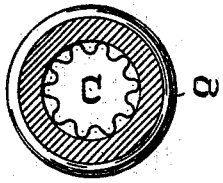


Fig.6.

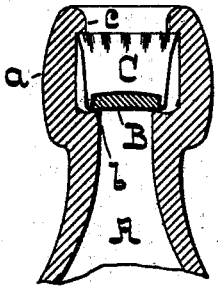
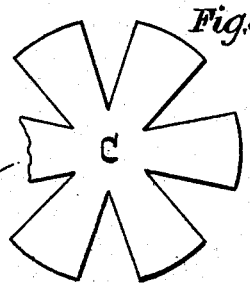


Fig.7.

Fig.8.



-WITNESSES-

Dan'l Fisher

George Hemsley

-INVENTOR-

Jacob S. Detrick,

by Geo. H. T. Mundt,

atty.

UNITED STATES PATENT OFFICE.

JACOB S. DETRICK, OF BALTIMORE, MARYLAND.

BOTTLE-SEALING DEVICE.

SPECIFICATION forming part of Letters Patent No. 524,890, dated August 21, 1894.

Application filed December 26, 1893. Serial No. 494,691. (No model.)

To all whom it may concern:

Be it known that I, JACOB S. DETRICK, of the city of Baltimore and State of Maryland, have invented certain Improvements in Bottle-Sealing Devices, of which the following is a specification.

This invention relates to certain improvements in that class of bottle sealing devices in which a compressible seal is held in contact with a seat formed of a part of the bottle, by means of a holder; and it consists in combining with a bottle head, having in its mouth a seat and a lip or projection above the seat, a compressible seal and a holder which is contracted in size as it is forced into the mouth of the bottle and onto the seal to compress it, and which expands or is expanded so as to bring a portion of its upper edge circumference under the lip or projection and thereby hold the said seal firmly in place, the remaining portions of the edge being within the said lip so as to provide spaces into which an extracting device may be introduced as will hereinafter fully appear.

In the further description of the said invention which follows, reference is made to the accompanying drawings forming a part hereof, and in which, the invention is shown in various forms hereinafter described.

Referring to Figures 1 and 2, which are, respectively, a vertical section, and a plan of the upper part of a bottle embodying the invention, A is the bottle, and *a* the head of the same.

The seal seat is denoted by *b*, and the projecting lip which is situated over the seat, by *c*.

B is the compressible seal formed of any suitable material, preferably cork, which rests on the flat annular surface or seat *b*.

C is the spring seal holder which consists of a metallic cup with its bottom recessed to receive the seal B, and its upper edge corrugated, so that portions only of its circumference project under the lip *c*. In other words the outer diameter of the corrugated edge of the cup shaped holder, is somewhat greater than that of the portion of the bottle mouth above the lip or projection *c*, while the inner diameter of the corrugations is considerably less, consequently, there appears, when the sealed bottle is viewed from its end, a series of exposed depressions into any one of which an extracting tool may be forced to effect the removal of the sealing device, as will hereinafter more fully appear.

The sealing of the bottle consists merely in forcing to its seat the compressible seal by means of the holder; or forcing in the holder and seal until the edge of the former passes to below the lip *c* and expands so as to bring the outer corrugations of its edge under the same.

To unseal the bottle, an instrument consisting preferably of a rod, is forced into one of the spaces made by corrugating the upper edge of the holder, and then using it as a lever to crush in the side of the holder, and thereby practically reduce its diameter. By continuing this movement of the tool, the sealing device is ejected from the mouth. In this operation the seal is either removed with the holder or forced out by the contents of the bottle.

I have shown the cup as provided with ten corrugations, but any number may be employed, and a reduced number is perhaps preferable.

Referring now to Figs. 3 and 4, the former being a vertical section, and the latter a cross section of Fig. 3, taken on the dotted line *x*—*x*, it will be seen that the seat *b* instead of being flat is conical, but in other respects, the construction shown in the preceding figures, is preserved.

Referring now to Fig. 5, which is a vertical section of a bottle, and its sealing device, it will appear that the seat is concave, and the seal concavo-convex, which shape is effected in the act of sealing by the sealing cup which has a rounded bottom.

In Fig. 6 the seat is convex and the bottom of the sealing cup, concave.

Fig. 7 is a top view of a corrugated sealing cup the wall of which is slit, and each alternate segment forced out and thereby adapted

to spring under the lip *c*. This construction provides spaces for the introduction of the extracting tool, before alluded to.

Fig. 8 is a view of the blank form from which the cup shown in Fig. 7 is made.

I claim as my invention—

1. In combination with a bottle having a mouth provided with a seat and a projection or lip over the seat, a seal on the seat, and a corrugated sealing cup with its bottom resting on the seal, and a portion of its corrugated upper edge, in contact with the under side of the said projection or lip, substantially as specified.

2. In combination with a bottle having in its mouth an annular seat and above the seat a projection or lip, a seal, and a seal holder with a corrugated edge which occupies the space between the seated seal and the lip, substantially as specified.

3. In combination with a bottle having in its mouth a seat, and a lip or projection above the seat, a seal and a cup-shaped holder, having its upper edge corrugated, to give space for the insertion of an extracting tool, substantially as and for the purpose specified.

JACOB S. DETRICK.

Witnesses:
GEO. E. TAYLOR,
WM. T. HOWARD.