No. 807,168. PATENTED DEC. 12, 1905.

J. A. HICKS.

MEANS FOR SEALING VESSELS.

APPLICATION FILED DEC. 10, 1904

Fig. 1.

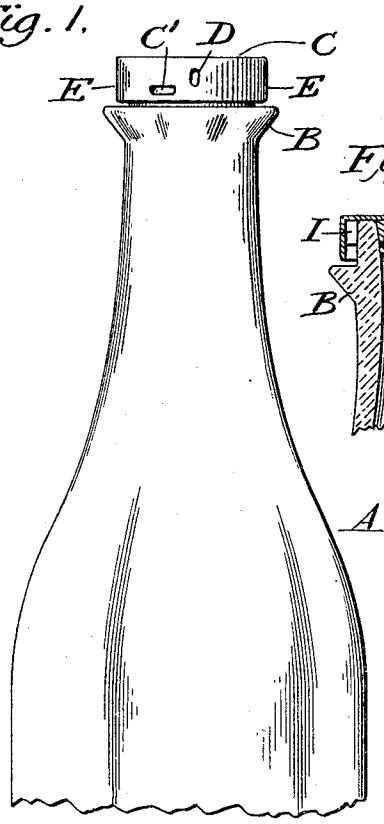


Fig. 4.

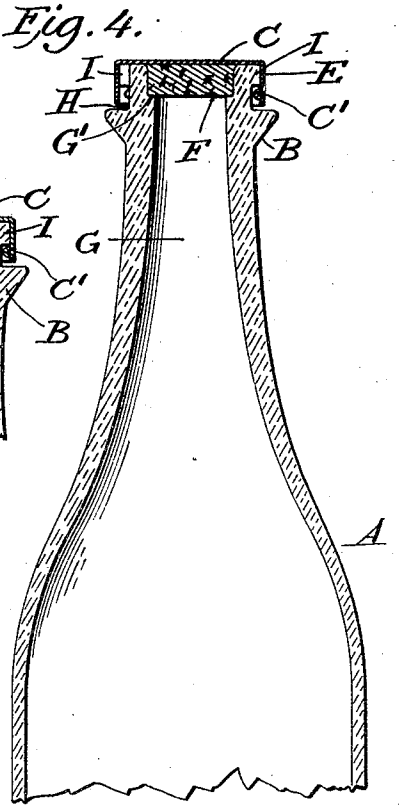


Fig. 7.

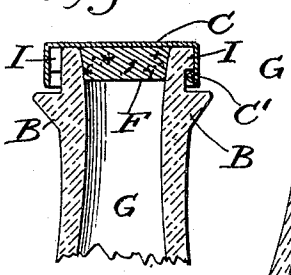


Fig. 2.

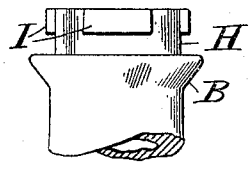


Fig. 5.

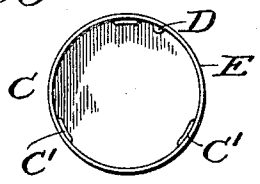


Fig. 3.

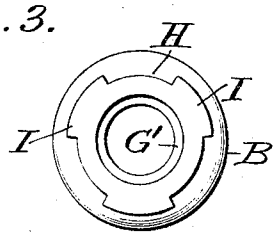
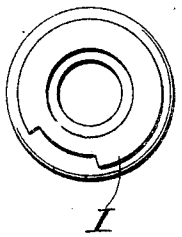


Fig. 6.



Witnesses
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By his Attorney
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UNITED STATES PATENT OFFICE.

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MEANS FOR SEALING VESSELS.

No. 807,168. Specification of Letters Patent. Patented Dec. 12, 1905.

Application filed December 10, 1904. Serial No. 236,344.

To all whom it may concern:

Be it known that I, JOHN AUGUSTUS HICKS, a citizen of the United States, residing at Summit, Union county, New Jersey, have invented certain new and useful Improvements in Means for Sealing Vessels, of which the following is a specification.

My invention relates to sealing means for vessels; and it consists in certain elements fully specified and claimed hereinafter.

In order that those skilled in the art to which my invention appertains may understand, construct, and use my invention, I will proceed to describe it, referring to the drawings herewith forming a part of this specification.

Figure 1 is a longitudinal elevation of my invention, showing the sealing-cap on a bottle. Fig. 2 is an elevation of the top of a bottle without the cap and showing the lugs upon the top of the exterior of the neck, the under side of which lugs is parallel with the top walls of the bottle. Fig. 3 is a top view of the same. Fig. 4 is a longitudinal central section of the bottle, showing the cap on the bottle, the indents in the cap which lock the cap on the bottle, also showing a shoulder in the bore of the bottle-neck near its top, and a stopper compressed between the top surface of the cap and the shoulder in the bore of the bottle, also the top edge of the stopper compressed into the crack or space between the top surface of the cap and the top of the walls of the bottle. Fig. 5 is a reversed view of the cap or a view of the under side thereof, showing the indents in the cap and the stop. Fig. 6 is a top view of Fig. 7. Fig. 7 is a vertical central section of a bottle-neck, showing a taper mouth instead of a shoulder in the mouth and for the same purpose.

A is the body of the bottle.

B is a swell near the top of the bottle-neck.

C is the top surface of the cap.

C′ represents indents in flange E.

D is an indent in the pendent flange E.

E is a flange pendent from the outer diameter of upper surface C of the cap.

F is a stopper of compressible material located in the mouth of the bottle and resting on the shoulder G′.

G is the bore of the bottle below the shoulder G′.

G′ is a shoulder near the top of the bore of the bottle-mouth.

H is the outer diameter of the bottle-neck above the swell B and below the lug or lugs I.

I represents lugs formed at or near the top of the exterior of the neck of the bottle.

In both forms of locking the cap to the bottle-neck the contents of the vessel when under pressure from within the bottle forces the top edge of the stopper against the under flat side of the cap and into the crack between the cap and bottle, be it small or large, and insures a tight seal, the stronger the pressure the better the seal will be.

The method of locking the cap to the bottle (shown in Figs. 6 and 7) is similar to that shown in patent to James M. Hicks, December 8, 1903, No. 748,329, the stop-indents in the cap taking against the vertical sides of the lug on the bottle in locking and unlocking the cap to and from the bottle by parallel and circumferential movement only.

The operation of my invention is as follows: The bottle being charged with fluid, the stopper F is placed in the mouth of the bottle, the top of the stopper protruding slightly above the top of the walls of the bottle-mouth. The cap C is then placed upon the bottle and pressed down to compress the stopper F until the indents C′ reach below the level of the lug or lugs I, thus compressing the stopper to the level of the top of the walls of the bottle-mouth, as near as may be practical, leaving of course a slight crack or space between the two into which the compressed stopper will be forced more or less diametrically. The cap is then turned, bringing the indents C′ under the lugs I until the stop D strikes the edge of a lug and limits the circumferential movement. To open the bottle, of course the cap is turned in the reverse direction until the stop D strikes the reverse side of a lug I, and the cap is then lifted upward and off, or, in case the bottle is filled with pressure, it will be forced off with the stopper F.

The greater the pressure in the bottle the more will the stopper be forced diametrically into the crack between the cap C and the top of the vessel-walls, thus securing a tight closure.

Having now fully described my invention and the manner in which I have embodied it, what I claim as new and as my invention, and desire to secure by Letters Patent, is—

1. A sealing-cap for vessels, comprising a top surface; a flange pendent from said top surface provided with horizontal indents near its lower edge and substantially parallel with the said top surface, to lock it to a vessel-neck; a stop-indent located slightly above the horizontal line of the said horizontal locking-indents, all constructed, arranged and combined, when on a vessel to lock the cap to it, by taking under a lug or lugs thereon, and to limit its circumferential movement by taking against the vertical side of a lug, substantially as specified.

2. In a means for sealing vessels, the combination consisting of a sealing-cap having a top surface; a flange pendent from said top surface, provided with horizontal indents substantially parallel with said top surface; and a stop-indent located slightly above the line of said horizontal indents, such that when placed on a vessel, having a lug or lugs as I, the horizontal indents will take thereunder and the stop-indent will take against the vertical sides of a lug and limit the circumferential movement of the cap; a vessel having a lug or lugs near the top of its neck; a vessel-mouth having a contraction located within said mouth forming a detent, a stopper compressible between the under surface of the top of the cap and said detent located within the vessel-mouth, and into the space between the under surface of the cap and the walls of the vessel-mouth, substantially as specified.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 29th day of November, 1904.

JOHN AUGUSTUS HICKS.

Witnesses:

JAMES M. HICKS,

NATHANIEL P. BARR.