J. M. HICKS.

MEANS FOR SEALING VESSELS.

APPLICATION FILED MAY 15, 1908.

934,072. Patented Sept. 14, 1909.

Fig. 1.

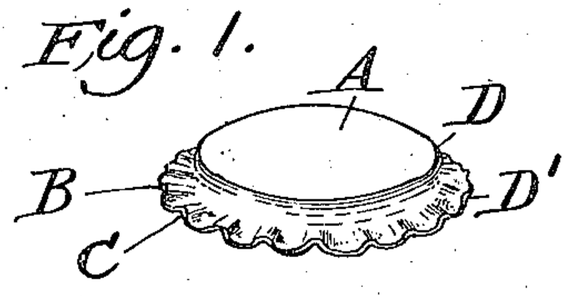


Fig. 2.

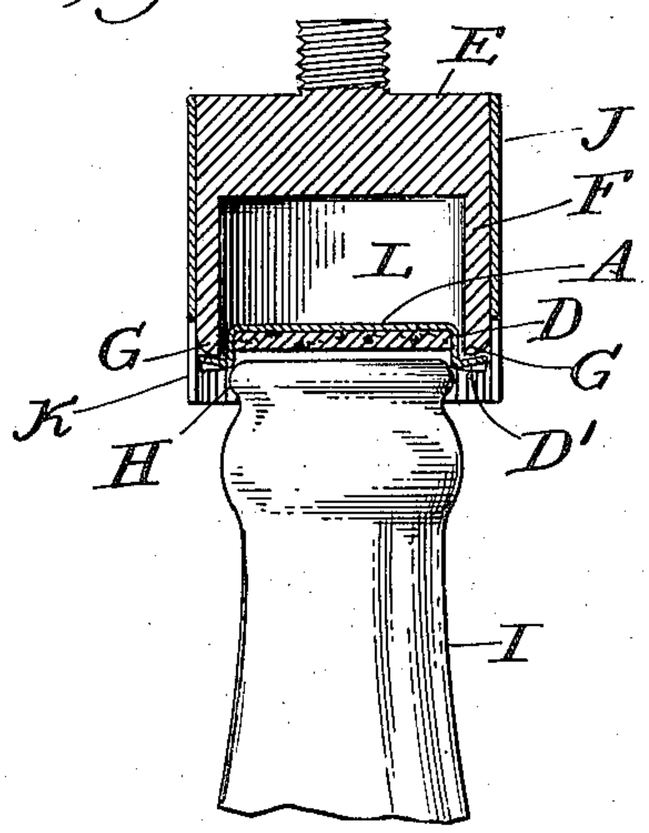


Fig. 3.

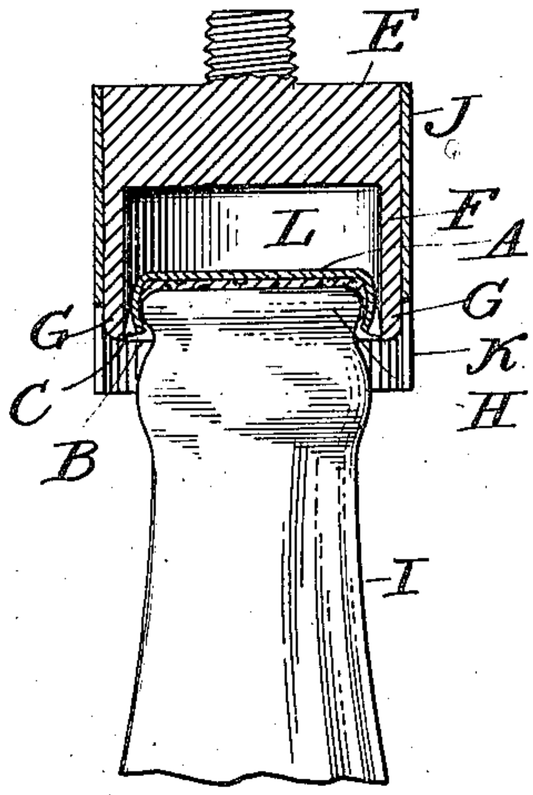


Fig. 5.

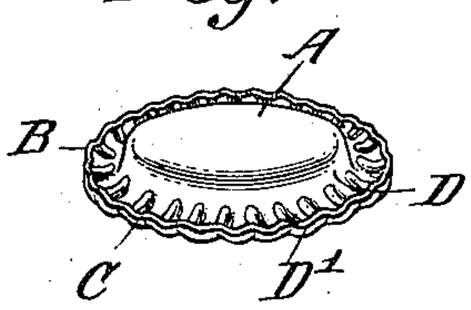


Fig. 4.

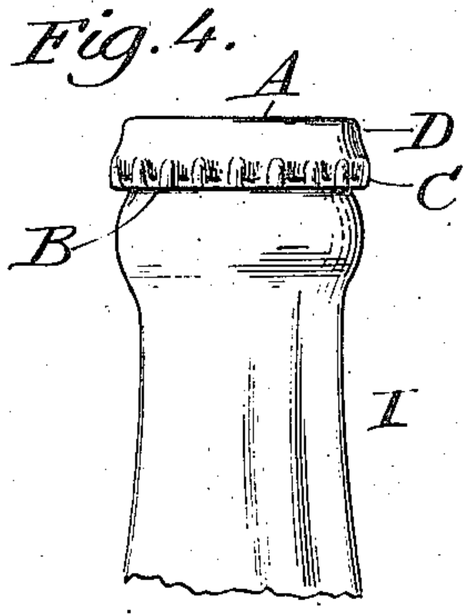
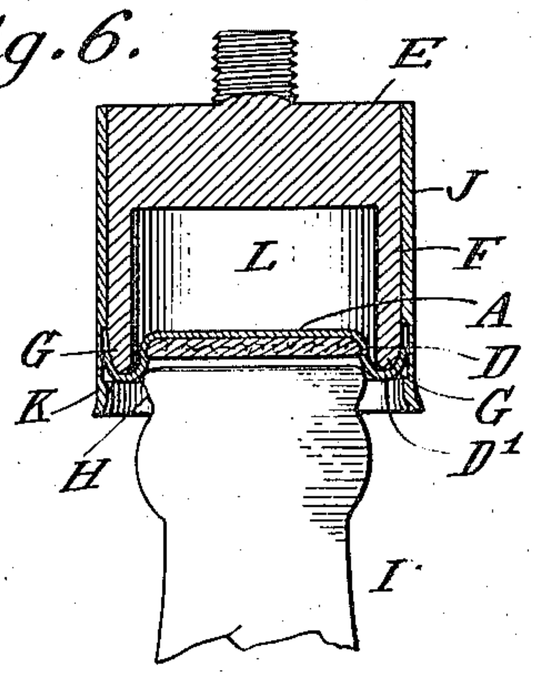


Fig. 6.



WITNESSES

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MEANS FOR SEALING VESSELS.

Specification of Letters Patent. **Patented Sept. 14, 1909.**

934,072.

Application filed May 15, 1908. Serial No. 433,018.

To all whom it may concern:

Be it known that I, JAMES MILNOR 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 caps for vessels, and it consists in certain elements and combinations, fully set out and claimed in the following specification.

The object of my invention is to provide means for locking a metal sealing cap flange beneath a bead on the vessel neck, and leave the barrel of the cap smooth to contact with and grip the bead of the vessel, by its own elasticity.

In order that persons 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 accompanying drawings forming part of this specification in which—

Figure 1 shows a perspective view of a sealing cap according to my invention. Fig. 2 shows it in vertical central section being applied to a vessel. Fig. 3 shows in vertical central section the same after it has been applied to a vessel. Fig. 4 shows the cap applied to a vessel. Fig. 5 shows a perspective view of the sealing cap; flange D; crimped flange D^1, flaring outward from flange D and turned upward toward its outer edge. Fig. 6 shows a longitudinal central section of the sealing cap and the tool which holds and applies it to a vessel neck bead.

A shows the top surface of the cap. D shows a circumferential flange, pendent from the said top surface A, of smaller diameter than the bead upon the vessel.

D^1 shows an angular outward flare to flange D, having its surface divided into crimps B, C, which are on the flare only, B shows the raised portions of the crimps and C shows the depressions between the raised portions B.

E shows an applying tool, bored out and having parallel walls F.

G shows the shape of the bottom of the wall F.

H shows a bead upon the top of vessel neck I.

J is a thin sleeve of metal secured on the outer surface of applying tool E and split into spring fingers K at its bottom, to hold a cap.

L shows the bore of tool E.

The outer part of flare D^1 is turned upward somewhat and the cap is pressed into the spring fingers K with the turned up portion engaging the curved bottom of the walls F, so that the cap is centered in the tool by means of this turned up outer flange.

The form of the bottom end of wall F is shaped to fit the turned up part of flare D^1.

When the cap on tool E, and the bead H, on the vessel are brought together by force applied in line with the bore of the vessel, and center line of the tool E, the metal of the pendent flange D, the same being of smaller internal diameter than the outer diameter of the bead H, stretches and at the same time the tool E draws the flare D^1 of the cap down over the bead H, and compresses the wafer within the cap to fit the top of the bead H, and as the movement progresses the flare D^1 enters the bore of the tool E, and the depressions C, of the flare D^1, are compressed under the bead H, by the raised portions B, as they enter the bore of the tool E, the cap is conformed to the bead H and the vessel is sealed. Not only is the cap held by the under grip of the parts C, but the contraction of the stretched metal of the part D in passing over bead H, pinches the bead and forms an outside seal between the metal D of the cap and the bead H according to my patent of Feb. 25th. 1905 No. 783,038.

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 cap for sealing vessels, consisting of an upper surface; a substantially vertical flange pendent from the said upper surface; a circumferential flange surrounding the lower end of said pendent flange, turned upward at an angle from its bottom toward its outer circumference, substantially as and for the purpose specified.

2. The combination of a vessel having neck and bead near its top, and a metal sealing cap having top surface and a flange pendent from said top surface of smaller diameter than the outer diameter of the said vessel bead; and a regularly crimped and outwardly flaring flange turned upward from

the bottom of said pendent flange toward its circumference, whereby when said cap is stretched over said bead, said bead is pinched by said pendent flange and when the said flaring flange is compressed inward circumferentially the crimps of said flange engage the under side of said bead upon the vessel, substantially as specified.

3. A sealing cap for vessels, comprising a top surface, a flange pendent from said top surface, a flange turned outwardly from the base of said pendent flange and turned upwardly toward its circumference as and for the purposes specified.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this 13th day of May 1908.

JAMES MILNOR HICKS.

Witnesses:

W. H. Rose,

N. P. Barr.