J. M. HICKS.

METHOD OF APPLYING SEALING CAPS TO VESSELS.

APPLICATION FILED FEB. 18, 1909.

949,477. Patented Feb. 15, 1910.

Fig. 1.

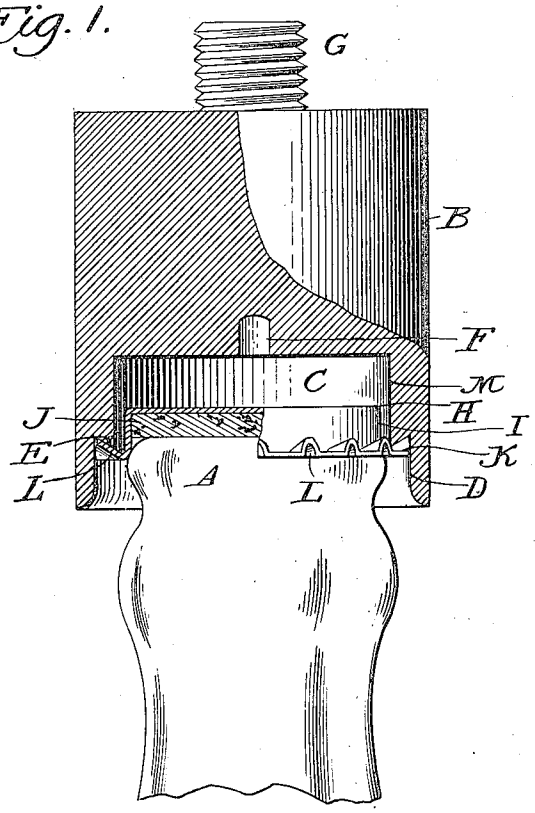
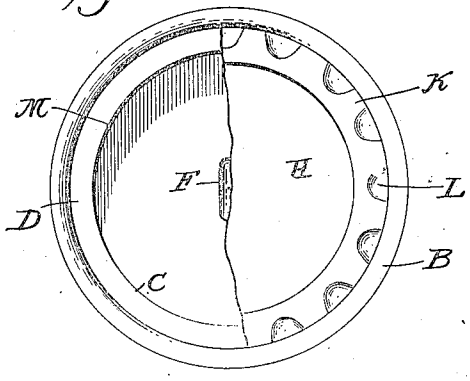


Fig. 2.



WITNESSES

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METHOD OF APPLYING SEALING-CAPS TO VESSELS.

949,477. Specification of Letters Patent. Patented Feb. 15, 1910.

Application filed February 18, 1909. Serial No. 478,625.

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 Methods of Applying Sealing-Caps to Vessels, of which the following is a specification.

My invention relates to the method of applying sealing caps to vessels.

The object of my invention is to apply a sealing cap to a vessel which has an enlargement surrounding its mouth in the nature of a bead of larger diameter than the cap which is to be applied to it. The sealing cap which is to be applied, has a top surface, a barrel or pendent flange depending from said top surface, also a crimped flange flaring circumferentially outward from the base of said barrel. The crimps of said flaring flange are turned upward at an angle toward its circumference so that pressure brought to bear upon the raised portions of the said flaring flange only stretches the metal of the cap barrel over the said vessel bead, to obtain a close contact therewith. This action compresses the sealing material within the cup of the cap and regularly folds portions of the said flaring flange beneath the vessel bead to secure the cap firmly in sealed position on the vessel, and to this end my invention consists in certain elements and combinations fully set out in and claimed at the end of this specification.

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 accompanying drawings forming part of this specification in which—

Figure 1. shows a central longitudinal part section of my invention in position as it appears at the beginning of the operation of applying a sealing cap to a vessel. Fig. 2. shows a view of the cap applying tool looking from the bottom side upward, one half showing the cap in place therein.

A shows the vessel bead.

B shows the body of the applying tool.

C shows the inner barrel of the tool.

D shows the lower part of the tool bored larger than the barrel C, leaving between the two a shoulder E.

F shows a screw driver slot by which the tool is screwed into a resistance post of a capping machine. G shows this screw thread attachment.

H shows the top surface of the sealing cap.

I shows the barrel or flange pendent from the top surface H.

J shows the sealing material within the cap.

K shows the flange flared toward the outer edge. L shows raised portions of crimps in said flaring flange flared upward.

The operation of my invention is as follows: By my method a sealing cap is sprung into the bore D of the applying tool the flange of the cap being somewhat elastic, the cap is retained there by friction. The vessel is placed beneath the cap and tool centrally. The bead A is guided centrally of the cup of the cap by the curved top surface of the bead coming in contact with the walls of the cup of the cap. The cap is held firmly within the lower bore D of the applying tool, with the upper surface of the upturned raised crimps of the flaring flange in contact with the shoulder E, which is shaped to fit this raised surface, so that by bringing the tool with its cap and the vessel bead forcibly the one toward the other, in central alinement with each other, the shoulder E presses upon the flange at L and as the movement progresses, the flange at L is pinched against the wall of bore D, and a firm grip is obtained on the said flaring flange by the shoulder E and the sealing material J is compressed and then the bead of the vessel is forced into the cup of the cap, thereby stretching the metal I to the form of the bead A. In doing this the flange K has been turned to an angle of depression, and passes the horizontal line, so that by further movement the flange K with crimps L has passed up into the barrel C of the tool and the flange K has been folded beneath the bead A and the cap has been locked.

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. The within described method of applying sealing caps, having a top surface; a barrel beneath said top surface; and a crimped flange flaring outwardly and upwardly from the said barrel, which consists in pinching the raised outer portion of said flaring flange between a circumferential resisting medium,

and the outer surface of the vessel bead, to which said cap is to be applied, and by the approach of one element toward the other in central alinement, stretching the barrel of said cap over said vessel bead, and by the continued forcible approach of the one element toward the other entering the said cap within confining walls and thereby forcing portions of said flaring flange beneath the said vessel bead, to lock the cap to the vessel, substantially as specified.

2. The within described method of applying a crimped flanged sealing cap, whose raised crimps turn upwardly toward their extreme outer edges, to a vessel having a circumferential bead, which consists in inclosing the barrel of the cap within circumscribing bounds, and the outer circumference of the raised flange crimps, within a circumscribing rim, primarily, and then by pressure brought to bear upon the upper side of the outer edges of the said raised crimps, seating the cap upon the vessel mouth, and causing the depressions of the crimped flange to be forced under the vessel bead, to securely lock it to the vessel, substantially as specified.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this eighteenth day of February 1909.

JAMES MILNOR HICKS.

Witnesses:
JOHN A. HICKS,
N. P. BARR.