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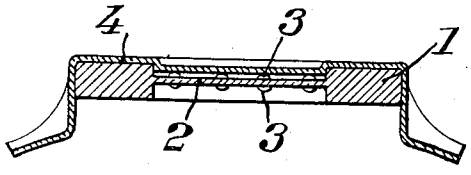
AIR TIGHT DISC FOR CROWN CAPS

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Fig. 1.



Fig. 2.



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AIRTIGHT DISC FOR CROWN CAPS

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1 Claim. (Cl. 215—40)

The placing of air tight discs in the interior of crown caps for bottles for the purpose of effecting the hermetic sealing of said bottles is well known.

These air tight discs are generally comprised of small cork discs. These discs can be hollowed out in the center and can be in the form of flat or crown rings.

The placing of discs of this nature is effected with difficulty.

The placing of the discs is generally effected by machines in which the discs are piled one upon another, and at each passage of the crown cap through the machine one of the discs is displaced laterally and falls into the crown cap.

The disc, owing to its circular shape and its hollowed out center has a tendency to be deformed under the effect of the pressure and to assume an elliptical form; with the result that the disc cannot place itself into the space provided in the crown cap, causing improper operation and necessitating the intervention of the operator.

According to the present invention, the heretofore described improper operation is prevented by the use of a disc or sealing ring comprised of plastic material and having a thin diaphragm portion at its interior. The diaphragm portion provides sufficient rigidity in a transversal sense to the disc to ensure that it does not deform at the moment of being placed into the crown cap; in addition it insures air tightness and prevents the liquid contained in the bottle from coming into contact with the metallic surface of the crown cap. Finally, the use of plastic material and the manufacture of this disc by moulding ensures the obtaining of a regular thickness that is difficult to obtain with cork.

In the attached drawings,

Fig. 1 is a cross-sectional view of an air tight disc according to the present invention.

Fig. 2 is a cross-sectional view of a crown cap with air tight disc according to the present invention.

The disc obtained by moulding is comprised of a suitable plastic material possessing elastic qualities necessary for efficient sealing.

The disc or sealing ring is an integral unit comprised of a circular annular portion 1 having two axially spaced-apart annular faces and the outside diameter of which corresponds to the circular space provided in the crown cap. The disc comprises, at its center, a continuous

central diaphragm portion 2 considerably thinner than the outer part but of substantially uniform thickness and lying in a single plane substantially half-way between the faces of the annular portion throughout its entire extent.

Diaphragm portion 2 is sufficient to prevent any deformation of the disc during its placing in position in the crown cap.

Diaphragm portion 2 suitably comprises certain solid spaced projections 3 which are circular for example and are spaced axially-inwardly from the faces of the annular portion, to prevent the diaphragm portion from coming into contact on all its surface with the interior bottom surface of crown cap 4 when the sealing ring is seated in the cap with its annular portion lying against the bottom and the skirt of the cap, the central cylindrical downwardly-projecting cup-shaped portion of the cap being accommodated in the central circular space of the sealing ring defined by the annular portion.

I claim:

In a crown cap having a bottom and a skirt and a central cylindrical downwardly-projecting cup-shaped portion, a plastic sealing ring comprising an integral unit having an outer annular portion defining a central circular space adjoining the skirt of the crown cap and adapted to lie between the bottom of the cap and the upper edge of the neck of the container upon which the cap is applied, and a continuous central diaphragm portion completely filling the space within the outer annular portion, said outer annular portion having two axially spaced-apart annular faces and said central diaphragm portion having a substantially uniform thickness which is substantially less than the axial dimension of said annular portion and said diaphragm portion lying in a single plane substantially half-way between the faces of the annular portion throughout its entire extent, said central diaphragm portion being provided with a plurality of solid spaced circular projections extending from at least the upper face thereof, said projections being spaced axially-inwardly from the faces of said annular portion to accommodate said central projecting portion of the crown cap in said central circular space with the projections in face contact with the lower surface of said cup-shaped portion, whereby said faces of said annular portion lie axially outwardly of all surfaces of said central diaphragm portion and said annular projections.

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