Oct. 11, 1938. C. H. BERRY 2,132,672

PAPER MILK BOTTLE

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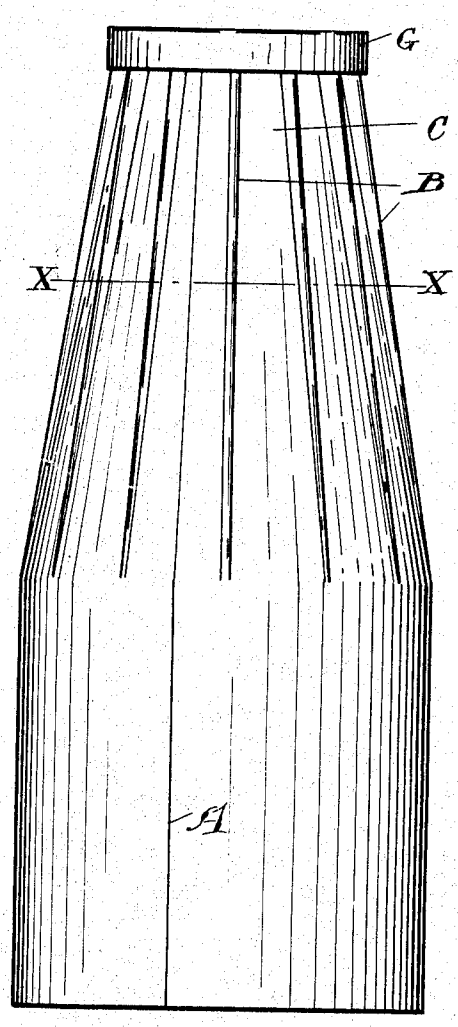


Fig. 1

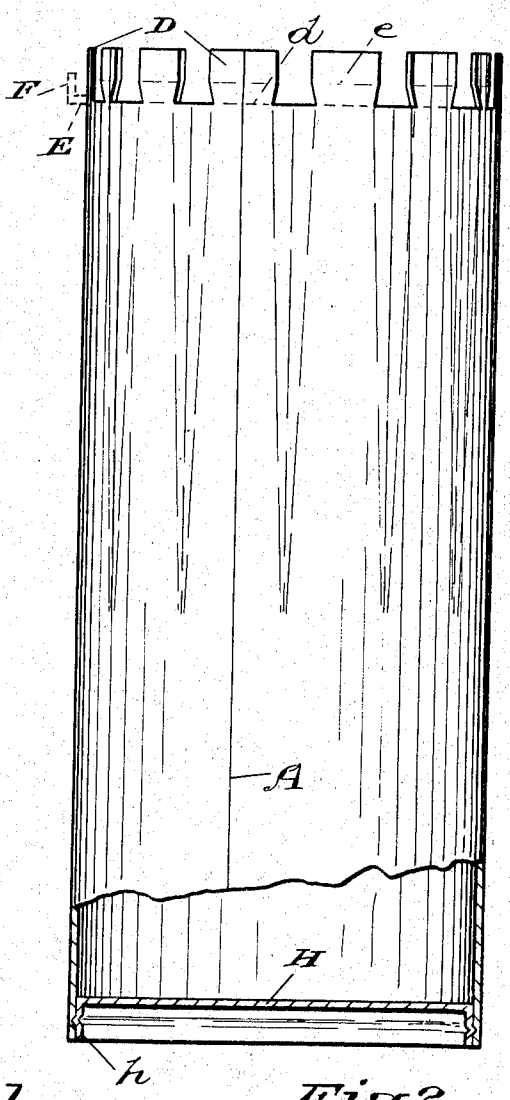


Fig. 2

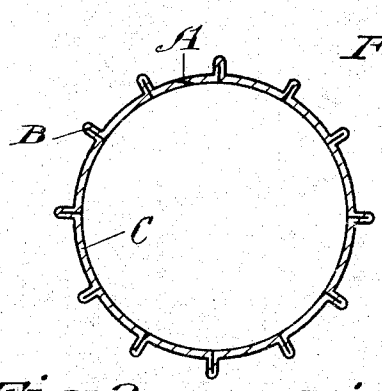


Fig. 3

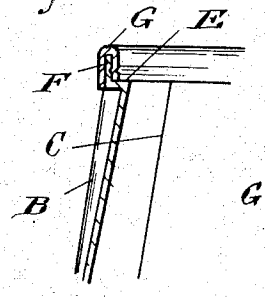


Fig. 4

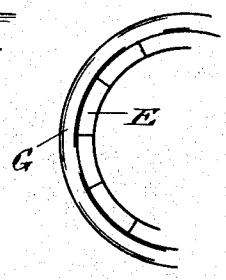


Fig. 5

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UNITED STATES PATENT OFFICE

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PAPER MILK BOTTLE

Christopher Hamilton Berry, Toronto, Ontario, Canada

Application July 28, 1937, Serial No. 156,191

1 Claim. (Cl. 229—4.5)

This invention relates to a milk bottle or container, formed of fibrous material, such as paper substantially corresponding in shape and size, with the standard milk bottle.

An object of the invention is to produce a bottle light in weight, durable and rigid, and applicable of being filled and capped by any of the standard bottle filling and capping machines.

A further object is to produce a paper bottle that may be semi-transparent and leak proof by being completely coated, either before or after formation, with a suitable composition, such as paraffin or the like.

A further and novel feature is to form from a single sheet of fibrous material, such as paper, a liquid container into the shape and formation of a standard milk bottle, that will resist crushing and damage when being filled or handled, and will not bulge or lose its regular shape after standing for lengthy periods with liquid contents.

In the hereunto annexed drawing—

Figure 1 is an elevational view of the bottle.

Figure 2 is an elevational view of the bottle before the neck and head is formed,

Figure 3 is a transverse sectional view on lines X—X, Figure 1,

Figure 4 is a detail sectional view through the head, and

Figure 5 is a fragmental top plan view of the head.

The bottle is formed from a single sheet of fibrous material, such as paper of a suitable weight, and thickness, notched along one edge; to form a series of ears adapted to be folded into shape to form the mouth of the bottle.

In forming the bottle the sheet of paper is formed into tubular formation and cemented along the meeting edges at A.

To form the neck and mouth of the bottle, the upper portion of the tubular body is crimped at regular intervals, by a series of graduated radial folds B, increasing in depth towards the upper edge and gradually decreasing the diameter of the upper half of the tube, thereby forming the neck C, reinforced by the folds B, in longitudinal direction to maintain shape and prevent being mis-shaped when being handled and filled.

To form the mouth of the bottle the ears D, are folded outwardly in radial relation at right angles on the lines *d*, to form a shoulder E. The outer portion of the ears are then bent upwardly from the lines *o* to form a radial flange F or the mouth of the bottle.

Fitted and cemented over the flange F is a binding ring G, formed in U-shape, and preferably formed from paper.

To further bind the ring G over the upwardly bent portions of the ears into circular formation, the inner periphery of the binding ring is embossed by any suitable method when the bottle is being formed.

The shoulder E, and flange F form the mouth of the bottle proper, and also provide a seat for the cap applied by the bottle filling apparatus for sealing the contents.

H, designates the bottom of the bottle, consisting of a paper disc, formed with a radial flange *h* adapted to be cemented to the interior walls of the bottom portion of the bottle.

To further bind and seal the bottom in place and to make leak proof the flange is embossed in circular relation, which also reinforces and strengthens the attachment.

What I claim as new and desire to secure by Letters Patent is—

A bottle of the character described, a sheet of fibrous material having one of its edges notched to form a series of folding ears, the said sheet being formed and cemented into tubular formation, the upper portion of said tubular member being converged by a series of graduated radial crimps to form a neck and mouth therewith, the said ears being folded over at right angles into radial relation to form a shoulder and the said ears being further folded over at right angles to the said shoulder to form a radial flange and mouth with said neck, and a U-shaped binding ring engaging over the said radial flange, a closure fitted in the opposite end of said tubular member forming a bottom therewith.

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