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J. H. O'NEIL

2,391,337

PAPER CONTAINER STRUCTURE AND END CLOSURE THEREFOR

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Fig. 1.

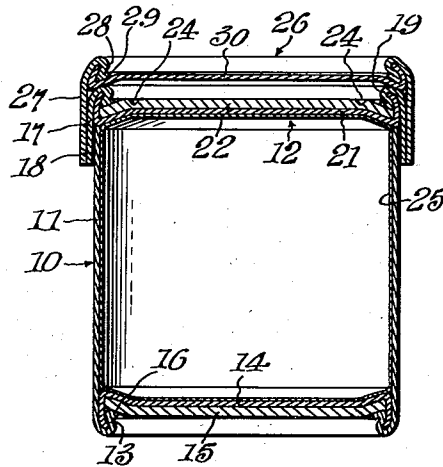


Fig. 2.

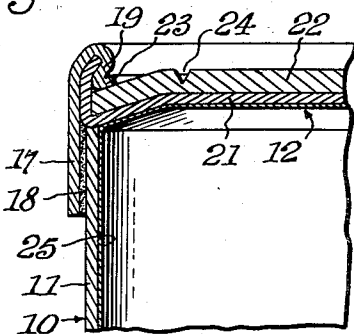


Fig. 3.

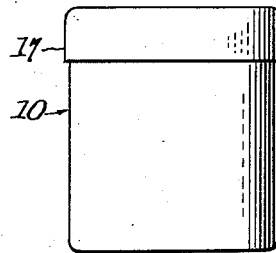


Fig. 4.

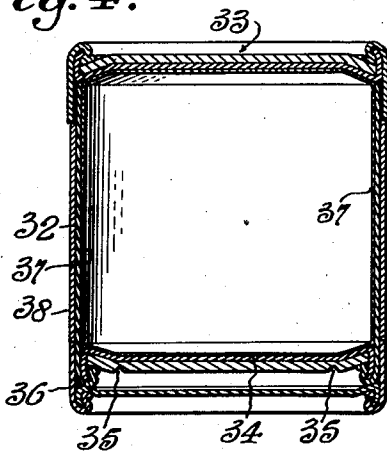
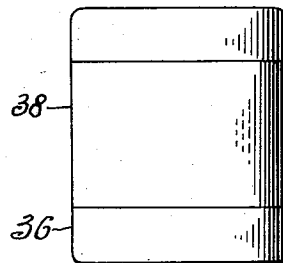


Fig. 5.



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PAPER CONTAINER STRUCTURE AND END CLOSURE THEREFOR

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Application December 13, 1943, Serial No. 514,129

1 Claim. (Cl. 229-5.5)

This invention relates broadly to paper containers and more particularly to the manufacture of novel closure members connected with the container body to close the ends thereof.

One of the objects of the invention is to provide an inexpensive paper or fiber container which is liquid tight and strongly constructed so that the possibility of leakage in handling is substantially eliminated.

Another object of the invention is to provide a paper container which is inexpensive to manufacture and which may be manufactured on existing machinery.

It is still another object of the invention to provide a paper container with a treated inner lining which is impervious to liquids containing solvents, such as paint.

A further object of the invention is to provide a container wherein one or more slip-fit covers are provided at one or both ends of the container body, and wherein a heavy reinforcing disc is inserted in the slip-fit cover to reinforce the same.

It is still a further object of the invention to provide a reinforced cover for a paper container which may be readily opened, and to provide an additional slip-fit cover for reclosing the container in the event all of the contents are not used at one time.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more fully understood by following the detailed description, the appended claim and the several views illustrated in the accompanying drawing.

In the drawing:

Figure 1 is a sectional view of a container illustrating one embodiment of the invention.

Figure 2 is an enlarged partial sectional view of one corner of the top of the container illustrated in Figure 1, the reclosure cover being removed.

Figure 3 is a side view of the exterior of the container shown in Figure 1.

Figure 4 is a sectional view of a container illustrating a second possible embodiment of the invention.

Figure 5 is a side view of the container shown in Figure 4.

The two species of the invention herein disclosed embody the same generic invention, and a claim covering the two species generally is included herein.

Referring specifically to the drawing for a detailed description of the invention, and more particularly to Figures 1, 2 and 3, numeral 10 design-

ates generally a paper container comprising a body member 11 having a top closure generally indicated at 12 and a bottom closure formed by turning the end of the wall 11, as at 13, over an inserted cup-like end member 14. A heavy reinforcing disc 15 is placed in contact with the inserted cup-like end member 14, and the turned end of the web 13 is crimped at 16 with a suitable tool to provide a liquid-tight joint.

At the top of the body 11, a slip-fit cover 17 is glued at 18 to the body. In order to form a closure, the end of the slip-fit cover 17 is turned, as at 19, over an inserted cup-like end member 21. A second heavy reinforcing disc 22 is placed in contact with the inserted cup-like end member 21, and the turned end 19 is crimped at 23 with a suitable tool to provide a liquid-tight joint at the top of the container. The top reinforcing disc 22 is preferably scored at 24 so that a cutting instrument may be inserted to remove the disc and gain access to the contents of the container.

The internal chamber defining body wall and end closure portions of the container are provided with suitably-treated inner surfaces 25 which are impervious to materials containing solvents such as may be present in paint or the like.

Usually, contained materials are not all used up at the time of the initial opening of the container, and, in order to reclose the container, a reclosing cover 26 is provided which slips over the outer surface of the glued, slip-fit cover 17. The reclosing cover 26 is also formed by a collar member 27 which is turned over at 28 and crimped at 29 to retain a cup-like, inserted end member 30 in position.

Referring now to Figures 4 and 5, this container comprises a fiber or paper body member 32, and the top and bottom closure members 33 and 34 are substantially the same as those shown in Figures 1, 2 and 3. Thus, further detailed description of these end closures is thought to be unnecessary. However, in this embodiment, the heavy reinforcing disc at the bottom of the container is scored at 35 and the top reinforcing disc is left unscored. In this embodiment a slip-fit cover 36 is placed on the bottom of the container and is constructed in the same manner as the slip-fit reclosing cover 26 shown in Figure 1. When this container is to be opened, it is inverted, the reclosing cover 36 removed, a knife inserted in the scoring 35, and the disc and end member removed. The reclosing cover 36 is then replaced if all the contents of the container are not used. The interiorly presented surfaces 37 of this con-

tainer also are provided with a suitable treatment which is impervious to paint.

From the foregoing, it will be apparent that an improved paper or fiber container has been provided which is substantially leak-proof, and is inexpensive to manufacture.

Should it be desired to additionally reinforce the container structure a spacer ring or reinforcing tube 38 may be added to the wall structure in the space intervening the two end closures in the manner clearly illustrated in Figures 4 and 5 of the drawing. This additional spacer or reinforcing ring may be used or not used according to the nature of the product to be packaged and the desire of the manufacturer.

Changes and modifications of the invention may occur to those skilled in the art, but the invention comprehends all such variations of the herein described structures as come within the spirit and scope of the appended claim.

What is claimed is:

A fiber container comprising a cylindrical open end body member, a bottom end attached to said body member and a top end closure for said body member including a collar glued to the outer face of the body member and projecting above the end thereof, a cup-shaped member inserted in said collar and dimensioned so as to extend over the end of the body wall and contact with the inner face of the collar, a heavy reinforcing disk disposed within said cup-shaped member and dimensioned so as to extend over the body wall and abut against the cylindrical wall of the cup-shaped member for clamping the same against the inner surface of said collar, said collar being turned over the cylindrical wall of the cup-shaped member and crimped into engagement with the inner face thereof and the outer peripheral portion of said heavy disk, said disk being scored to permit the rupturing thereof for the opening of the container.

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