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CONTAINER

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2 Sheets-Sheet 2

Fig. 3

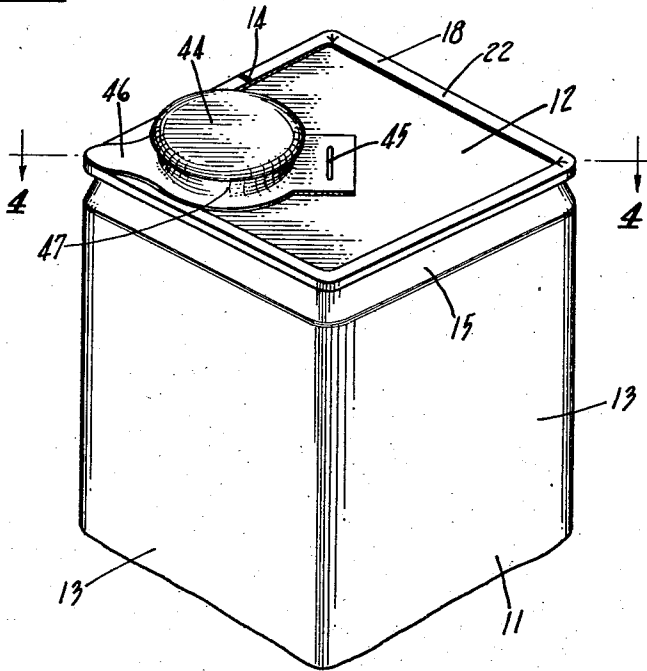
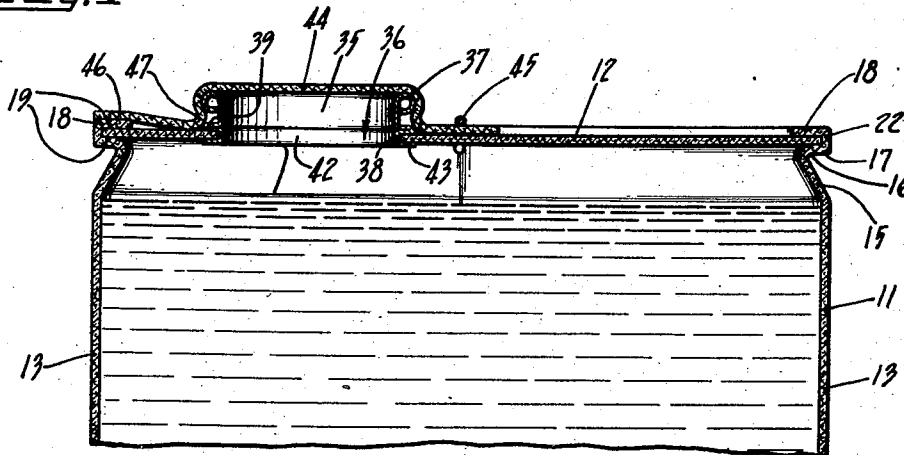


Fig.4



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2,355,044

CONTAINER

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1 Claim. (Cl. 229-7)

This invention relates to fibre containers for the packaging and delivery of liquids, such as milk, fruit juices or the like and has particular reference to the closure element for the container which includes an upwardly extended wall bordering the dispensing opening which is closed and sealed by an inverted hinge plug closure.

In certain respects, the invention constitutes an improvement upon the container illustrated and described in the John M. Hothersall United States Patent 2,085,979, issued July 6, 1937, and is especially an improvement comprising a nozzle-like extension which permits the liquid contents to pour clear of all wall surfaces during dispensing.

The invention contemplates a container top member which is secured to the body of the container by the interfolding of marginal portions of the top and the body members in an end seam, the top member having an upstanding annular wall surrounding a pouring opening and providing a dispensing nozzle for the container which prevents the contents from flowing over the top of the container when being dispensed and the hinge closure for the nozzle constructed and disposed to maintain in a clean, sanitary condition, the portion of the container top over which the contents flows during dispensing.

An object of the invention is the provision of a sanitary fibre container for milk and other beverages, wherein the top wall member of the container has a raised annular wall part or nozzle which defines the pouring opening located adjacent one corner of the container and which functions as a pouring spout preventing the liquid during a dispensing operation, from pouring over external surfaces of the container, such nozzle opening being closed by a hingeable inverted and insertable plug closure element.

Another object of the invention is the provision in such a container of a perforated top end member which includes a raised annular wall part or nozzle surrounding the reinforced filling and dispensing opening. The latter is or may be formed and defined by a metal grommet secured in the opening of the top end, the grommet having an extended annular wall part terminating in a curled edge so that the nozzle will function as a pouring spout to prevent the liquid contents from pouring over and contacting external surfaces of the top wall part. The described nozzle opening is preferably closed by a hingeable inverted closure element.

Numerous other objects and advantages of the invention will be apparent as it is better under-

stood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

Figure 1 is a fragmentary perspective view of a filled and sealed container embodying the present invention;

Fig. 2 is an enlarged fragmentary vertical sectional elevation of the container illustrated in Fig. 1, as viewed substantially along the line 2-2 in that figure and showing an inverted plug closure sealed within an extended annular wall part of a top end member;

Fig. 3 is a view similar to Fig. 1, showing an alternate or modified form of the invention; and

Fig. 4 is a view of the alternate form similar to Fig. 2, as viewed substantially along the line 4-4 in Fig. 3 and showing a separate metal nozzle secured within an opening in the top end member and sealed by a necked-in hinged closure.

The container illustrated in the different views of the accompanying drawings is of the general construction described in detail in the Hothersall patent hereinbefore mentioned. Such a container briefly comprises a substantially rectangular body 11 closed at its ends with suitable top and bottom end members. These end members are similar and for the purpose of this invention only the top end member need be illustrated. The numeral 12 designates such a top end.

The container body 11 preferably is formed from a single sheet of liquid-proof fibrous material folded at right angles to provide four side walls, these walls being designated by the numeral 13. The edges of the sheet are joined by a lapped seam which extends longitudinally of the body on one of the side walls 13, such a seam continues up and over the inwardly bent or folded top portions of the container, and as suggested in Fig. 1 of the drawings, has an extended portion over the end 12 as at 14. This lapped side seam joint is secured together by a suitable adhesive to make it leaf-proof.

The end members preferably are square and are formed from the same fibrous material as the body of the container. Fig. 2 of the drawings shows how the top member 12 is interlocked with the adjacent end or marginal portions of the body. For this purpose the body marginal end portions are bent inwardly at 15 and then outwardly as at 16 thereby providing a horizontal seat or ledge 17 which extends circumferentially

of the body and upon which the top end is supported.

The extreme edges of the body marginal portions beyond the ledge 17 are bent upwardly and then inwardly over the outer edges of the top end, thus providing opposite end flanges 18 which enclose and hold the end member in position. The bent or folded parts 16 and 13 of the body and the intervening marginal edges of the top member 12, prior to being assembled, have their engaging surfaces coated with a suitable liquid-proof adhesive 19. During assembling the parts are pressed firmly together and secured permanently to form a leak-proof end seam 22.

The top end member 12 (Fig. 2) has an upwardly and inwardly curved annular wall portion 23 which defines a pouring opening 24 and which preferably is located adjacent one corner of the container. The extended annular wall constitutes a nozzle element and imparts a spout effect when dispensing liquids through the pouring opening in guiding the contents from the container. This prevents the contents from pouring over or flowing upon the outer surfaces of the top end or upon the flat flange 18 or seam 22 of the container, thus producing a clean and sanitary dispensing outlet.

An inverted cup shaped slip-over hinge plug closure element 25 (Fig. 2) is provided for covering and closing the annular extended nozzle wall part 23 and the opening 24, thereby protecting the dispensing opening and the outer wall part. Should contaminated liquid or other undesirable foreign matter come in contact with the outside of the top end, regardless of whether the hinged closure is open or closed, it cannot flow back into the pouring opening but instead will drain off and away from the annular extended wall part. This prevents the possibility of tainting the container contents.

The hinge closure element 25 is formed with an upstanding wall part 26 which fits over the annular extended wall 23 of the top end 12. In this preferred form the closure has a sunken central panel section 27 which is adapted to fit within the pouring opening 24 to insure a more secure seal for a filled container. This drawn panel section as a further sealing feature may have its annular depending wall altered in shape by a suitable expanding tool to form a circumferential bead 28, as illustrated in Fig. 2, when a filled container finally is sealed.

The bead 28 is formed from the material of the depending annular walls and is pressed beneath the inward peripheral curved edge of the annular extended wall 23 which defines the pouring opening. This more effectively seals the hinged closure in its closed position. The entire container as described in the Hothersall patent supra, preferably is treated with paraffin wax and the waxed or otherwise treated surface of the closure 25 engaging the curved inner wall 23 of the opening 24, produces a liquid-tight closure.

The closure element 25 is hingedly secured to the top end 12 by a wire staple 29. This permits the closure to be swung into either an open or a closed position. This provides for temporary closing of the empty container to maintain the interior thereof clean prior to filling. It also provides for the final sealing after filling.

The extended flange of the closure, designated by the numeral 32, surrounds the pouring opening and rests upon the end flange 18 (Fig. 2) at the corner, and after the filling and sealing of the container, protects the covered parts from con-

tamination. The closure may be raised from its closed and sealed position by inserting a kitchen knife or the like between the end seam 22 and the flange 32 after which the hinge closure may be swung back to uncover and expose the dispensing opening 24.

A modified form of the invention is illustrated in Figs. 3 and 4 of the drawings, such modification having to do mainly with the wall surrounding the pouring opening. This wall is formed by a separate member inserted in the opening of the top end 12 of container 11. Thus a metal pouring spout 35 in the form of a ring or tube is secured within an opening 36 of the top end 12. Such a spout has an annular curled rim 37 at its upper edge thus forming a smooth mouth. An annular folded double wall 38 extends circumferentially of the spout 35 at its lower or inner end and provides a recess 39 for the top end 12. A lower grooved section 42 of the spout insert constitutes a grommet which tightly clamps the spout in its position.

Such a grommet double wall structure is formed after an inner marginal edge portion 43 of the spout 35 has been inserted into the opening 36 and has been folded outwardly against the inner surface of the top end 12 which borders upon the opening therein, as in Fig. 4. This secures the spout or extension in position near one corner of the can top.

An inverted raised slip-over closure element 44 is secured in a hingeable connection to the can end 12 as by a staple 45. The forward end of the closure 44 has an extended flange 46 which projects over and rests upon the end seam 22 of the container in a manner similar to that of the flange extension 32 of the preferred form, disclosed in Fig. 1 of the drawings. The inverted closure element 44 serves the same purpose as the inverted plug cover of the preferred embodiment and may be opened or closed in a similar manner.

The closure 44 is secured in a further final seal by crimping it under the spout 35 by a necking-in of a depending wall part 47 of the closure so that the inner wall engages beneath the curled rim 37 of the spout. This secures the closure element 44 in a sealed position on a filled container and in a liquid-tight connection, thereby protecting the spout and the region surrounding it against contamination.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

A container for liquids comprising a tubular fibre body member and a substantially flat end closure member having its peripheral portion enclosed within and adhesively secured to inwardly folded terminal flange portions of said body member in an end joint, said end member having a pouring opening surrounded by an integral annular upwardly and inwardly extending spout flange terminating in an exposed raw edge, said spout extension constituting a pouring nozzle for directing the flow of liquid contents beyond and out of contact with the adjacent exterior surface parts of the container, and a closure element hingedly secured to said end closure mem-

ber for covering said nozzle and said opening when in closed position, said closure element having a drawn plug section engageable within said opening and laterally expanded into locking engagement beneath said spout flange extension to removably secure said closure element in container sealing position, said hinged closure ele-

ment also having an integral forwardly extending flange portion engaging and secured to said end joint to cover and protect adjacent parts of said end closure member and joint against contamination by extraneous matter.

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