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FIBRE CONTAINER WITH RECLOSURE COVER

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Fig. 1

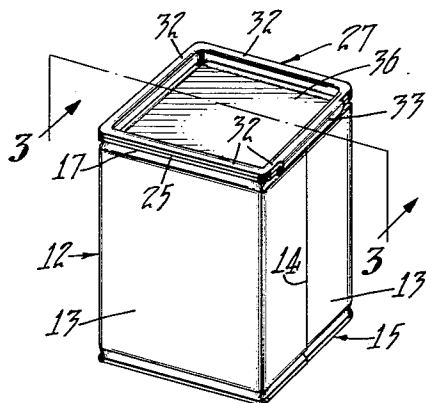


Fig. 2

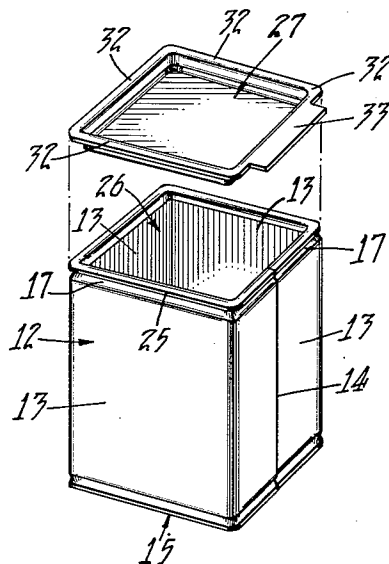


Fig. 4

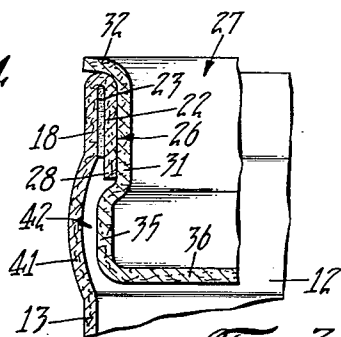
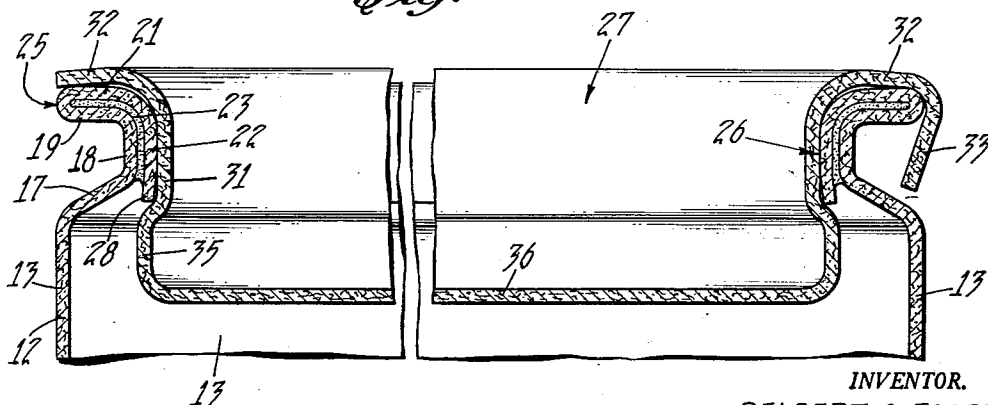


Fig. 3



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FIBRE CONTAINER WITH RECLOSURE COVER

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The present invention relates to fibre containers for cottage cheese, ice cream and similar products and has particular reference to such a container having a mouth construction protected by a readily removable and replaceable friction plug closure.

An object of the invention is the provision of a fibre container for cottage cheese, ice cream and the like products wherein the closure member fully closes the mouth of the container and covers adjacent friction walls and flanges surrounding the mouth to protect these walls and flanges and the product within the container from contamination.

Another object is the provision of such a container wherein the closure is of the friction plug type which is readily removable from the container and may be utilized as a reclosure.

Another object is the provision of such a container wherein the structure surrounding the mouth of the container provides a rigid and strong seat for the friction plug closure to insure tight frictional fit between the closure and its seat.

Another object is the provision of such a container wherein the friction seat surrounding the mouth of the container is provided with a free resilient terminal portion adapted to securely lock the friction plug closure in place but which is resilient enough to permit clearance of an enlarged portion of the plug and also easy removal of the closure from the container.

Numerous other objects and advantages of the invention will be apparent as it is better understood 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 perspective view of a sealed container embodying the instant invention;

Fig. 2 is a view similar to Fig. 1 showing the friction plug closure removed and in exploded relation to the container;

Fig. 3 is an enlarged sectional view of the upper portion of the container and is taken substantially along a plane indicated by the lines 3—3 in Fig. 1; and

Fig. 4 is a view similar to Fig. 3 and showing a fragmentary portion of a modified form of the invention.

As a preferred or exemplary embodiment of the instant invention Figs. 1, 2 and 3 of the drawing illustrate an all fibre container for ice cream, cottage cheese, yogurt, sour cream, delicatessen store products, home freezer use and the like. The container preferably is paraffin coated and is of square or rectangular configuration although the invention is equally well adapted to other coatings and to cylindrical or other shaped containers.

The container comprises a tubular body 12 (Figs. 1, 2 and 3) which preferably is made from a single blank of fibre material and bent along transverse lines to set off four flat side walls 13, the marginal end portions of the blank being overlapped and adhesively secured

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together to provide a side seam 14. At its lower end, the body 12 preferably is "necked-in" and its marginal edge portions interfolded with a bottom closure member to provide a bottom 15 for the container.

At its top end, the marginal edge portion of the body 12 is bent inwardly and upwardly to provide a short inclined wall section 17 (Fig. 3) which merges into a short upright or vertical wall section 18, thus forming a short neck or necked-in section on the container adjacent its mouth. The upper continuation of the vertical wall section 18 merges into a laterally, outwardly projecting flange wall section 19. This flange wall section 19 terminates in substantial vertical alignment with the outer face of the side walls 13 of the body.

Continuation of the flange wall section 19 merges into an inwardly extending and overlapping top flange wall section 21, which follows the contour of the flange wall section 19, and which top flange continues down into the container adjacent the vertical wall section 18 in parallelism thereto to provide a substantially straight vertical friction seat wall section 22 disposed parallel to the body wall section 18. The top flange wall section 21 and the friction seat wall section 22 are bonded to the adjacent flange wall section 19 and vertical wall section 18 respectively by a suitable adhesive 23 interposed between the adjacent walls.

The bonded flange wall sections 19, 21 thereby set off a rigid, strong double thickness flange 25 surrounding the top of the body 12. In a similar manner the bonded vertical wall section 18 and friction seat wall section 22 set off a rigid, strong double thickness vertical neck which defines a full, open, filling and dispensing mouth 26 for the container and provides a smooth friction seat for a friction plug closure member 27.

The lower or terminal edge of the friction seat wall section 22 depends a small distance below the vertical wall section 18 and provides a free resilient locking wall 28 which is disposed in spaced relation to the body wall and is thus free to move laterally outwardly under pressure of the friction plug closure 27 as will be described more in detail hereinafter.

The friction plug closure member 27, like the other parts of the container is preferably made of fibre material and is formed with an imperforate countersunk panel wall surrounded by a substantially straight vertical friction wall 31 (Fig. 3) which fits within the mouth 26 of the container body 12 and frictionally seats against the friction wall section 22 of the container when the closure is in place. The upper edge of the closure friction wall 31 merges into a partially curved and outwardly extending flange 32 which in general follows the outer peripheral contour of the container body flange 21, 25, overlapping and extending slightly beyond the outer edge of the container body flange 25 to entirely cover and protect the latter against exposure and contamination. Along one edge of the friction plug closure 27, the right as viewed in the drawings, the closure flange 32 is provided with a continuing pull integral tab 33 which extends for nearly the full length of the flange on that edge of the closure.

The closure friction wall 31 extends the entire depth of the container friction wall section 22 and its terminal locking wall 28. Adjacent the lower edge of the locking wall 28, the closure friction wall 31 merges into a resilient outwardly bulged or expanded wall section or bead 35 which in turn merges into an imperforate or solid bottom wall 36 which constitutes the bottom of the closure. The bead or enlargement 35 projects under the lower edge of the resilient locking wall 28 for a distance slightly greater than the thickness of the locking wall and thus locks the closure 27 in place in the mouth of the container.

In such a container, the friction plug closure member

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27 including its expanded lower section or locking bead 35, may be completely preformed as shown in Fig. 2 prior to assembly with the container so that it may be rapidly snapped into sealing position in the mouth of the container. In assembling the closure with the container, the closure is tilted to a slight angle with the horizontal and the lower edge of the closure inserted into the mouth of the container with the closure flange 32 resting on top of the container flange 25. A slight downward pressure on the elevated or opposite edge of the closure readily snaps it into tight fitting and locked position on the container. In thus pressing the closure downwardly, the resilient enlargement or bead 35 on the closure presses the freely movable, resilient locking wall 28 of the container outwardly, thus permitting the projecting bead 35 to pass and snap under the lower edge of the locking wall 28.

The closure bead 35 like the locking wall 28 and the other parts of the structure, except the pull tab 33, extends entirely or annularly around the container and closure and thus the closure is securely locked against displacement. The continuous closure structure comprising the bottom wall 36, bead 35, friction wall 31 and flange 32 constitutes a complete tight fitting covering for the entrance to the container and the adjacent wall faces including the container flange 25 and thus protects these faces and the contents of the container from exterior contamination.

When it is desired to open the container, a slight upward pull on the pull tab 33 springs the closure bead 35 past the resilient locking wall 28 and lifts the adjacent edge of the closure 27 out of the mouth of the container in a manner reverse to that in which it was inserted. The closure may then be readily withdrawn. A free fully open mouth results to facilitate access to the contents of the container. No damage to the closure or the container is effected by the removal of the closure. Hence both the container and the closure may be reused.

In the modified form of the invention disclosed in Fig. 4 the marginal edge portion at the top end of the body 12 is bent inwardly and downwardly in vertical parallelism with the side walls 13 to provide the short upright or vertical wall section 18, the friction seat wall section 22 and the free resilient locking wall 28 depending from the friction seat wall section 22 as in the preferred form of the invention shown in Fig. 3. The vertical wall section 18 and the friction seat wall section 22 are bonded together by a suitable adhesive 23 interposed between these wall sections in the same manner as disclosed in preferred form of the invention.

Instead of the necked-in feature as shown in Fig. 3, the modified form of the invention as disclosed in Fig. 4 features an outwardly projecting bead 41 which is formed in the body walls 13 and which is disposed adjacent the resilient locking wall 28. This bead 41 extends entirely peripherally around the body 12 and provides an annular interior clearance space 42 adjacent the locking wall 28 for the free flexing or outward or lateral movement of the locking wall during insertion of the friction plug closure 27 into locked position in the mouth 26 of the container and during removal therefrom as explained above. The bead 41 preferably extends from the terminal edge of the vertical wall section 18 to a location immediately below the bottom wall 36 of the closure 27 so that the clearance space 42 also accommodates the expanded wall section or bead 35 of the closure.

In this manner the bead 41 in the modified form of the invention provides for the same clearance space as the necked-in portion 17 of the preferred form and thus the resilient locking wall 28 is in spaced relation to all walls of the body and hence free to move laterally under pressure of the friction plug closure 27 as described hereinbefore.

It is thought that the invention and many of its at-

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tendant 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:

1. A container comprising a fibrous body member having a closed bottom and connected upright side walls terminating in an inwardly offset reversely folded depending straight peripheral flange disposed parallel and adhesively secured to said body side walls to constitute a peripheral friction seat wall of double thickness defining the open container mouth, said connected side walls having a laterally outwardly offset peripheral portion beneath said friction seat wall, said seat wall flange terminating in a freely depending resilient flange extension constituting an annular closure member locking wall of single thickness surrounding the container mouth, the inner terminal end of said depending flange extension being spaced laterally inwardly from said offset peripheral portion of the body side walls beneath said friction seat wall, a cup-shaped friction plug closure member insertable in said mouth for closing the container, said closure member having a countersunk panel wall and an upstanding substantially straight peripheral friction wall for fitting closely against said friction seat wall of the body member, the inner end of said countersunk closure member panel wall beneath its said straight friction wall having preformed peripheral portions extending laterally outwardly beyond the plane of said friction wall seat for yieldable engagement beneath said resilient locking flange extension of said body member to removably secure the closure member in place on the container mouth, and a pull tab on said closure member for pulling the latter free from beneath said locking wall to open the container without damaging said locking wall and said laterally extending peripheral panel wall portions of the closure member, whereby the latter may be utilized to reclose the container.

2. A container comprising a fibrous body member having an upright side wall having a laterally outwardly offset peripheral portion and terminating at its outer end in a reversely and inwardly folded straight peripheral flange disposed parallel to said side wall to constitute a friction seat wall defining the open container mouth, said seat wall terminating in a freely depending resilient flange extension constituting a closure member locking wall of single thickness surrounding the container mouth, the inner end of said depending flange extension being spaced laterally inwardly from said offset peripheral portion of the body side wall beneath said friction seat wall, and a friction plug closure member insertable in said mouth for closing the container, said closure member having a countersunk panel wall terminating in an upstanding substantially straight peripheral friction wall for fitting closely against said body member friction seat wall, the inner end of said countersunk closure member panel wall beneath its said straight friction wall having preformed peripheral portions extending laterally outwardly for yieldable engagement beneath said resilient flange extension of said body member side wall to removably lock the closure member in place on the container mouth.

3. The container of claim 2 in which the upright wall and the adjacent folded friction seat wall of the body member are bonded together with a suitable adhesive to rigidify said friction seat wall.

4. The container of claim 2 in which the described disposition of said friction seat wall portion of the body member laterally inwardly of the outer wall face of the body provides a neck on the body and also provides a peripheral clearance space adjacent said freely depending locking wall on said body to insure unobstructed lateral movement of said locking wall during insertion of said

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friction plug closure member into locked position in said mouth and during its removal therefrom.

5. The container of claim 2 in which the mouth of said body member is rectangular in configuration.

6. The container of claim 2 in which the reversely folded body flange includes an outwardly extending peripheral flange of double thickness and said friction wall of the friction plug closure member terminates at its upper end in an outwardly extending peripheral flange overlapping said peripheral body flange when the closure member is in place on said body to protect said body flange against contamination.

7. The container of claim 2 in which the body side wall is provided with an annular outwardly projecting bead disposed adjacent said locking wall to provide a

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clearance space for said locking wall to insure free movement of said locking wall flange extension during insertion of said friction plug closure into locked position in said mouth and during removal therefrom.

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