Feb. 24, 1942. H. CAREW 2,274,037

PAPER CONTAINER AND PROTECTOR

Filed Sept. 17, 1938

Fig. 1.

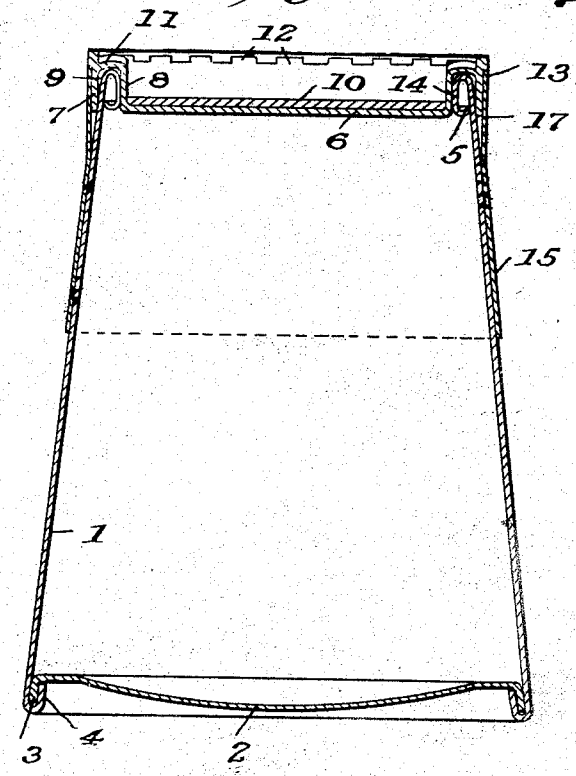


Fig. 2.

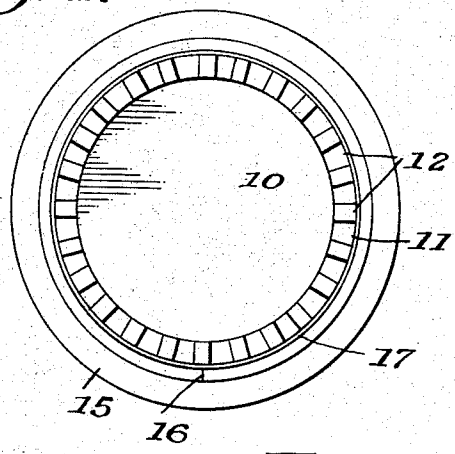


Fig. 3.

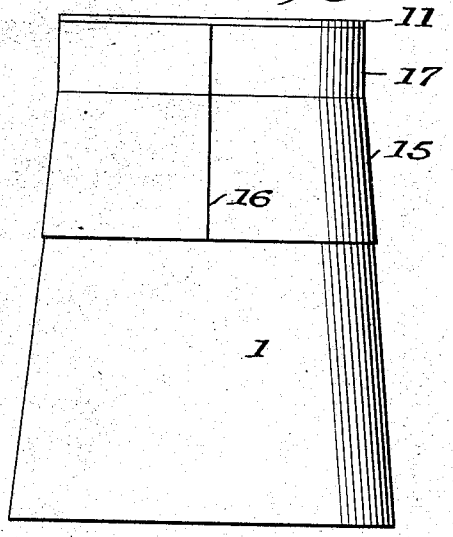


Fig. 4.

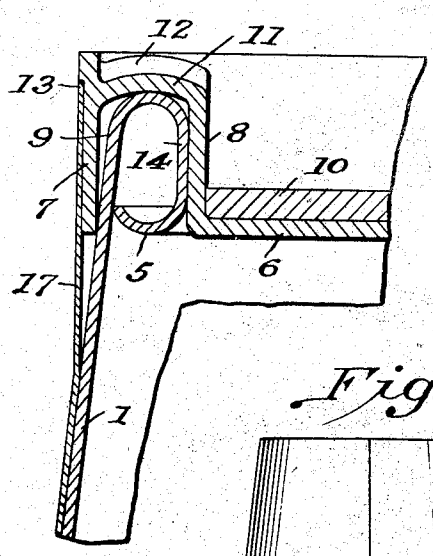


Fig. 5.

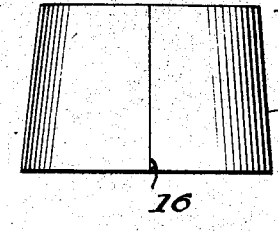
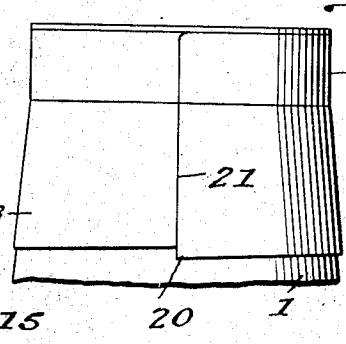


Fig. 6.



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Patented Feb. 24, 1942 2,274,037

UNITED STATES PATENT OFFICE

2,274,037

PAPER CONTAINER AND PROTECTOR

Herman Carew, Easton, Pa., assignor to Dixie-Vortex Company, Easton, Pa., a corporation of Delaware

Application September 17, 1938, Serial No. 230,489

4 Claims. (Cl. 229—5.5)

My invention relates to new and useful improvements in a paper container as well as a protecting device therefor and while adapted for containing various commodities is particularly adapted for use as a milk bottle.

The primary object of the invention resides in the provision of a container formed of paper or other readily destructible material and while primarily intended for but a single use it will be understood that it will be of sufficient strength to permit the storing of the milk or other commodity until entirely used, or in other words, will be of sufficient strength as to permit storage in a refrigerator or the like to maintain the contents in a sanitary condition and preserve the same against souring.

As is well-known the dairies are subjected to heavy loss due to the use of glass bottles or containers, as is now the common practice, but with the use of my improved form of container and protector therefor there will be no expense due to breakage or the like and there will be no necessity for retaining the container for return.

Another object of the invention resides in the provision of a novel form of closure cooperating with the novel form of lip or mouth portion of the container to provide a secure seal and to thus aid in the preservation of the contents, the closure or cap being of such a formation that it may be reapplied to the container after its initial removal and to maintain the contents of the container in a sanitary condition while being stored or preserved in a refrigerator or the like.

A still further object of the invention consists in the novel form of a protector adapted to be positioned exteriorly of the container, adjacent the mouth portion thereof, and at the point which would be normally engaged by the hands of the milkman or other person making deliveries. This protector may also be of a formation adapting it to cooperate with the closure or cap for maintaining a good seal and is of tapered formation premitting it to be readily applied over the end of the container and forced downwardly into tight frictional engagement therewith, the smaller end of the protector, in its application to the container, being expanded or re-shaped into cylindrical form and the whole protector being formed and adapted for ready removal, when desired, said removal of the protector providing a clean and sanitary portion of the container at the mouth so that when desired a person may drink directly from the container without possibility of impurities contacting with the lips.

With the above and other objects in view, which will appear as the description proceeds, my invention consists in the novel details of construction and arrangement of parts described in the following specification and illustrated in the accompanying drawing, and while I have illustrated and described the preferred embodiments of the invention, as they now appear to me, it will be understood that such changes may be made as will fall within the scope of the appended claims.

In the drawing:

Fig. 1 is a transverse vertical section through the container, closure cap and protector.

Fig. 2 is a top plan.

Fig. 3 is a side elevation.

Fig. 4 is a fragmental enlarged detail showing a section through a portion of the container, closure cap, and protector.

Fig. 5 is a side elevation of the protector; and

Fig. 6 is a fragmental side elevation of a container showing a modified form of protector in position thereon.

The body of the container includes the tapered side wall 1 and bottom 2, the bottom 2 being formed at its outer edge with a depending flange 3 around which the bottom edge of the side wall is turned as shown at 4. At its upper end or mouth portion the side wall is curled inwardly to form what might be termed an elongated bead 5, it being understood that the upper or mouth portion is of less diameter than the bottom portion. The container will be formed of paper of the desired thickness and the container as a whole will be of the desired capacity for containing the desired amount or quantity of milk or other commodity.

The closure cap will also be formed of paper of the desired thickness and shaped to provide the central depressed portion 6 and outer flange 7, the wall 8 of the depressed portion cooperating with the flange 7 to provide the channel 9, adapted to receive the beaded mouth portion of the container, as shown more particularly in Figs. 1 and 4 of the drawing. A reinforcing disc 10 is received in the central depressed portion 6 and the top wall 11 of the channel 9 will be formed with the reinforcing corrugations 12 as shown. Exteriorly the flange 7 is formed with the shoulder 13, for a purpose which will be later described, it being understood that the flange 7 will be of less thickness below the shoulder than that portion above.

As shown more particularly in Figs. 1 and 4 of the drawing, when the closure cap is in position the beaded mouth portion of the container will be received in the channel 9 and the inner wall 14 of the bead will engage the inner face of the wall 8 and provide a relatively large surface in frictional engagement therewith. Due to the taper of the wall of the container the flange 7, of the closure, forming the outer wall of the channel 9, will only contact at its lower end with the outer wall of the container. However, the engagement of the lower end of the flange with the wall of the container will cooperate with the

frictional engagement between the wall 8 and portion 14 of the bead of the container to hold the cover cap in tight frictional engagement on the container. In applying the cover cap to the container the bead of the container will be slightly compressed thereby aiding, due to friction, to hold the closure cap in proper position on the container against accidental displacement. However, when it is desired to use the contents of the container the closure cap may be forced off without undue mutilation and may be reapplied, when desired, and have sufficient frictional engagement to hold it in place.

When a person purchases milk, or other liquids in a container, it is often their desire to drink the same from the container and it can be appreciated that with this in mind it is desirous, and in fact necessary, to keep or maintain the lip portion of the container and the area thereabout sanitary and free of any contamination whatsoever. Of course, closure caps have been provided which surround the normal lip portion of the container, but when the container is handled the fingers of the milkman or others often contact with the body portion of the container below the closure cap. In order to maintain the body portion of the container, adjacent the lip portion, normally enclosed by the closure cap, clean and sanitary I provide a protector member which is formed of paper or similarly readily destructible material which is of tapered formation and can be forced down over the upper portion of the container to maintain the portion enclosed thereby in perfectly sanitary condition, this protector being readily detachable, when desired, and when it is the wish to drink directly from the container. The protector, of tapered formation, is shown at 15 in the drawing and its normal shape, that is before being applied to the container, is shown more particularly in Fig. 5 of the drawing. The protector is formed from a strip of material bent into the tapered formation shown and the ends are secured together to provide the seam shown at 16. In use after the closure cap has been applied to the mouth portion of the container the large end of the protector is placed over the upper portion of the container and forced downwardly into the position shown more particularly in Figs. 1, 3 and 4 of the drawing. The protector will frictionally engage the tapered body wall 1 of the container while the smaller end of the protector will be expanded, as shown more particularly in Figs. 1 and 4, to provide the vertically extending portion 17 which will engage the outer surface of the closure cap, it being understood that the normal smaller diameter of the protector is less than the diameter of the closure cap. I have shown, in the drawing, the protector as being forced downwardly to a point where the upper edge thereof will snap beneath the shoulder 13 of the closure cap and this, of course, will help to maintain the protector in position although normally the frictional contact of the protector, with the wall of the container, and the depending flange of the closure cap, will be sufficient to hold the same in position. When it is desired to remove the protector the fingers may be engaged with the bottom edge thereof, preferably at the point of the seam 16, and then be torn from the container. It will be understood that the closure cap may be removed from the container either before or after the protector is removed and the surface enclosed by the protector will be maintained in clean condition so that, as previously described, a person may drink from the container without fear of impurities contacting with the lips.

In Fig. 6 of the drawing I have shown a slightly modified form of my protector which is of the same formation as disclosed in Fig. 5 of the drawing with the exception that a finger-engaging portion is provided for tearing or removing the protector from the container. In this form of the invention the protector is shown at 18 with the expanded vertically extending upper portion 19. A finger-engaging portion is provided at 20 and is formed by extending the bottom edge on one side of the seam 21 somewhat beyond the bottom edge on the opposite portion of the seam. When it is desired to remove this form of protector the portion 20 is engaged and the protector torn away from the container.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is:

1. In combination with a container having a yieldable tapered side wall and a mouth portion formed with an inwardly rolled yieldable lip, a closure cap having a depressed portion and an outer peripheral depending flange formed on its outer surface with a shoulder, the depending portion and flange forming a channel to receive the mouth portion of the container, the depressed portion adapted to be received in the mouth of the container with the wall of the depressed portion frictionally engaging the lip of the mouth portion while the lower edge portion of the flange engages the tapered wall of the container, and a readily flexible tapered protecting member adapted to enclose the depending flange of the closure cap below the shoulder thereof and a portion of the side wall of the container adjacent thereto.

2. In combination with a container having a mouth portion, a closure cap having a portion encircling the mouth portion of the container and formed with a shoulder on its outer surface, and a member for protecting the surface of the container adjacent the mouth portion, said member adapted to be positioned to enclose the outer encircling portion of the closure cap below the shoulder thereof and a portion of the container.

3. In combination with a container having a mouth portion, a closure cap having a portion encircling the mouth portion of the container and formed with a shoulder on its outer surface, and a member for protecting the surface of the container adjacent the mouth portion, said member being of less diameter at its smaller end than the diameter of the closure cap whereby when it is forced into position longitudinally of the container it will be expanded and engaged beneath the shoulder of the closure cap.

4. In combination with a container having a mouth portion, a closure cap having a portion encircling the mouth portion of the container and formed with a shoulder on its outer surface, and a member for protecting the surface of the container adjacent the mouth portion, said member adapted to be positioned to enclose the outer encircling portion of the closure cap below the shoulder thereof and a portion of the container and formed with vertically extending overlapped edge portions, one edge portion projecting below the other edge portion to provide a tearing tab at the lower edge of the member.

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