March 17, 1942. R. F. HAHN 2,276,577

PAPER CONTAINER

Filed Sept. 13, 1939

Fig. 1.

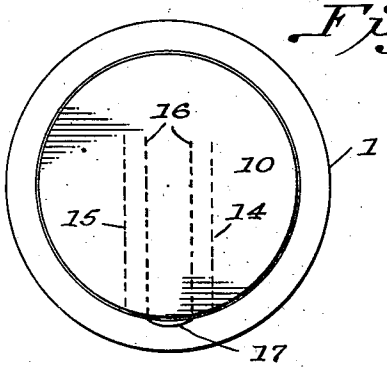
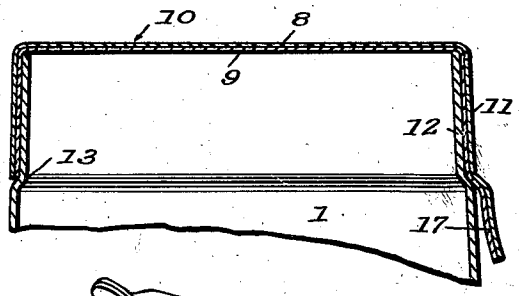


Fig. 3.



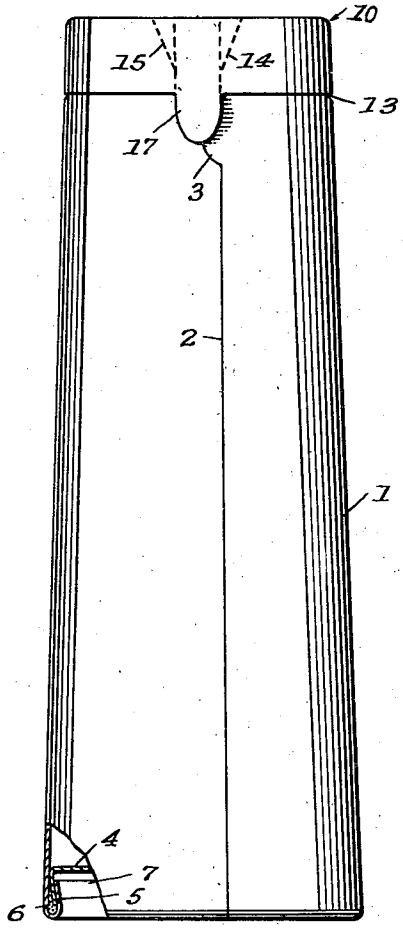


Fig. 2.

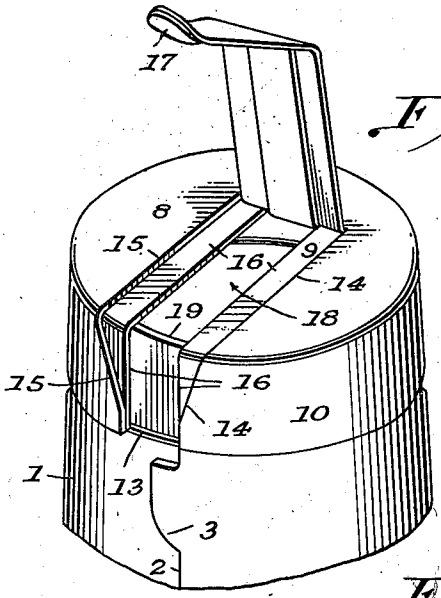
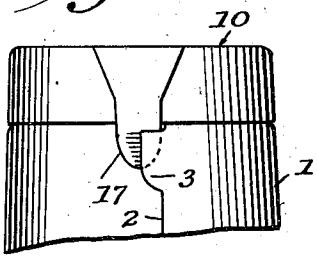
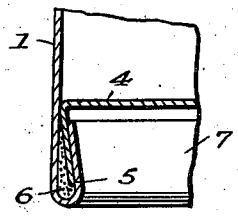


Fig. 4.

Fig. 6.

Fig. 5.





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UNITED STATES PATENT OFFICE

2,276,577

PAPER CONTAINER

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Application September 13, 1939, Serial No. 294,762

7 Claims. (Cl. 229—7)

My invention relates to new and useful improvements in paper containers and more particularly to a container for milk or other fluids, the principal object of the invention residing in the provision of a novel form of closure cap in which means are provided for partially severing a portion thereof to provide a pouring opening having an edge at right angles to the plane of the opening, said partially severed portion being adapted to be positioned for closing the opening where only a portion of the contents is discharged, thereby permitting the container with the unused contents to be placed in a refrigerator or the like for use at a later time.

Another object of the invention resides in the provision of a closure cap having a portion adapted to be partially torn therefrom on lines on different planes of the top portion of the cap whereby when the torn portion is returned to closing position parts thereof overlie the edges forming an opening through the top portion of the cap to prevent leakage therefrom or the entrance of impurities into the container.

Another object of the invention consists in the provision of novel means for holding the torn portion of the cap in its reclosing position against accidental displacement.

Still another object of the invention resides in the provision of a novel form of bottom closure for the body portion of the container, said bottom closure including a flange portion spaced from the wall of the body and in which space adhesive may be applied for securing the bottom closure within the body. The subject matter of my bottom closure just described is being made the basis of a divisional application.

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 top plan.

Fig. 2 is a side elevation.

Fig. 3 is a fragmental transverse vertical section through the upper portion of the container and closure cap therefor.

Fig. 4 is a fragmental perspective showing the partially torn portion of the cap in raised position with an opening for pouring the contents from the container.

Fig. 5 is a fragmental side elevation showing the partially torn portion of the cap returned to closing position and the flap for holding the same against accidental displacement; and

Fig. 6 is a fragmental sectional view, with parts shown in elevation, through the bottom portion of the body of the container and the bottom closure thereof.

Paper containers have come into extensive use for various purposes such as for holding milk or other liquids and in carrying forward my invention I have had in mind a container for this purpose which has a novel form of closure for originally sealing the container and such closure having a portion which may be torn to provide a pouring opening having a sharp edge at right angles to the plane of the opening. I have further had in mind a closure of a construction permitting resealing or reclosing of the pouring opening so that where only a part of the contents of the container is used the remaining part may be retained in a sanitary condition and the container placed in a refrigerator or similar storage space. I have also had in mind the provision of a bottom closure of a form cooperating with the taper of the body portion to provide a space for the reception of adhesive for securely attaching the bottom closure within the body. With these thoughts in mind I have perfected the present container a detailed description of which will follow.

In the drawing 1 indicates the body portion of the container which is of truncated cone shape and this body is formed from a blank shaped to provide the overlapped edge 2, the overlapped edges being secured together by a suitable adhesive. Projecting from the overlapped edge 2, adjacent the top of the body, is a flap 3 for a purpose which will be later brought out. At 4 I have illustrated a bottom closure inserted into the large end of the body, as shown more particularly in Figs. 2 and 6 of the drawing, and this bottom closure includes a depending flange 5 bent to project at less than a 90° angle from the top portion. Cooperating with the taper of the body 1 this flange provides a space between the outer face of the flange and the inner face of the body to receive the adhesive which is shown at 6. This adhesive secures the bottom closure securely within the larger end of the body. It will be understood that the bottom closure is positioned inwardly of the bottom edge of the body and the bottom edge is then turned

inwardly as shown at 7 to engage the inner face of the flange 5.

The top closure of the container is in the form of a cap made from two layers, the outer layer being indicated at 8, while the inner layer is shown at 9. The cap further includes the top portion 10 and depending flange 11, the depending flange 11 being adapted to encircle the upper end of the body portion 1, when the closure is in position, as shown more particularly in Fig. 3 of the drawing and when the cap or closure is applied it reduces the diameter of the upper end of the body as shown at 12 to provide the offset portion 13 which forms a seat for the bottom edge of the flange 11, as shown more particularly in Figs. 2 and 3 of the drawing. The closure cap may be secured to the body with any suitable form of adhesive.

The outer layer 8 of the cap closure is weakened or scored across the top 10 by the lines 14 and 15, while the inner layer 9 is scored or weakened across the top 10 by the lines 16. The weakened or scored lines 14 and 15 originate at a point within the top 10 of the closure and extend to the marginal edge of the flange 11 as is quite clearly illustrated in Fig. 2 of the drawing. The lines 16 also extend from a point within the top 10 of the closure to the marginal edge of the flange and extending from the marginal edge of the flange, at the point of the weakened or score lines, is a tab 17. By reference more particularly to Fig. 1 of the drawing it will be seen that the weakened or score lines 16 are within the space between the lines 14 and 15 and spaced therefrom for a purpose which will be later apparent.

In Figs. 1 and 2 of the drawing I have shown the container in its sealed condition with the contents therein. When it is desired to use the contents the user will grasp the tab 17 and on pulling upwardly thereon a portion of the cap will be torn along the lines 14, 15 and 16, as is quiet clearly illustrated in Fig. 4 of the drawing, and it will be noted that the inner layer 9 of the closure will be torn along the line 16 to provide the opening 18, while the outer layer 8 will be torn along the lines 14 and 15 spaced from the line 16, the outer layer of the torn portion being of greater width than the inner layer. When the portion is torn from the closure cap the sharp edge 19, of the upper end of the body portion, is exposed and forms a pouring edge at right angles to the plane of the opening. This is of particular advantage as will be appreciated. Where only a part of the contents is used then the torn portion will be returned to closing position, shown in Fig. 5 of the drawing, and the tab 17 will be engaged beneath the flap 3 for holding the torn portion in its closing position. When the torn portion is returned to its closing position the outer layer 8, of the cap, will overlie the edges of the opening 18 along the lines 16 to prevent any leakage or the entrance of any impurities into the container. While the weakened or scored lines 16 extend straight through the flange, as shown quite clearly in Fig. 4 of the drawing, the lines 14 and 15, which extend into and through the flange, are at an angle, the lower ends of which meet the lines 16. This facilitates the tearing of the portion of the closure along the weakened lines.

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

1. A container including a body portion and a closure cap applied to an end thereof, said closure cap having a part adapted to be partially torn therefrom to provide a pouring opening, an edge of the body being exposed as a pouring edge at right angles to the plane of the opening, said partially torn portion being adapted to be returned to its original position for closing the opening, and a member engageable with the returned torn portion for holding the same against accidental displacement.

2. A container including a body portion and a closure cap applied to an end thereof, said closure cap having a part adapted to be partially torn therefrom to provide a pouring opening, an edge of the body being exposed as a pouring edge at right angles to the plane of the opening, said partially torn portion being adapted to be returned to its original position for closing the opening, and a flap adapted for engagement with the returned torn portion for holding the same against accidental displacement.

3. A container including a body portion and a closure cap applied to an end thereof, said closure cap having a part adapted to be partially torn therefrom to provide a pouring opening, an edge of the body being exposed as a pouring edge at right angles to the plane of the opening, said partially torn portion being adapted to be returned to its original position for closing the opening, and a flap formed as a part of the body portion for engaging the returned torn portion for holding the same against accidental displacement.

4. A container including a body portion having overlapped longitudinal edges, and a closure cap applied to an end portion thereof, said closure cap having a part adapted to be partially torn therefrom to provide a pouring opening, an edge of the body being exposed as a pouring edge at right angles to the plane of the opening, said partially torn portion being adapted to be returned to its original position for closing the opening, and a flap formed on one of the longitudinal edges of the body and adapted to engage the returned torn portion for holding the same against accidental displacement.

5. A container including a body portion and a closure cap applied to an end thereof, said closure cap having a part including a tab adapted to be partially torn therefrom to provide a pouring opening, an edge of the body being exposed as a pouring edge at right angles to the plane of the opening, said partially torn portion being adapted to be returned to its original position for closing the opening, and a member engageable with the tab of the returned torn portion for holding the same against accidental displacement.

6. A container including a body portion and a closure cap applied to an end thereof, said closure cap having a part including a tab adapted to be partially torn therefrom to provide a pouring opening, an edge of the body being exposed as a pouring edge at right angles to the plane of the opening, said partially torn portion being adapted to be returned to its original position for closing the opening, and a flap formed as a part of the body portion and extending at right angles to the tab of the returned torn portion for engaging the tab to hold the returned portion against accidental displacement.

7. A container including a body portion and a closure cap applied to an end thereof, said closure cap including a top and depending flange, weakened lines originating at a point within the

top of the closure and extending to the marginal edge of the flange, a tab projecting below the marginal edge of the flange and adapted for engagement for tearing the flange and top along the weaked lines to provide a pouring opening, the torn portion being adapted to be returned to its original position for closing the pouring opening, and a flap formed as a part of the body portion and positioned below the marginal edge of the flange of the closure cap to engage the tab of the closure cap to hold the returned portion against accidental displacement.

RICHARD F. HAHN.