Dec. 24, 1940. J. L. CARLEY 2,226,049

MILK CONTAINER

Filed May 23, 1938

Fig. 1.

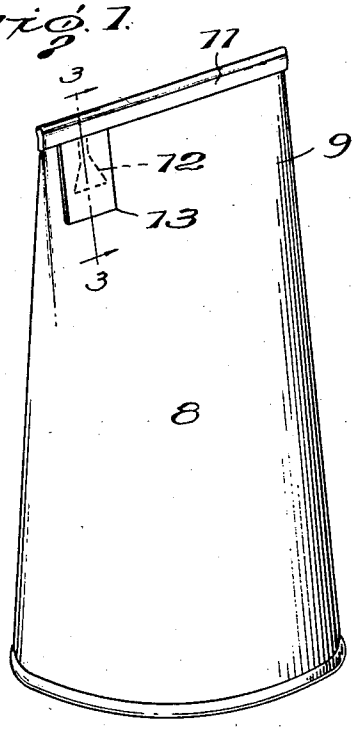


Fig. 2.

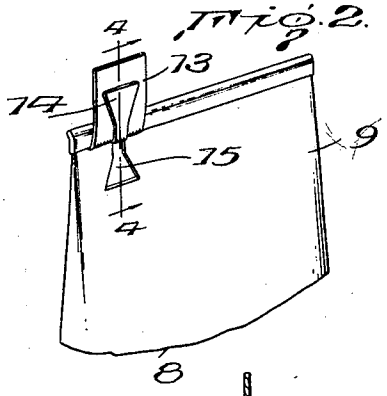


Fig. 3.

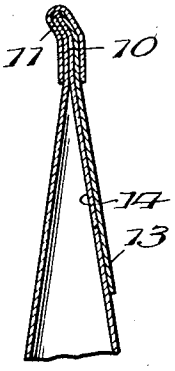


Fig. 4.



Fig. 5.

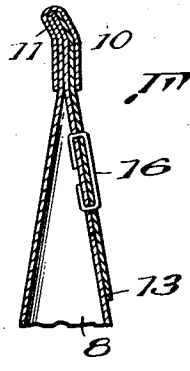


Fig. 6.

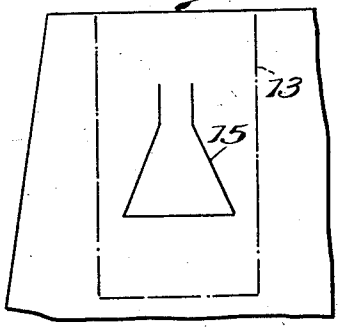
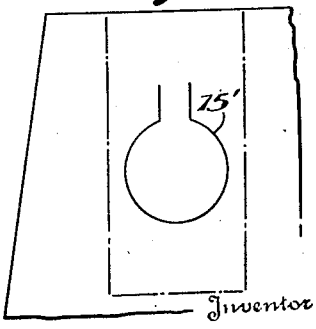


Fig. 7.



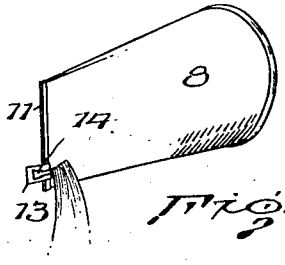


Fig. 8.

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UNITED STATES PATENT OFFICE

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MILK CONTAINER

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Application May 23, 1938, Serial No. 209,583

4 Claims. (Cl. 229—7)

The present invention consists of a container, preferably made of paper, which may be formed, sterilized and filled, providing a sealed container especially adapted for use in packaging milk and like products, and equipped with a pour opening which is originally uncovered when the contents of the container is to be dispensed.

It is within the contemplation of my invention to provide a container which although sealed after the container is filled, may be opened with facility when the contents of the container is to be dispensed, the pour opening being relatively small and located near the top of the container and of a contour which assures pouring in a compact non-diffused stream.

A further object of the invention is to provide a destructible container especially adapted for use in vending highly perishable commodities, such as milk, the entire container being machine sealed after the commodity has been packaged; provision however, is made to permit a part of the wall of the container to be severed to provide an opening through which the contents of the container may be conveniently and satisfactorily dispensed, the separable portion of the wall being positively protected from being casually opened, by a guard tab which latter completely covers the severable portion of the container wall and is secured to the container wall outside of the severable zone, the guard tab likewise serving to disrupt and carry the severable portion of the side wall of the container into a plane away from the container to permit the contents of the container to be freely poured, the guard tab likewise being usable for reinserting the severed portion of the container into the pour opening, the tab extending beyond the walls of the opening.

A still further object of the invention is to provide a container, which although made in any desired shape, preferably has the upper end thereof, in which the severable portion of the wall is formed to provide the pour opening, tapered or sloped to prevent the accumulation of extraneous materials, such as dirt, or moisture around the sealing tab thereby preventing possible contamination of the contents of the container when the seal is broken and the pour opening formed.

Other objects of the invention will be apparent from the following description of the present preferred forms of the invention, wherein:

Fig. 1 is a perspective view of a container constructed in accordance with the present invention, showing the container sealed.

Fig. 2 is a fragmentary perspective view of a container with the tab in an open position and exposing the pour opening,

Fig. 3 is a fragmentary vertical sectional view of the container taken on the line 3—3 of Fig. 1,

Fig. 4 is a similar view taken on the line 4—4 of Fig. 2,

Fig. 5 is a fragmentary vertical sectional view of a modified form of container wherein the tab is secured to the container by a staple,

Fig. 6 is a detail fragmentary elevational view of a container blank, illustrating one form of pour opening therein,

Fig. 7 is a similar view showing a pour opening of a different contour, and Fig. 8 is a fragmentary view of the container showing the latter in a dispensing position.

After much experiment I have found that in packaging perishable commodities, especially commodities which are highly susceptible to contamination, such as milk, it is preferable to employ a package which is not adapted for reuse and one which is preferably formed, sterilized, filled and sealed without the intervention of human hands, the container being taken from the machine completely sealed. In this type of container or receptacle, I prefer to provide a self-contained means for forming the pour opening, which serves the function of sealing and reinforcing the container at the zone where the opening is to be made, the said means likewise serving to re-engage the pour opening after the latter has been originally formed.

In making up a container in accordance with the teaching of the present invention, a blank is employed adjacent one margin of which a zone is incised. The incised zone may be of any desired contour, but I have found that good results are obtained by providing a substantially triangular shaped opening in that the contents of the container may be poured therethrough in a compact non-diffused stream. Also, in accordance with the teaching of the present invention I preferably superimpose over the incised zone a tab, the tab being either sealed in conjunction with the sealing of the terminal of the container in which the incised zone is formed, or else being secured to the container by extraneous means. After the blank has been formed into a container by sealing the sides and an end thereof, the receptacle is filled and the open or fill end of the latter sealed. When the contents of the container is to be dispensed, the pour opening is formed by operating the tab. Consequently, the pour opening is originally formed in the container at

the time the contents of the latter is to be dispensed.

In carrying out my invention, I have in the drawing, shown a receptacle 8, which may be of any desired contour, the upper end of the receptacle being preferably tapered or sloped, as indicated at 9, to prevent the accumulation of extraneous materials thereon. The upper terminal of the receptacle is sealed in a suitable manner. In this form of invention the upper terminals of the receptacle are pinched together, as indicated at 10, and a binding strip 11 of metal or the like fixedly secured thereto. As already described herein, a wall of the blank, which is later formed into the receptacle 8, is incised, as indicated at 12, the incision being of substantially triangular shape, the apex of the triangle being open and extending upwardly to approximately the inner end of the binding strip 11. Superimposed on the wall of the receptacle 8 and extending completely across the incised zone 12 is a tab 13, the upper end of which terminates at the upper end of the receptacle and is secured beneath the binding strip 11, as indicated to advantage in Figs. 3 and 4. The tab 13 is sealed, by a suitable cementitious agent to the wall of the receptacle within the confines of the incision 12, the tab being likewise secured to the receptacle wall around said incised zone. It is to be understood that although the wall of the receptacle is incised, as indicated at 12, the receptacle is re-enforced at this point in superimposing the tab 13 thereover, thus the incision is sealed as well as re-enforced in addition to providing means by which the receptacle wall, within the incised area 12, may be displaced and the pour opening formed from a hitherto sealed tamper-proof protected portion of the receptacle.

As illustrated in Figs. 2 and 4 of the drawing, when pressure is exerted on the lower or free end of the tab 13, the wall of the receptacle or container, at the incised area 12, is disrupted or broken, thereby permitting said portion of the wall, indicated at 12, to move as a unit with the tab 13 and providing a pour opening 15. When the tab 13 is re-engaged with the receptacle wall, the severed portion 14 of the wall serves as a cap which refits snugly into the pour opening 15.

In the form of invention illustrated in Fig. 5, the tab 13 is secured to the receptacle by means of a staple 16. Where this form of invention is used, the staple may be engaged with the receptacle immediately above the apex of the scored area 12.

In the form of invention illustrated in Fig. 7, the incised area 12 may be circular instead of triangular thereby providing a round pour opening 15'.

It is, of course, understood that various changes may be made in the details of construction, proportion and arrangement of parts within the scope of the claims hereto appended.

What is claimed is:

1. A milk receptacle including an elongated paper body provided with an incised zone at its upper end, a tab extending across and engaged with said incised zone, and means for securing one end of the receptacle, said means engaging a terminal of the tab, the opposite terminal of the tab being free to operate for severing the incised zone of the body.

2. A milk container including a paper body the upper end of which is sealed and provided with a triangular shape incised zone, the apex of the zone issuing into said sealed end, and a tab one end of which is secured in said sealed end, said tab being superimposed on and engaged with the incised zone of the body, a part of the tab projecting beyond said zone to provide an operating portion for severing the incised zone from the body.

3. A paper receptacle for milk consisting of a body provided with an incised zone and equipped with machine sealed terminals, and means carried by one end of the body and operable to provide a pour opening by removal of the part of the receptacle within said incised zone, a part of said means being secured in one of said sealed ends, another part of said means providing a finger grip to permit operation of said means.

4. A liquid container having a paper wall which is cut or scored to provide a displaceable part permanently connected to the wall by an uncut portion which comprises a hinge, and a separately formed tab attached to the outer surface of the container wall adjacent said hinge and also to the outer surface of said part, the hinge of the displaceable part being reinforced by a metallic clip secured to the container and comprising a sealing member thereof, and the tab overlapping the displaceable part and the overlapping portion thereof being separately connected to the container wall and being separable therefrom without injury to itself or to the container wall to effect displacement of said part.

JOSEPH L. CARLEY.