June 14, 1949. W. A. ROSELLE 2,473,391

CONTAINER

Filed Oct. 23, 1946 2 Sheets-Sheet 1

Fig. 1.

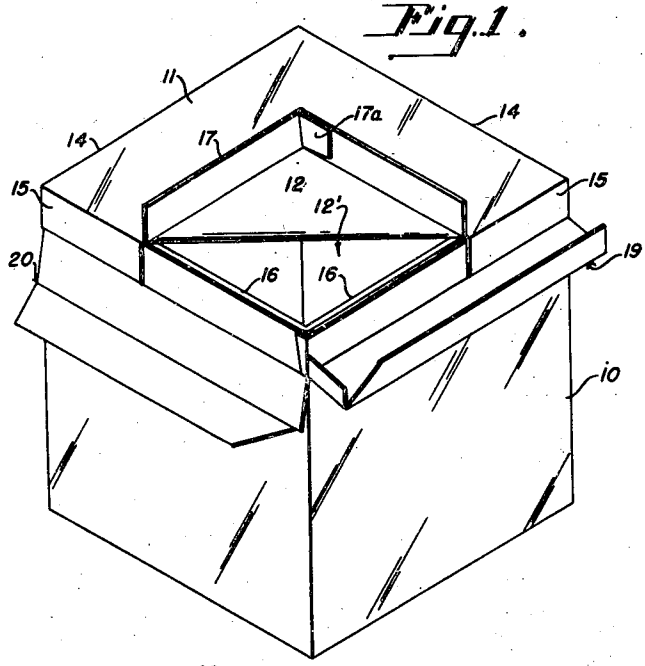


Fig. 4

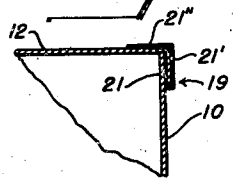
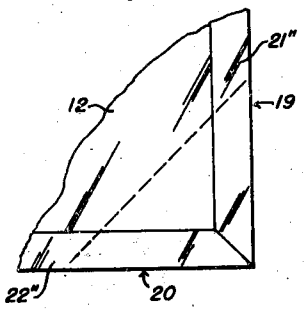


Fig. 2



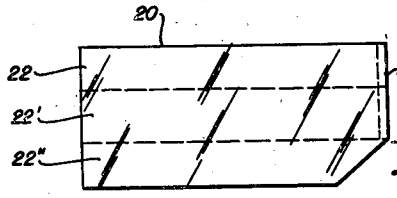


Fig. 6

Fig. 5

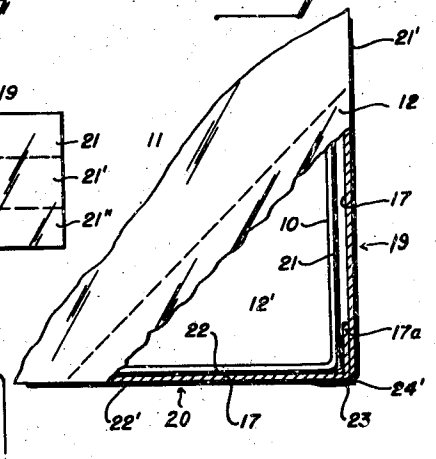
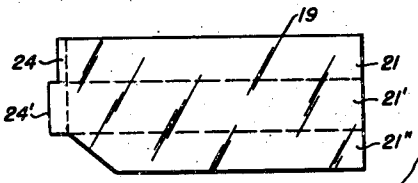


Fig. 7



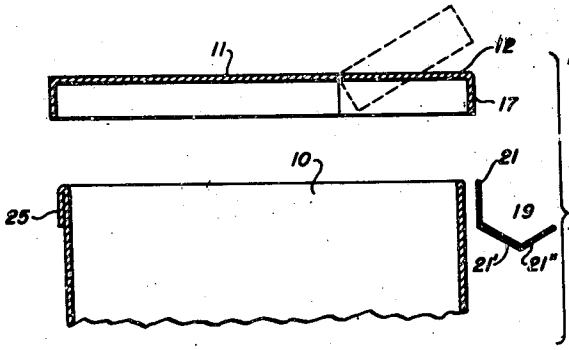


Fig. 3

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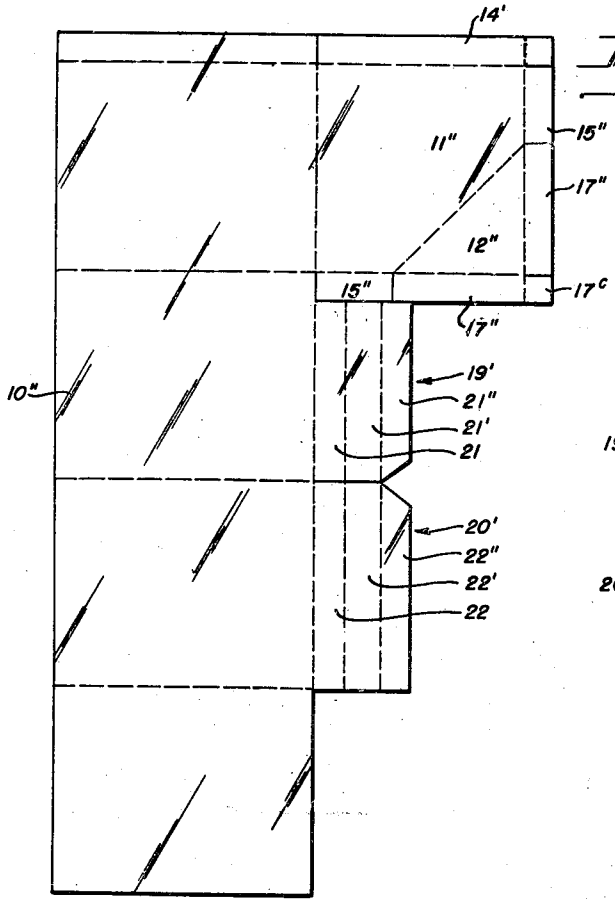


Fig. 9

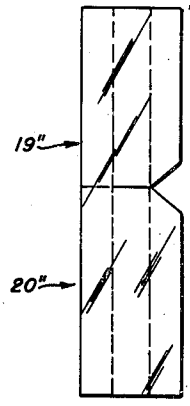


Fig. 10

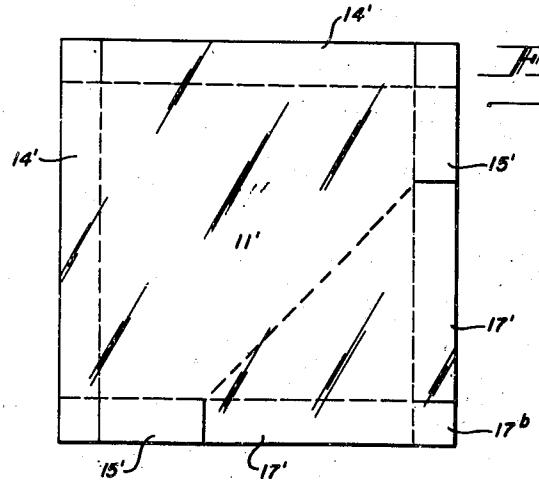


Fig. 8

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Patented June 14, 1949 2,473,391

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2,473,391

CONTAINER

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Application October 23, 1946, Serial No. 705,131

7 Claims. (Cl. 229—7)

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This invention relates particularly to what are commonly called paper containers.

Paper containers for liquids especially for dispensing milk are in great demand. These quite obviously must be leak proof and sanitary under the severe conditions of transportation and use. Naturally they must be reasonable in cost of production. It is also highly desirable that the contents be readily accessible and that when opened the container can be closed and will still be sanitary. It is also desirable that the container provide for free pouring of all the contents, i. e. that there be no pockets at the discharge outlet.

After several years of research and study of the problem, I have at last discovered the solution as shown and described herein.

The container comprises a body and a top or cover member with a closure member connected or sealed to it in such a way that it is leak proof and yet the closure member can be unsealed and released and opened when desired. The bottom may be formed in any suitable manner. The top and the closure member have flanges along two sides overlapping two adjoining edges of the body. The flanges of the top member are permanently cemented to the body of the container and the flanges of the closure are detachably but completely sealed by strips attached to or integral with the body of the container. The other two sides of the top member may have flanges permanently cemented to corresponding edges of the body or one side may be integral with the fourth edge of the body.

The accompanying drawings show the preferred form and modifications of my invention.

Fig. 1 is a perspective view of a container embodying one form of my invention, the closure member being shown open.

Fig. 2 is a plan view showing the closure member closed and sealed.

Fig. 3 is an exploded view showing a top member and the upper end of the body member and a sealing strip.

Fig. 4 is a fragmentary sectional view showing the way in which the closure is sealed.

Fig. 5 is a plan view and horizontal sectional view taken on a plane through the flange of the cover, the body and the sealing strips.

Figs. 6 and 7 are detail views of two separate sealing strips.

Fig. 8 is a plan view of a blank from which a separate top member or cover with integral edge flanges may be formed.

Fig. 9 shows a blank from which a container

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with a top member and sealing strips integral with the body may be formed.

Fig. 10 is a plan view of a blank from which two integrally connected sealing strips may be formed.

The body 10 of the container may be formed of fibre or card board or other suitable material and is rectangular in horizontal cross-section. The top or cover member 11 has a closure member 12 hinged by a scored or weakened line across one corner to close a triangular opening 12' in the corner of the body. The sides 14, 14 may have flanges which overlap and are cemented to edges of the body. The other sides of the top have flanges 15, 15 which are cemented to the edges 16, 16 of the body and the flanges 17, 17 of the closure detachably fit outside of the edges 16, 16, when the closure is in the closed position. Tab 17a connects 17 and 17.

In order to completely close the joints between the flanges 17, 17 and the edges of the body and the joints between the ends of adjacent flanges 15 and 17, I provide special sealing strips 19 and 20 such as are shown in Figs. 6 and 7. These are frequently formed separately as shown or may be integral with edges of the body as shown at 19' and 20' in Fig. 9, or connected as are 19'' and 20'' in Fig. 10. Each strip has three parts 21, 21' and 21'' and such as 22, 22' and 22'' with creased or scored lines separating adjacent parts so that they can be folded to embrace the flanges 15 and 17 when the container is sealed. The parts 21 and 22 are integral with the edges 16, 16 or may be cemented in place before the top member is applied. By using separately formed sealing strips of suitable character, I may employ thinner and more readily foldable material than is required for the body and top of the containers. The parts 21' and 22' are folded up around the flanges 15 and 17 and the parts 21'' and 22'' are folded over the edges of the top member. These flange parts 21', 21'', 22' and 22'' are detachably held in place for instance by the use of wax or the like when the container is sealed.

For additional security, I may extend the tip of strip 20 at 23 (Fig. 6) so as to overlie the corner of the body and the flanges 17, 17, when the parts are sealed. Further security may be effected by extending the tips of the parts 21 and 21' as shown at 24 and 24' in Fig. 7 so that they can be turned around the end of strip 23 when sealed.

The edges of the body which do not carry the sealing strips may be doubled and reinforced as at 25 in Fig. 3.

Ordinarily the top 11, with the exception of

closure 12, will be permanently connected to the body of the container which will be filled through the opening 12' after which the closure will be closed and the sealing strips folded over and sealed with wax or the like.

The top may be formed separately from the body as shown in Fig. 8 where the top 11' has flanges 14', 14', 15', 15' and the closure 12x has the flanges 17', 17' and the tabs 17b for assembly as will be understood from the foregoing.

The body, top and sealing strips may be formed from a single blank as shown in Fig. 9 with suitable scoring between the relatively foldable parts such as the body 10'', the top 11'' and the sealing strips 19', 20'. The top has flanges 15'', 15'', 14'' and the closure 12'' has flanges 17'', 17'' and the tab 17c. The method of joining the various flanges and sealing strips will be obvious from the foregoing.

The top may also be formed by drawing or molding so that the side flanges are integral with the top and closed at corners.

According to Fig. 10, the two sealing strips 19'' and 20'' are formed of a single piece to be applied to a body by connecting the edges in the same way that the strips 19 and 20 of Fig. 1 are applied.

Although there are many paper containers now on the market none of them so far as I can ascertain are entirely satisfactory especially with respect to the requirements of complete freedom from leakage and absolute cleanliness.

Although it is most desirable to fill the container through the opening 12' after the top has been cemented to the body, it shall be understood that the top and closure may be secured in place and the container filled from the bottom.

According to my invention, the use of the sealing strips with the container having a corner discharge spout makes it possible to obtain complete protection on all counts. The closure is completely sealed and yet can be opened readily, poured freely and again closed so as to maintain a thoroughly sanitary condition. Because of the location of the discharge spout in the corner, it is convenient to pour freely or drink from the container and without splashing or requiring the use of a straw.

The movable parts of the sealing strips of course may be torn off when the container has been opened. After the container has been opened and liquid poured from it, it will be seen that the lip of the outlet can be completely covered by closing the corner closure so that it is thus absolutely protected from any possibility of outside contamination, a highly important hygienic feature.

I claim:

1. A container formed of paper and comprising a body portion of angular cross-sectional shape and a top portion having flanges overlapping at least two adjacent side edges of the body, said top being scored across the corner intervening said side edges to form a closure and said flanges being interrupted at the ends of said scores to facilitate hinging of the corner of the top along the scored line, and sealing strips secured to the outer edges of the body portion along said adjacent side edges beneath said flanges and extending around the outside of said flanges and covering the interrupted portions of said flanges and extending over the outer edges of the corner of the top portion and sealing the outer edges of the flanges along said adjacent sides of the top portion, said extended portions of said strips being detachably sealed to the outer surfaces of the top portion.

2. A container comprising a rectangular body, a top secured thereto and having a portion of the top hinged to the remainder of the top along a scored line and forming a closure having flanges overlapping the adjacent edges of the body and extending to the ends of the hinge line and sealing means including flexible strips fixed to the body beneath said flanges and extending beyond the ends of the scored hinge line of the top, said strips having extensions covering the outer wall of said flanges and including the ends of said flanges and further extensions overlapping the outer surface of the upper edges of the top and adhesively attached to the upper surface of the top along said flanges, said closure being free to be raised and leave an unobstructed pouring spout when the extensions of said strips are detached from the top and its flanges.

3. A container comprising a body of angular cross-section having a corner forming an unobstructed spout and a top having a triangular closure portion hinged across one corner of the top above said spout and of an area less than one-half the area of the top, said hinged portion having flanges removably overlapping the adjacent edges of the body at said corner, the remainder of the periphery of the top being permanently fixed to said body and a sealing member consisting of a flexible strip permanently secured to said body beneath said flanges and having portions extending over the outside of said flanges and sealing the ends thereof and removably secured to the upper outer surface of the top at the ends of the hinged portion for sealing said hinged portion to the body.

4. A container comprising a body angular in cross-section, a top secured to the upper edges of the side walls thereof and having a hinge line diagonally across one corner forming a movable triangular closure portion at said corner, flanges depending from adjacent edges of said triangular portion and overlapping the adjacent upper edges of adjacent walls of the body and a sealing strip surrounding the upper portion of the walls of the body beneath the triangular portion and permanently secured along one edge to said upper wall portions, the remainder of said sealing strip overlapping the depending flanges and the free ends thereof and being removably sealed to the upper surface of the triangular portion and to adjacent areas of the outer surface of the top whereby when said removably sealed portion of the sealing strip is removed the triangular portion of the top may be moved from closing position leaving an unobstructed pouring spout at the corner of the body.

5. A container comprising a body of angular cross section, a top, means for securing edges of the top to the edges of the body, said top having a triangular closure portion with flanges extending part way along two meeting edges of the closure and removably overlapping the adjacent edges of the body, said flanges being of a length less than the width of the adjacent edges of the top, the closure being hinged along a line connecting the ends of said flanges and a sealing member consisting of a strip of foldable material having edges secured to the body edges beneath said flanges and having portions folded over and covering the ends of the flanges of the closure and folded over and sealed to the upper surface of the closure and top.

6. A container having a body of angular cross-

section and a top connected to the upper edge of the body, a part of said top constituting a closure member having a joint hinged to the remainder of the top, said closure member having connected flanges overlapping parts of the upper edges of the body at a corner thereof, the ends of said flanges extending to the hinge joint and sealing means consisting of strips fixed to said edges beneath said flanges and extending along said edges beyond the ends of said flanges and detachably overlapping the ends of said flanges and detachably overlapping and secured to the outer surface of the top at and beyond the ends of said flanges so as to seal the joints of the hinged closure member.

7. A container comprising a rectangular body having edges around its upper end, a top secured to said upper edges of the body and including flanges overlapping at least two adjacent edges of the body at a corner thereof, said top being scored along a line to form a hinge and said

flanges being interrupted at the ends of said line to form an openable closure, sealing strips fixed to said edges beneath said flanges at said interrupted portions thereof and having extensions overlapping the outer surface of said flanges at said hinge joints and further extensions overlapping and adhesively secured to the upper surface of the top including the area adjacent said hinge joint.

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