Sept. 5, 1950 E. A. BECKER 2,521,279

LIQUID TIGHT SECTIONAL CONTAINER HAVING RIGID SIDE WALLS

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Fig. 1.

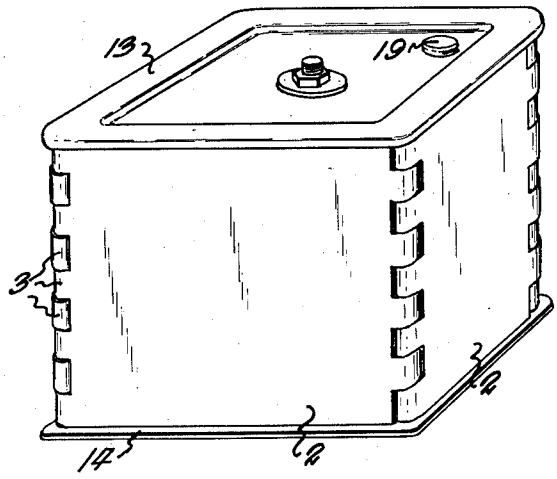


Fig. 3.

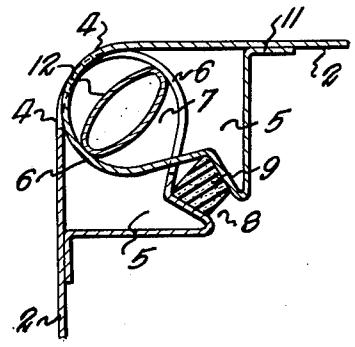


Fig. 2.

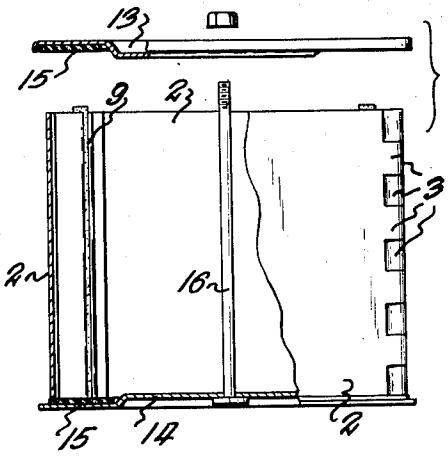
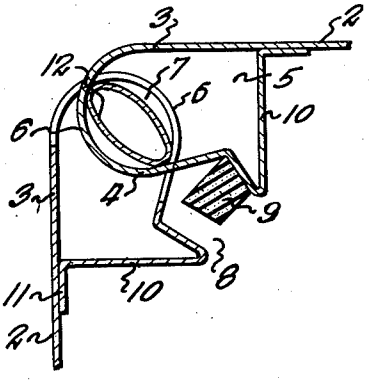


Fig. 4.



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Fig. 5.

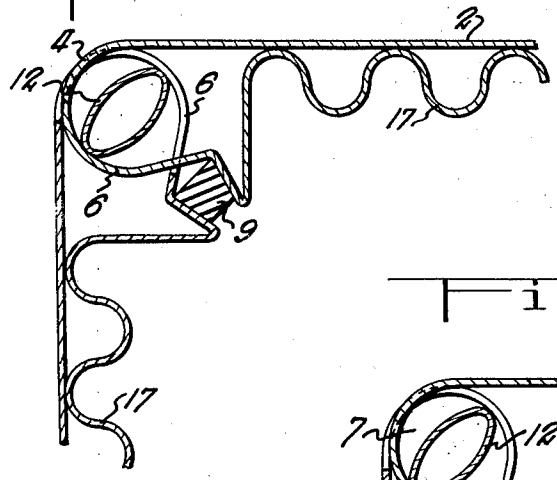


Fig. 6.

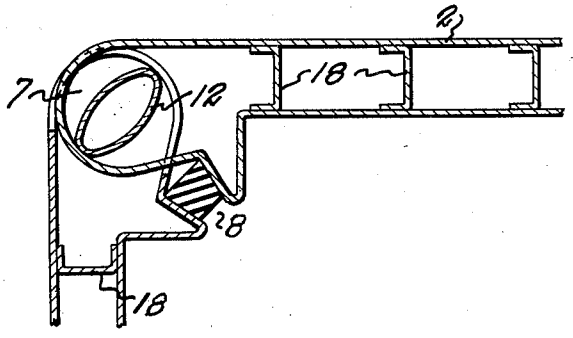
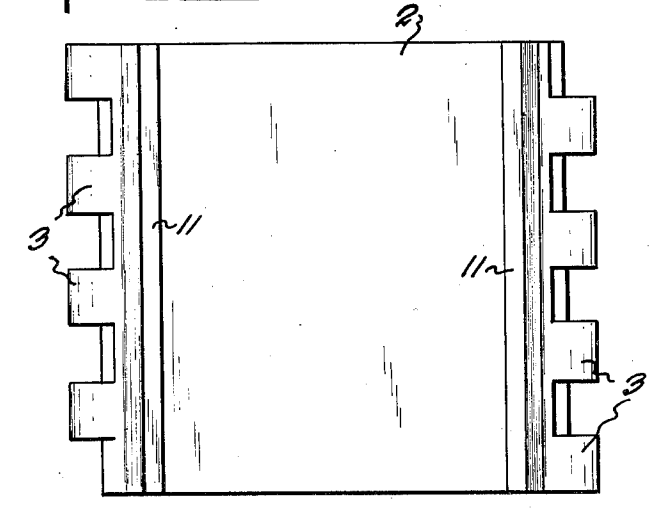


Fig. 7.



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LIQUID TIGHT SECTIONAL CONTAINER HAVING RIGID SIDE WALLS

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Application July 27, 1949, Serial No. 107,101

4 Claims. (Cl. 220—4)

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My invention relates to improvements in collapsable liquid tight containers having rigid side walls, and the object of the invention is to provide a container consisting of interlocking side wall sections which are detachably secured to each other along their vertical edges, and wherein the corners formed by the engaging edges of the side wall sections carry caulking strips which are arranged to be clamped by the interlocking arrangement of the edges of the side wall sections whereby the corners are made liquid tight.

Another and important feature of the invention is to form the side wall sections with crenellated interlocking edges, such edges and contained caulking strips being drawn together and compressed by the action of rotatable wedge plugs of oval cross-section which are inserted within the interlocking corners.

A further object of the invention is to provide the container with detachable bottom and top plates which engage the lower and upper edges of the side wall sections.

With the foregoing and other objects in view as shall hereinafter appear, my invention consists of a collapsable liquid tight container constructed and arranged all as hereinafter more particularly described and illustrated in the accompanying drawings in which:

Fig. 1 is a perspective view of the assembled container.

Fig. 2 is an exploded side elevational view of the container, part of one of the side walls being broken away, and the top plate or lid being shown partly in section and positioned above the container.

Fig. 3 is an enlarged horizontal cross-sectional view through one of the corners formed by the interlocking edges of the side wall sections and showing the caulking strip in the compressed liquid tight position.

Fig. 4 is a similar view to Fig. 3, and showing the corner before it is drawn into the liquid tight arrangement.

Fig. 5 is a similar view to Fig. 3, and showing a construction wherein the side wall sections are each formed of two plates, and wherein the outer plates are flat and the inner plates corrugated to give added strength.

Fig. 6 is a similar view to Fig. 5, and shows a construction wherein the inner and outer plates of each wall are spaced apart and connected by channel spacers, and

Fig. 7 is a side elevational view of one of the side wall sections.

Like characters of reference indicate corresponding parts in the different views of the drawings.

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The container may be formed of three or more side wall sections, and in the drawings the container is shown with four sides 2, each of the same size and configuration.

The edges of the wall sections or sides 2 are formed with interlocking crenellations 3 which are contained within the turned back edge portions 4 of the wall sections. As shown in Figs. 3 and 4, the turned edge portions 4 are in the form of cells 5 having rounded outer edge portions 6, whereby the interlocking crenellations constitute a bore 7 in the corner structure.

The inner edge portions of the cells 5 are so constructed that when the crenellations interlock they form a channel 8 designed to contain a wedge shaped caulking strip 9 which constitutes the liquid tight corner seal. The walls 10 of the cells 5 are formed with feet 11 welded or rivetted to the side plates 2.

As two interlocking plates form, what may be termed a tongs' arrangement, it will be appreciated that when the rounded edge portions 6 are forced apart, that the portions forming the sides of the channel 8 are drawn together to clamp the caulking strip 9 contained therein.

To press the portions 6 of the bore 7 apart, a rotatable plug 12 of oval cross-section is inserted into the bore 7 in the position shown in Fig. 4. The plug is so dimensioned that when it is turned from the position shown in Fig. 4 to the position shown in Fig. 3, the portions 6 of the bore are pressed apart to a sufficient degree to cause the sides of the channel 8 to clamp upon the caulking strip 9.

The top and bottom plates 13 and 14 are of similar form and carry gaskets 15 upon their inner faces to engage the upper and lower edges of the side wall sections 2 and form a liquid tight seal. The caulking strips 9 are a shade longer than the height of the side wall sections 2 so that their end faces will tightly engage the faces of the gaskets 15. To permit ready assembly and to guard against loss of the caulking strips 9 when the container is apart, each strip is cemented to a channel side wall as shown in Fig. 4.

The top and bottom plates 13 and 14 are drawn into sealing position by any suitable arrangement, such as by the draw bolt 16 shown in Figs. 1 and 2, and which extends through the container and holes in the top and bottom plates.

The side wall section construction shown in Figs. 5 and 6 interlock in exactly the same man-

ner as the interlocking arrangement previously described.

In the construction shown in Fig. 5, the walls 10 of the cells 5 are extended in corrugated form 17 and are secured to the back faces of the side plates 2 to give added strength.

In the construction shown in Fig. 6, the walls 10 of the cells 5 are extended in spaced apart parallel relation to the side plates 2, and suitably spaced channel spacers 18 are positioned therebetween, whereby a very strong wall construction is obtained.

To assemble the container, the sides 2 are assembled with their crenellations interfitted, and the plugs 12 inserted in the position shown in Fig. 4 and then twisted into the position shown in Fig. 3, thereby clamping the caulking strips 9 to form liquid tight corner seals. The top and bottom plates 13 and 14 are then positioned in place and drawn into liquid tight engagement with the top and bottom edges of the side wall sections 2, by the bolt 16. The top plate carries a filling and pouring orifice and cap 19.

The container is taken apart by removing the top and bottom plates and turning the plugs 12 into the position shown in Fig. 4, whereby they may be removed and the edges of the side wall sections 2 disconnected.

From the foregoing description it will be apparent that I have devised a collapsable liquid tight container which may be readily assembled and taken apart, and which will permit the container to be cheaply returned to the supplier for refilling.

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

1. A collapsable liquid tight container having a plurality of side wall sections detachably secured to one another along their vertical edges and detachable top and bottom plates, and comprising a plurality of side walls having their vertical edge portions turned back inwardly in spaced relation to the inner faces of the side walls to form cells, crenellations cut out of the turned back portions of the side walls, the crenellations in one turned back side wall edge being adapted to interfit between the crenellations of an adjacent turned back sidewall edge to form a corner, the cellular crennelations in one edge overlapping the cellular crenellations in an adjacent edge, the portions of the vertical edge cells of the side walls not containing the crenellations being spaced apart from one another in the corner structures to form channels, caulking strips contained within said channels, wedge means engaging the interfitting crenellations of the corner structures to draw the walls of the channels together to clamp the container caulking strips, removable top and bottom plates resting upon the top and bottom edges of the side walls, and releasable means for retaining said top and bottom plates in engagement with the top and bottom side wall edges.

2. A collapsable liquid tight container as claimed in claim 1, wherein the overlapping cellular crenellations in a corner structure form a bore and wherein the channel forming portions of the vertical edge cells of the corner constitute a tongs' arrangement in combination with the bore, and a rotatable wedge receivable within the bore and adapted upon rotation to press the crenellations of the bore apart and clamp the walls of the channel upon the caulking strip.

3. A collapsable liquid tight container as claimed in claim 1, wherein each side wall is bent back upon itself to form a double thickness wall, the overlapping cellular crenellations in a corner structure forming a bore, and wherein the channel forming portions of the vertical edge cells of the corner constitute a tongs' arrangement in combination with the bore, and a rotatable wedge receivable within the bore and adapted upon rotation to press the crenellations of the bore apart and clamp the walls of the channel upon the caulking strip.

4. A collapsable liquid tight container as claimed in claim 1, wherein each side wall is bent back upon itself to form a double thickness wall, one thickness being corrugated and the other flat, the overlapping cellular crenellations in a corner structure forming a bore, and wherein the channel forming portions of the vertical edge cells of the corner constitute a tongs' arrangement in combination with the bore, and a rotatable wedge receivable within the bore, and adapted upon rotation to press the crenellations of the bore apart and clamp the walls of the channel upon the caulking strip.

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No references cited.