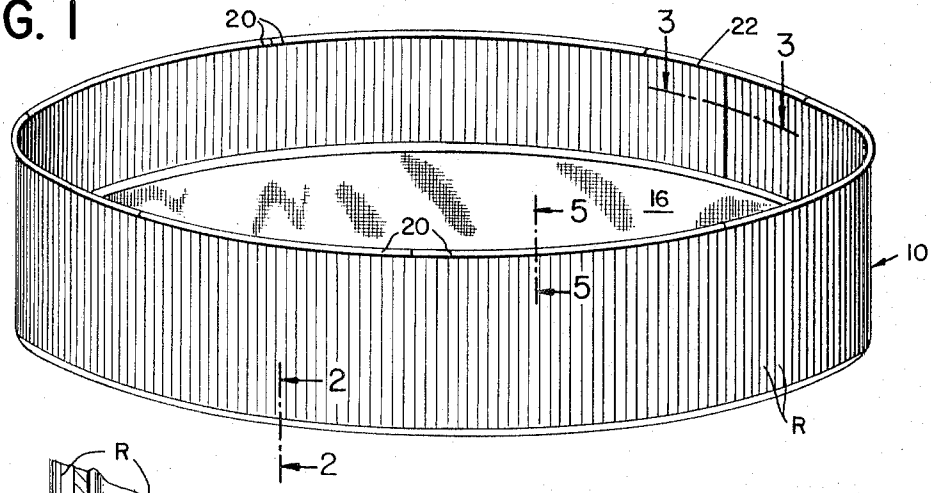
Feb. 7, 1967 R. SCHLEEWEISS 3,302,825

OPEN TOP LIQUID CONTAINER

Filed April 15, 1964

FIG. 1



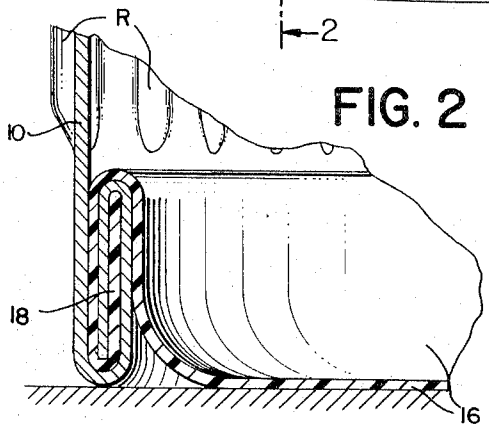


FIG. 2

FIG. 3

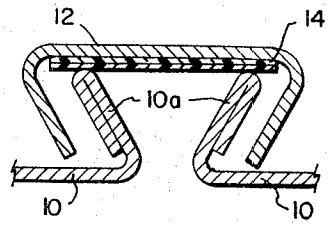


FIG. 4

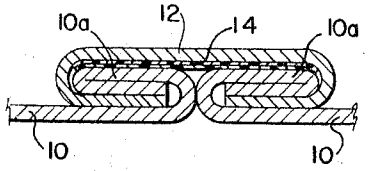
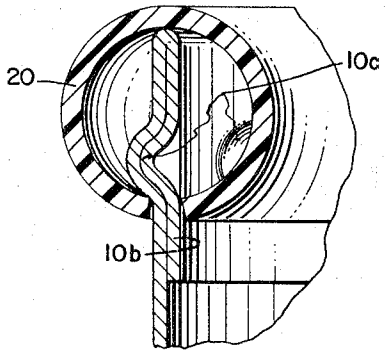


FIG. 5



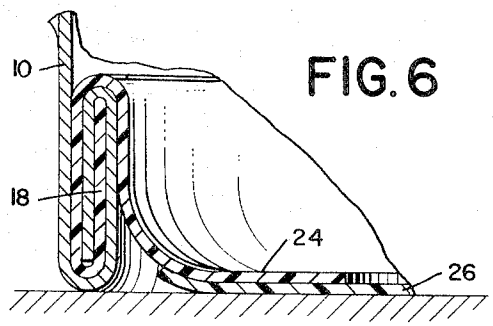


FIG. 6

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OPEN TOP LIQUID CONTAINER

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13 Claims. (Cl. 220—67)

This invention comprises an open top liquid container specifically dimensioned to provide a swimming pool.

An important object of the invention is to provide a swimming pool of this type comprising a metal side wall and a flexible, fluid tight plastic bottom wall, joined together at their periphery to form a fluid tight seal.

Another object of the invention is to provide in a structure of this type a coping for the top edge of the side wall, which can be readily attached and removed.

Another object of the invention is to provide a pool structure of this type which is collapsible in the sense that it can be folded or rolled into a compact bundle for transportation and storage. Other and more detailed objects of the invention will be better understood from the following description of the several embodiments thereof illustrated in the attached drawings.

In those drawings:

FIGURE 1 is a perspective view of the complete assembly comprising the container of this invention;

FIGURE 2 is a typical cross section, such as that on the line 2—2 of FIGURE 1, showing the construction of the joint between the side wall and the bottom wall;

FIGURE 3 is a cross sectional exploded view on the line 3—3 of FIGURE 1, showing the seam at the ends of the metal strip forming the side wall;

FIGURE 4 is a sectional view corresponding to that of FIGURE 3, showing the seamed parts completely assembled;

FIGURE 5 is a typical cross sectional view, such as that on the line 5—5 of FIGURE 1, showing the coping attached to the side wall; and

FIGURE 6 is a typical cross sectional view of a modified structure corresponding to the view of FIGURE 2, differing however in that the bottom wall is of two-piece construction.

Fluid containers, such as those used as swimming pools, are relatively large and therefore are difficult to construct in the simplest form while providing adequate strength and at the same time permitting compaction for transportation and storage purposes.

In an effort to obtain these objects it has been proposed to make pools of this type having side walls of any suitable material and providing a separate plastic sheet as a liner for containing the water. It has also been proposed to make the side wall of plastic material and to unite a plastic bottom wall therewith to form the fluid tight container. However, plastic side walls are impractical, because if made light enough for folding and transportation, they are not strong enough to support the substantial weight of the water which they must contain. On the other hand, if they are made of sufficiently thick and strong plastic materials in the side wall, they become too expensive, heavier than desired and difficult, if not impossible, of collapsing.

All of these disadvantages are avoided by means of the construction herein disclosed, wherein the primary container consists of a flexible metal side wall having a plastic bottom wall permanently united thereto in fluid tight relation. Any light metal is suited to this purpose. As illustrated in the drawing, the container comprises a metal side wall **10** formed from a strip of suitable metal and of the required length for a particular pool size. The end edges of the strip are folded upon themselves, as indicated at **10***a* in FIGURE 3. The fluid tight joint is

made at this meeting point by means of a U-shaped channel **12**, preferably of the same metal, shaped to enclose the folded edges **10***a*. Interposed between the ends of the edges **10***a* and the closed side of the channel **12** is a strip or strips of suitable gasket material **14**. These strips may be made of synthetic or natural rubber, plastic, or the like. The finished seam is shown in FIGURE 4, wherein the parts when assembled, as shown in FIGURE 3, are rolled down flat, so that the sides of the channel **12** enclose the folded edges **10***a* of the strip **10** with the gasket **14** tightly clamped therebetween.

However, before the seam described above is assembled the strip **10** is double folded at its lower edge so as to double fold and enclose the peripheral edge of a sheet **16** of suitable plastic to form the seam **18**, clearly illustrated in FIGURE 2. The double folded edge of the strip **10** is rolled down into complete contact with the end folded edge of the sheet **16**, so as to insure against the seepage of liquid. If desired, a suitable sealing cement can be enclosed within the seam, but this is not essential.

The top edge of the strip **10** is folded over upon itself, as indicated at **10***b* in FIGURE 5, and at spaced circumferential points the metal of the double fold is pressed outwardly to form spaced bosses **10***c*. To strengthen, trim and protect the top edge of the side wall a coping is detachably secured thereto, by means of bosses **10***c*. This coping consists of a tube **20**, which can be of light metal, synthetic or natural rubber or a suitable plastic. The tube is longitudinally split along one side, as indicated in FIGURE 5, so that it can be forced on or slipped endwise on to the top edge of the side wall, so that the bosses engage inside of the tube, as illustrated in FIGURE 5, and hold it in place. The coping can be made up of a series of sections, as illustrated in FIGURE 1, or it can be a single continuous tube of sufficient length. In the case of a metal coping it is preferable to have it sectionalized for easy handling, whereas a flexible tube such as a plastic tube could be of a single piece since it can be rolled up. Also, as an added feature, if desired, in the case of sectionalized coping, the length **22** of tubing which overlaps the seam in the side wall could be of larger diameter so that the adjacent ends of the tube **20** could be telescoped therewith. This variant is illustrated in FIGURE 1.

One of the advantages of the construction thus described in related to the economics of manufacturing. The metal side wall strip **10** can be fed through a seaming machine conjointly with the bottom wall **16**, so that the seam **18** is formed as a continuous operation, and at the same time where it is desirable for strengthening purposes, vertical parallel ribs can be formed in the strip. After the seam **18** has been completed the vertical seam previously described in connection with FIGURES 3 and 4 is made.

A variation of the construction shown in FIGURES 1 to 5 inclusive is illustrated in FIGURE 6, wherein the bottom wall is made in two parts. It comprises a strip **24** of plastic material, which is connected to the side wall **10** in the seam **18**, as in the previous case. A sheet of plastic **26** is then overlaid at its periphery with respect to the strip **24** and the parts joined by means of an adhesive, but preferably by dielectric heat-sealing in a manner well known in this art. It will be understood that the material of the strip **24** and sheet **26** will be of a plastic suited to this type of sealing, such as, for example, polyvinylchloride.

From the above description it will be apparent that the details of this invention can be varied by those skilled in the art without departing from the novel subject matter herein disclosed. It is intended, therefore, that the disclosure be taken in an illustrative sense and that the scope

of protection afforded it be determined by the appended claims.

What is claimed:

1. A collapsible liquid container comprising a coilable metal wall non-rigid in a longitudinal direction defining an enclosure, a flexible fluid impervious bottom wall, and means forming a fluid tight joint connecting said walls, comprising a seam by which the peripheral edge of said bottom wall is enclosed by a folded edge of said metal wall.

2. In the combination of claim 1, said wall edges being mutually double enfolded.

3. In the combination of claim 1, said metal wall being formed of a strip of metal having its ends in abutting relation and means for uniting said ends in fluid tight association.

4. In the combination of claim 3, said last means comprising a channel enclosing the end edges of said strip.

5. In the combination of claim 3, said last means comprising a channel enclosing the end edges of said strip, including a sealing gasket.

6. In the combination of claim 1, a coping enclosing the top edge of said metal wall and means for releasably holding said coping in place.

7. In the combination of claim 1, a split tubular coping overlying the top edge of said metal wall and projections on said wall releasably engaging the interior of said tubing.

8. In the combination of claim 7, said tubing comprising a plurality of arcuate sections.

9. In the combination of claim 7, said tubing comprising a plurality of arcuate sections, including a section overlying the adjacent ends of said sections.

10. In the combination of claim 1, said bottom wall consisting of a strip engaged in said seam and a central portion secured at its periphery to said strip.

11. In the combination of claim 1, said bottom wall consisting of a strip engaged in said seam and a central portion secured at its periphery to said strip by cement.

12. In the combination of claim 1, said bottom wall consisting of a strip engaged in said seam and a central portion secured at its periphery to said strip by a heat seal.

13. In the combination of claim 1, said enclosure defining wall being ribbed, the ribs extending transversely thereof.

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