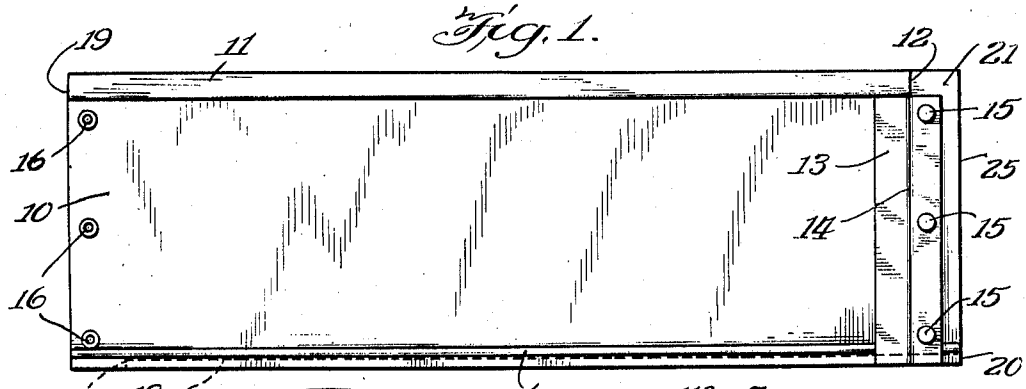
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CONTAINER

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Fig. 1.



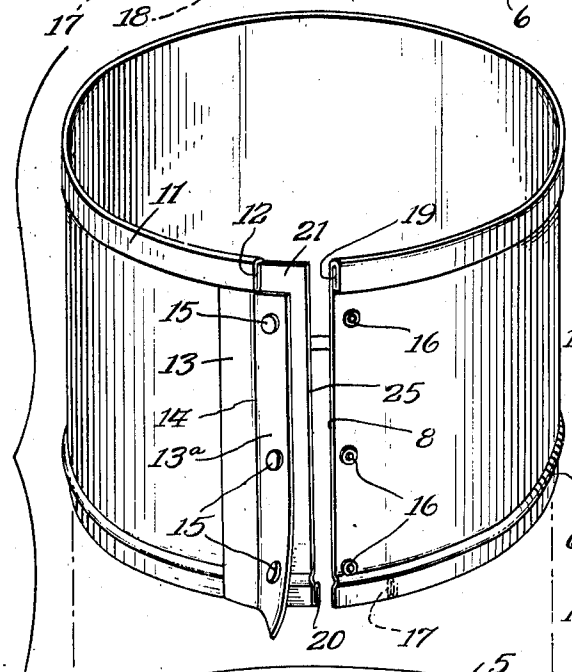


Fig. 2.

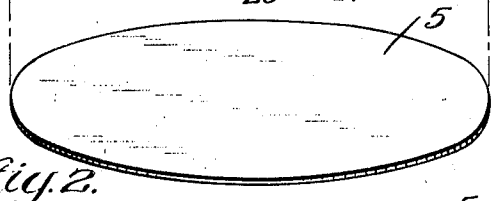
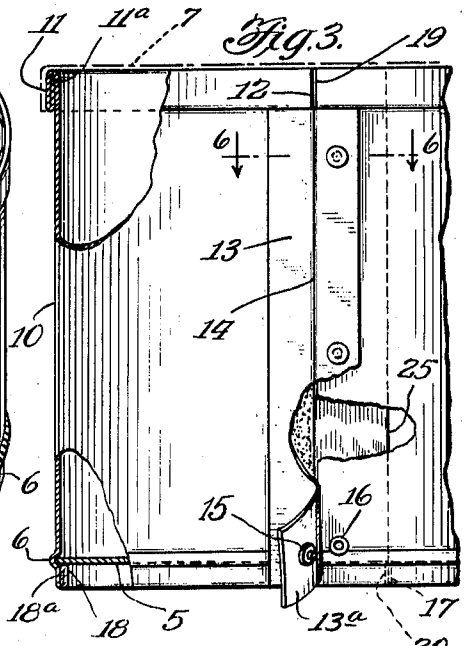


Fig. 3.



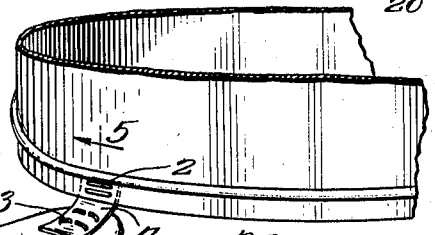
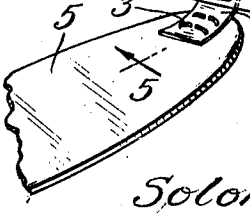


Fig. 4.



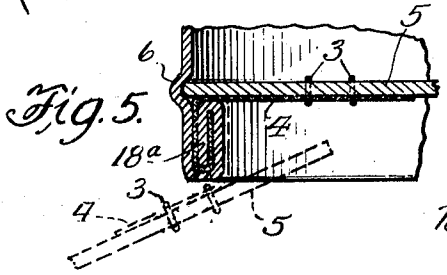


Fig. 5.

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Fig. 6.

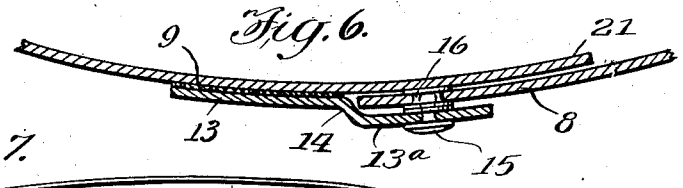


Fig. 7.

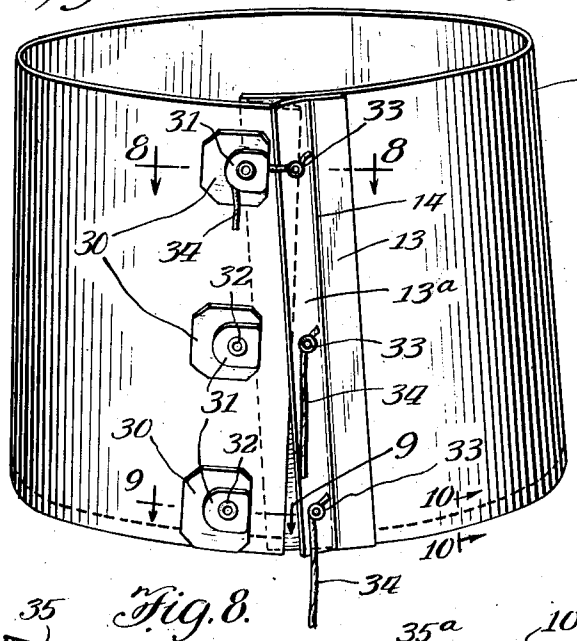
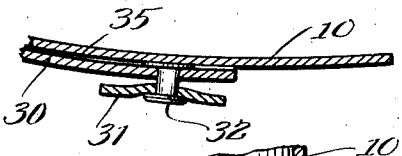


Fig. 9.



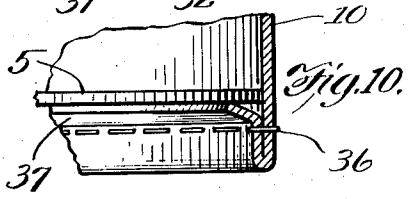


Fig. 10.

Fig. 8.

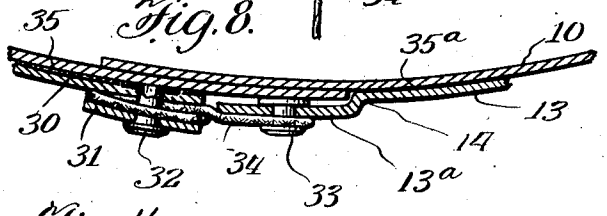


Fig. 12.

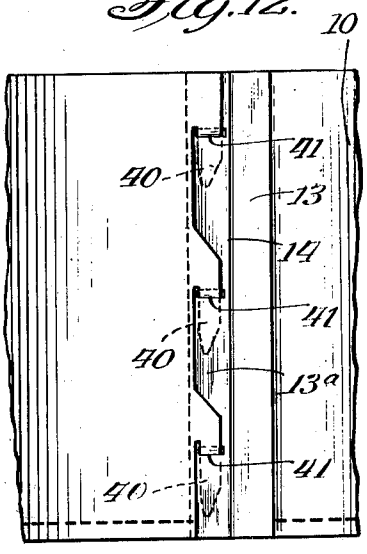
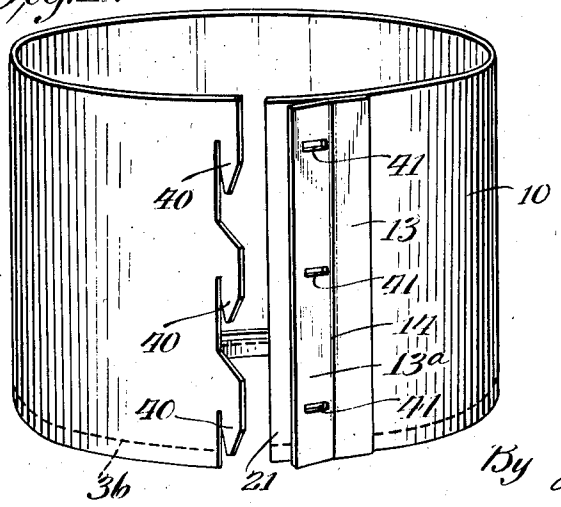


Fig. 11.



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Fig. 13.

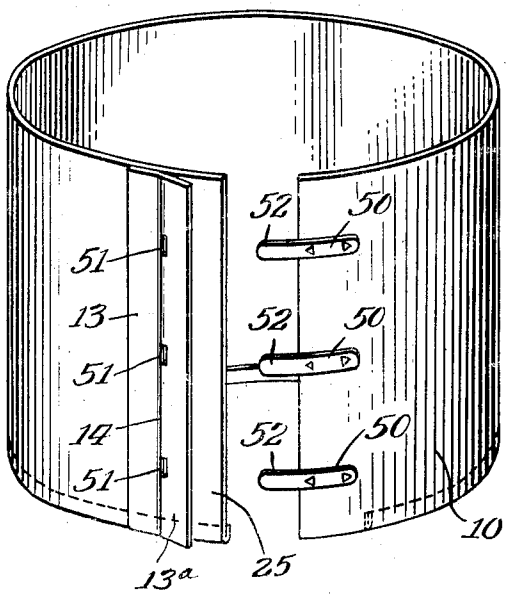


Fig. 14.

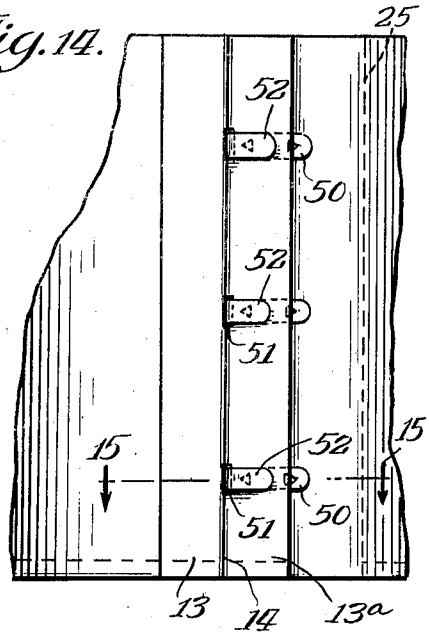


Fig. 15.

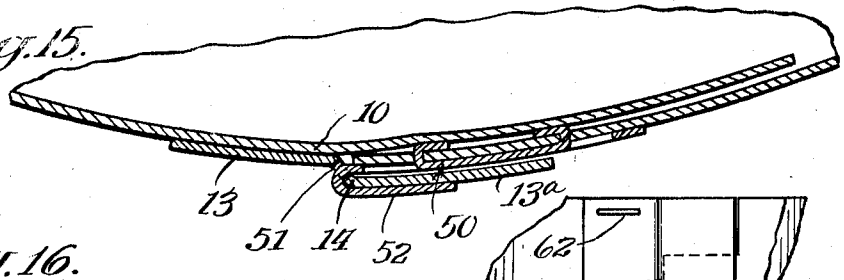


Fig. 16.

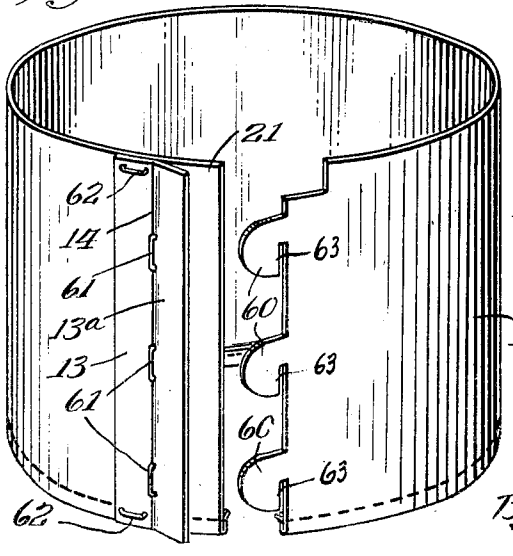
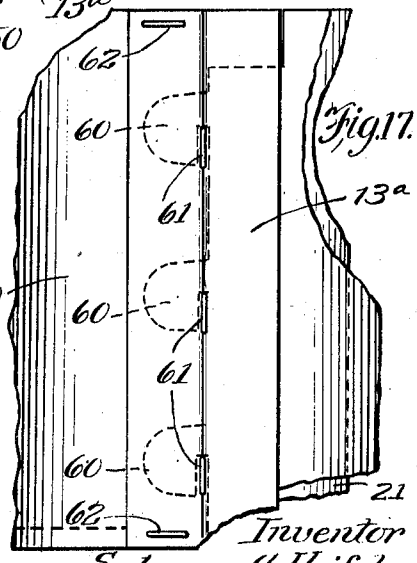


Fig. 17.



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UNITED STATES PATENT OFFICE

2,140,996

CONTAINER

Solomon A. Heifetz, Wausau, Wis., assignor to Marathon Paper Mills Company, Rothschild, Wis., a corporation of Wisconsin

Application September 15, 1936, Serial No. 100,932

7 Claims. (Cl. 229—4.5)

This invention relates to a container and more specifically to a collapsible container suitable for packaging foods such as frozen ice cream.

One of the objects of the invention is the provision of a container which can be shipped in flat disassembled condition and readily assembled by the user for use without requiring any special equipment.

Another object of the invention is to produce a container of comparatively large capacity made of fibrous sheet material, preferably paper board, that can be manufactured and shipped in flat knocked-down condition with the parts making up the container disassembled.

Another object of the invention is the provision of a flat blank for forming the body portion of the container, means being provided for readily fastening the ends of said blank to form a tubular body portion.

Another object of the invention is to provide a container made of fibrous material and which is sturdy and strong in construction, which is economical to manufacture and which fully protects the contents.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in certain novel details of construction hereinafter more fully described and pointed out in the claims, it being understood that changes and modifications may be made without departing from the scope of the appended claims.

Referring to the accompanying drawings:

Figure 1 is a plan view of the blank for forming the tubular body portion of the container;

Figure 2 is a perspective view of the blank illustrated in Figure 1 as bent preparatory to locking its ends together to form a tubular body and also the bottom disc prior to assembly within the tubular body;

Figure 3 is a view of the completed container partly in section with a portion of the flap folded back.

Figure 4 is a fragmental perspective view of a modified construction illustrating the bottom disc held in attached relation to the body blank;

Figure 5 is a cross-sectional view taken on lines 5—5 of Figure 4;

Figure 6 is a fragmental cross-sectional view taken on lines 6—6 of Figure 3;

Figure 7 is a perspective view of a modified construction of the body blank in partially locked condition;

Figure 8 is a cross-sectional view taken on lines 8—8 of Figure 7;

Figure 9 is a cross-sectional view taken on lines 9—9 of Figure 7;

Figure 10 is a cross-sectional view taken on lines 10—10 of Figure 7;

Figure 11 is a perspective view of another modified construction of the body blank;

Figure 12 is a fragmental view of the body blank illustrated in Figure 11 the ends of same being locked;

Figure 13 is a perspective view of still another modified construction of the body blank;

Figure 14 is a fragmental view of the body blank illustrated in Figure 13 with the ends locked;

Figure 15 is a cross-sectional view taken on lines 15—15 of Figure 14;

Figure 16 is a perspective view of a further modification of the construction of the body blank; and

Figure 17 is a fragmental view of the blank illustrated in Figure 16 with the ends locked.

Like reference characters denote like parts in the several figures of the drawings.

A blank 10 of substantially rectangular shape is provided for forming the body portion of the container. This blank may be made of fibrous material, such as paper board or cardboard, depending upon the use to which the container is to be put. If the container is used for liquid or semi-liquid material, or materials which may deteriorate by contact with the air, the fibrous material is waxed on the inside or outside of the container, or both, or a moisture-proof board may be used for the blank 10.

The upper margin 11*a* of the blank is refolded and glued to the body portion of the blank 10 to form an external rim or collar 11 as shown in Figure 2. A portion of the upper margin is cut away prior to folding and gluing the margin so as to leave the body blank adjacent one end 25 without a rim portion as indicated at 21 in Figure 2, for a purpose to be hereinafter explained.

The edge 12 of the upper rim is consequently inwardly spaced or offset a short distance from the edge 25 of the blank. The rim 11 thus formed serves to reinforce the body of the container and renders it more rigid. The rim also affords a convenient hand hold or grasping means for handling the container. The outer face of the rim 11 also serves to engage the rim portion of a closure cover which may be used for the container.

The lower margin 18*a* of the blank 10 is similarly refolded and glued to the blank 10 on the opposite face to form a short collar portion 18.

A portion of the lower margin 18a is also cut away so as to leave the body blank adjacent one end 8 without a collar portion for a short distance as shown in Figure 2, the edge 17 of same being inwardly spaced a short distance from the edge 8 of the blank. The lower collar portion also serves to reinforce and render the body more rigid.

Adjacent one edge 25 of the blank 10 a flap preferably made of the same stock material as the blank 10 is secured. This flap comprises panels 13 and 13a, panel 13 being preferably glued to the blank throughout its area and panel 13a being hinged on score line 14. Panel 13 is provided at suitably spaced distances with the female portions 15 of metal snap fasteners. The complemental male portions of the snap fasteners are positioned adjacent the edge 8 of the blank 10. Blank 10 is scored or grooved along line 6 positioned above the collar 18 for receiving a stiff comparatively heavy circular paper bottom disc 6.

In forming a container the blank 10 is bent into tubular form as shown in Figure 2. The edge 8 of the blank is then positioned so as to overlap the edge 25 as shown in Figure 6 and at the same time is caused to enter the pocket portion formed by hinged panel or flap 13a so as to bring the terminal end 19 of the upper collar 11 into abutting relation with the opposite terminal end 12 of the collar as shown in Figure 3. Simultaneously the terminal end 20 of the lower collar 18 is brought into abutting relation with the inwardly spaced terminal end 17 of the lower collar. In order to secure simultaneous abutment of the terminal ends of the upper and lower collars it is necessary that the terminal end 12 of the upper collar be spaced inwardly from the edge 25 the same distance that terminal end 17 of the lower collar is inwardly spaced from the edge 8.

The portions 15 and 16 of the metal snaps are then interlocked by pressing same into engagement. The ends of the blank are thus fastened mechanically against relative displacement in any axial or circumferential direction.

A bottom disc 5 of suitable diameter is then inserted through the top of the tubular body and pressed into position so that its edges snugly fit into the groove 6 while the lower portion thereof is supported by the collar 18 as shown in Figure 3.

The container so formed is now ready to receive any suitable material such as ice cream and other materials. After being filled, a cover 7 of any suitable construction having a flange portion for engaging the collar 11 is applied. A suitable cover for this purpose is disclosed in the patent to Meier 2,032,296 February 25, 1936.

The described construction of the body blank affords a simple and effective means for producing a container which is easy to assemble without requiring any special equipment. Furthermore a great economy and saving in shipping costs of the empty containers is effected because they can be shipped to the user in flat compact disassembled form occupying the minimum possible space during shipment. The described container produces a tight, leakproof construction particularly suitable for ice cream and similar frozen liquid and semi-liquid products. The feature of the overlapped locked edges of the body blank ensures a smooth interior for the container and at the same time provides a leakproof joint when used for ice cream. The pocket construction at end edge of the blank formed by the hinged flap affords a simple guide for assembling the blank as well as facilitating fastening the overlapped ends of the blank.

If desired a bottom disc 5 may be attached to each blank 10 by means of a strip of fabric or other flexible material 4 as shown in Figures 4 and 5. One end of the strip 4 may be interfolded in the collar portion 18 and fastened by staples 2. The other end of the strip may be fastened to an edge portion of the disc by staples 3. Strip 4 is of such length that when the blank 10 is formed into tubular form the disc 5 can be positioned in the groove 6. The blanks 10 can thus be shipped to the user in flat condition each blank having a bottom disc attached thereto ready for assembly.

It is obvious that many modifications may be made in the construction of the container utilizing the essential features of this invention. Instead of using snap fasteners for fastening the ends of the blank 10 any suitable fastening means may be employed as illustrated for example, in Figures 7 to 17.

In Figure 7 the flap 13a attached to one edge of the blank 10 is provided with strings 34 fastened by eyelets 33 or any other suitable means. Adjacent the other edge of the blank 10 are attached substantially rectangular tabs 30 by means of glue 35. Each tab has attached thereto by means of eyelets 32 substantially circular discs 31, the edge portions of said discs 31 being free to permit the strings 34 to be wound therebeneath.

In forming a container using the blank illustrated in Figure 7 the edges thereof are assembled so as to overlap beneath the flap 13a as shown in Figure 8 in a manner previously described in connection with Figure 1. Strings 34 are then tightly wound beneath discs 31 so as to hold securely the edges of blank 10.

In order to hold the bottom disc 5 in position the lower margin of the blank may be folded over and stitched with thread or other suitable means 36 so as to form a flange 37 which supports the disc 5 as shown in Figure 10.

Figure 11 illustrates a further modified construction wherein one edge of the blank is provided with tongues 40. Flap 13a is provided with slots 41 for receiving the tongues 40 into locking engagement as shown in Figure 12.

Another modification is illustrated in Figure 13 wherein flexible metal strips 50 are attached to one edge of the blank 10. Flap 13 is provided with suitably spaced slots 51 for receiving the ends 52 of said metal strips. After the edges of the blank are overlapped as shown in Figure 15 the ends of the strips are folded over to securely hold the edges of the blank in proper relation.

A further modification is illustrated in Figure 16 wherein one edge of the blank 10 is provided with tongues 60. Panel 13 is fastened to the blank 10 by means of a series of vertically positioned staples 61 and also by staples 62 at the upper and lower edges thereof. In assembling the blank 10 into tubular form the tongues 60 are positioned so as to extend beyond the staples 61, the undercut portions 63 thereby interlocking with the staples as shown in Figure 17 so as to fasten the edges of the blank 10.

Having thus described the invention, what is claimed is:

1. A collapsible leakproof container comprising a body made from a blank bent to tubular form, said blank having adjacent one end an externally positioned flap portion forming a pocket for receiving the other end of the blank, said pocket extending for substantially the full depth of the

container, and means for fastening the ends of said blank in overlapped relation.

2. A collapsible leakproof container comprising a body made from a blank bent to tubular form, said blank having adjacent one end an externally positioned pocket portion for receiving the other end of said blank, said pocket extending for substantially the full depth of the container, and means for fastening the ends of said blank in overlapped relation.

3. A collapsible leakproof container comprising a body made from a blank bent to tubular form, said blank having at one end an externally positioned flap portion forming a pocket for receiving the other end of said blank, said pocket extending for substantially the full depth of the container, means for fastening the ends of said blank in overlapped relation, a disc removably supported within one end of said body and a closure secured at the other end thereof.

4. A collapsible leakproof container comprising a body made from a blank bent into tubular form, said blank having at one end an externally positioned flap portion forming a pocket for receiving the other end of said blank, said pocket extending for substantially the full depth of the container, female portions of snap fasteners provided on said flap portion, and complemental male portions of snap fasteners provided at said other end of the blank for fastening the ends of the blank in overlapped relation.

5. A collapsible leakproof container comprising a body made from a blank bent into tubular form, said blank having its upper margin folded so as to form an external rim portion and its lower margin folded so as to form an internal collar portion for supporting a removable disc, one end of said blank having an externally positioned flap portion for forming a pocket for receiving the other end of said blank, said pocket extending for substantially the full depth of the container, and means for fastening the ends of the blank in overlapped relation.

6. A collapsible leakproof container comprising a body portion made from a blank bent into tubular form, said blank having a portion of its upper margin cut away adjacent one end and folded so as to form an external collar portion for the container, and having a portion of the lower margin cut away adjacent the other end and folded so as to form an internal collar portion for supporting a removable disc, one end of said blank having an externally positioned flap portion for forming a pocket for receiving the other end of said blank, said pocket extending for substantially the full depth of the container, and means for fastening the ends of the blank in overlapped relation with the terminal end portions of the upper and lower collar portions in abutting relation.

7. A collapsible leakproof container comprising a body portion made from a blank bent into tubular form, said blank having a portion of its upper margin cut away adjacent one end and folded so as to form an external collar portion for the container, and having a portion of the lower margin cut away adjacent the other end and folded over so as to form an internal collar portion for supporting a removable disc, one end of said blank having an externally positioned flap portion for forming a pocket portion for receiving the other end of said blank, said pocket extending for substantially the full depth of the container, female portions of snap fasteners provided on said flap portion at suitably spaced intervals, and complemental male portions of snap fasteners provided at said other end of the blank for fastening the ends of the blank in overlapped relation with the terminal end portions of the upper and lower collar portions in abutting relation.

SOLOMON A. HEIFETZ.