# United States Patent [19]

**Pensak**

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[54] **INFLATABLE CONTAINER**


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[73] Assignee: **Colgate-Palmolive Company,** New York, N.Y.



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[52] **U.S. Cl.**..... **150/1,** 150/.5, 206/DIG. 30

[51] **Int. Cl.**..... **B65d 31/04**

[58] **Field of Search**..... 206/DIG. 30; 150/.5, 150/1, 48, 49, 50; 190/44



[56] **References Cited**

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[57] **ABSTRACT**

An inflatable double walled container having inner and outer walls of plastic film and provided with an imperforate bottom wall. The container may be inflated to form a rigid self-supporting waste basket or garbage can and when filled may be deflated and have the open end sealed and thereafter disposed of in any convenient manner.


**7 Claims, 6 Drawing Figures**

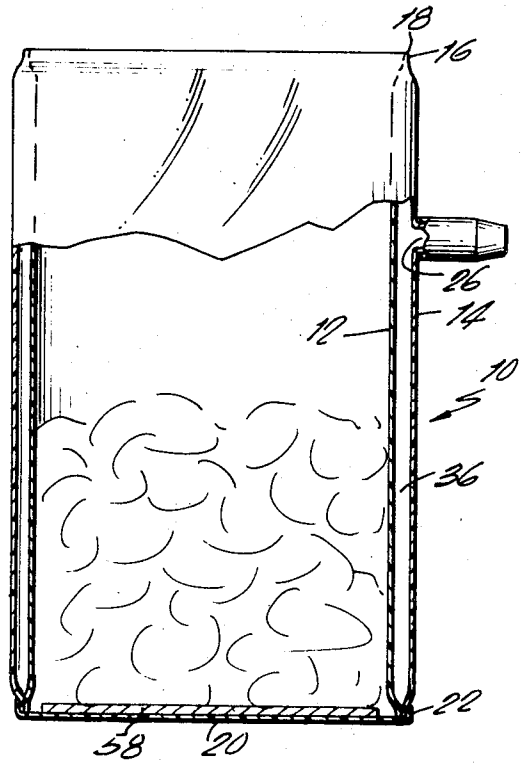


FIG. 1

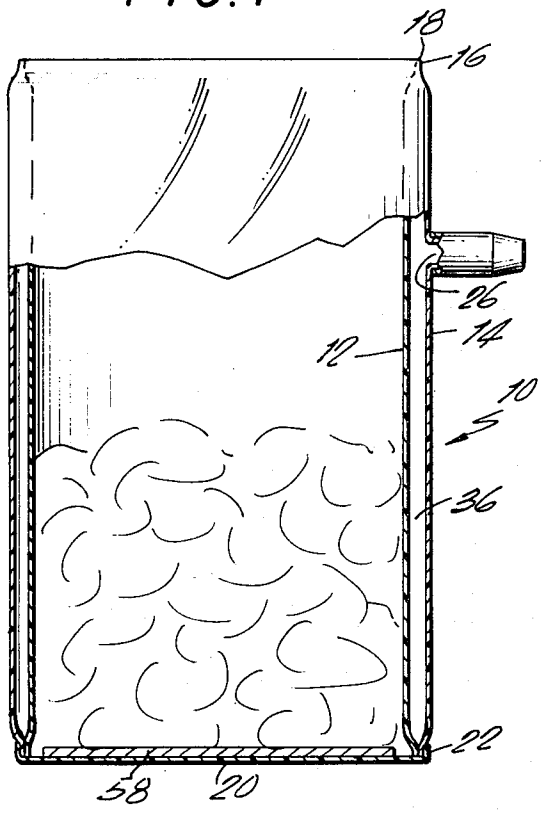



FIG. 2

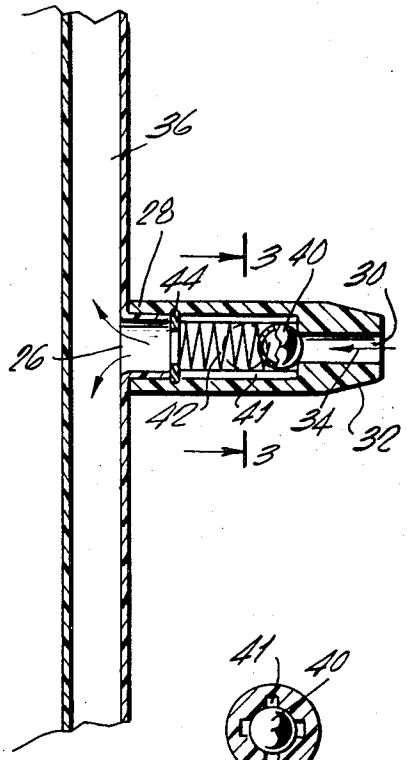






FIG. 3

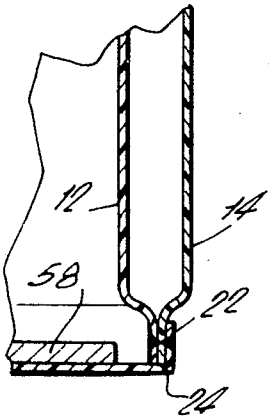



FIG. 5

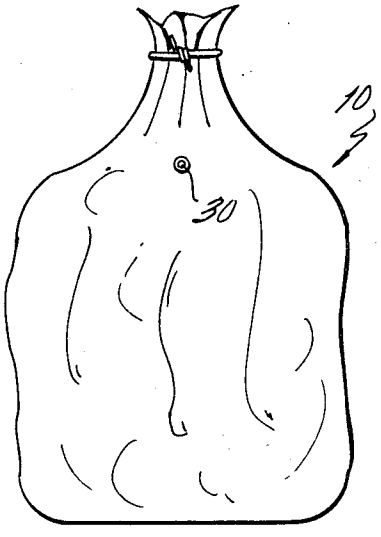



FIG. 6

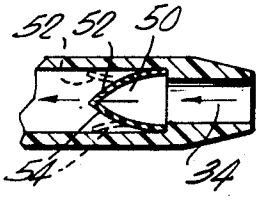



FIG. 4

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# INFLATABLE CONTAINER

This invention relates to an inflatable double walled container and has for its primary object to provide a double walled plastic bag when inflated which will be self-supporting in an open standing position so that it can be used as a disposable waste basket or garbage can.

Various types of sheet plastic materials have been used as liners for garbage cans or waste baskets. However, these devices are not self-supporting, and heavy and relatively ugly garbage cans or waste baskets must be used for supporting the liners when receiving trash, garbage and the like refuse.

The present invention overcomes the disadvantages of the prior art disposable refuse containers by providing for a double walled construction that is inflatable so that the container becomes self-supporting and relatively rigid yet which, once filled, can be easily collapsed, have its mouth tied off, and used as a disposable refuse receptacle thereby eliminating the need for waste baskets or garbage cans.

Other objects of this invention reside in the provision of a self-supporting substantially leak-proof container for refuse that may be easily inflated, yet which has a construction which is relatively inexpensive to manufacture in mass production quantities, thereby permitting wide use and distribution.

These, together with the various ancillary objects and features of the present invention, which will become apparent as the following description proceeds, are attained by this inflatable container, preferred embodiments of which are illustrated in the accompanying drawing, by way of example only, wherein:

FIG. 1 is a side elevational view of a container constructed in accordance with the concepts of this invention, with parts broken away showing other parts in section;

FIG. 2 is an enlarged sectional detail view illustrating the means used for inflating the container;

FIG. 3 is a transverse sectional view taken along the plane of line 3—3 in FIG. 2;

FIG. 4 is a sectional detail view illustrating an alternate form of valve which may be used in conjunction with the invention;

FIG. 5 is a sectional detail view in an enlarged scale showing details of construction; and,

FIG. 6 is an elevational view showing the container after deflation when filled with refuse for disposal thereof.

With continuing reference to the accompanying drawing, wherein like reference numerals designate similar parts throughout the various views, reference numeral **10** generally designates a container constructed in accordance with the concepts of the present invention. The container **10** includes an inner wall **12** and an outer wall **14**. The container **10** may be of any suitable shape such as cylindrical, oval, or box-like, but, as shown in FIG. **1**, the inner wall **12** and the outer wall **14** are of a cylindrical configuration. The inner wall **12** and the outer wall **14** are secured together at the top **16** thereof as by heat welding or ultrasonic welding to form a top edge **18**. A bottom wall **20** is provided which is of an imperforate configuration and has an integral flange **22** which is heat welded or otherwise united to the inner wall **12** and the outer wall **14** at the bottom **24** thereof forming a very strong bottom peripheral edge for the container.



The outer wall **14** has a bore **26** therein and a tube **28** surrounds the bore **26** in an air tight manner. The tube is provided with an inlet opening **30** therethrough and may be a tapered mouthpiece **32** for permitting air **34** to be blown into the space or chamber **36** between the inner wall **12** and the outer wall **14**. A ball check valve including a spherical member **40**, bypass slots **41**, a spring **42**, and a washer **44** may be provided for preventing loss of any of the air from the chamber **36**.

As shown in FIG. **3**, in lieu of the ball-type check valve assembly, a spring-type check valve assembly may be provided including springs **52, 54** which, when air is introduced into the mouthpiece in the direction of arrows **34**, will move to the position shown in dotted lines but will spring to the position as shown in solid lines in FIG. **4** to prevent loss of air from the chamber **36**.

One of the novel features of the invention is that the more air that is introduced into the space **36**, the more rigid the container **10** becomes. The use of the inner wall **12** and the outer wall **14** also prevents seepage of liquid refuse after deflation should a slight tear happen to either the inner wall **12** or the outer wall **14**.

After the container **10** has been suitably filled with refuse, it may be collapsed by pulling off the tube **28**. In lieu of the check valve assembly, it is within the concepts of the present invention to employ a cap, cork, or pinching device.

The inner wall **12** and outer wall **14** may be made of a thin or thick film material depending on the size of the ultimate inflated container. Any light flexible nonpermeable material can be utilized and such material may be opaque, transluscent, or transparent with any suitable design, printing, indicia, or the like thereon. If it is desired, the inner wall **12** and the outer wall **14** may be provided with reinforcement and the bottom wall may be provided with ribs such as shown at **58** for providing added strength.

A latitude of modification, substitution and change is intended in the foregoing disclosure, and in some instances, some features of the invention will be employed without a corresponding use of other features.

I claim:

**1.** An inflatable double wall cylindrical container comprising an inner wall and an outer wall connected at their top and bottom edges, said outer wall being otherwise spaced from said inner wall and defining a chamber therebetween, a bottom wall, said inner wall and said outer wall being continuously secured to said bottom wall at the periphery thereof, said outer wall being generally perpendicularly disposed to said bottom wall, and means for introducing air under pressure to said chamber to rigidify said container.

**2.** A container according to claim **1**, wherein said inner wall and said outer wall are of a thin plastic film.

**3.** A container according to claim **1**, wherein said means includes a bore in said outer wall, and a tube attached to said outer wall surrounding said bore.

**4.** A container according to claim **3**, including a check valve for preventing loss of air from said chamber through said tube.

**5.** A container according to claim **1**, wherein said bottom wall is imperforate and is flexible.

6. A container according to claim 1, wherein said inner wall and said outer wall are secured to each other at the top and bottom thereof.

7. An inflatable double wall container coresponding an inner wall and an outer wall connected at their top edges, said outer wall being otherwise spaced from said inner wall and defining a chamber therebetween, a bottom wall, said inner wall and said outer wall being secured to said bottom wall at the periphery thereof, said bottom wall having a peripheral flange welded to said inner wall and said outer wall, said outer wall being disposed inwardly of said flange, and means for introducing air under pressure to said chamber to rigidify said container.



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