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NEW TYPE DRUM PACKAGE

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Fig. 1

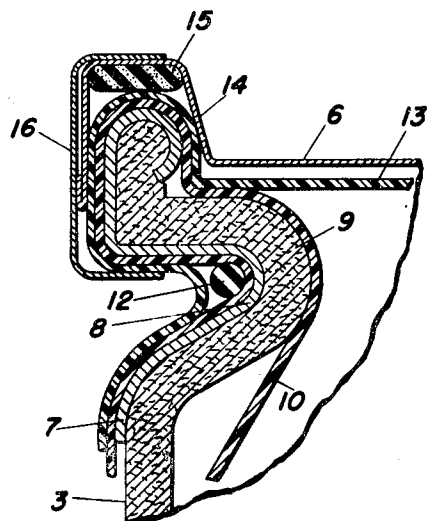
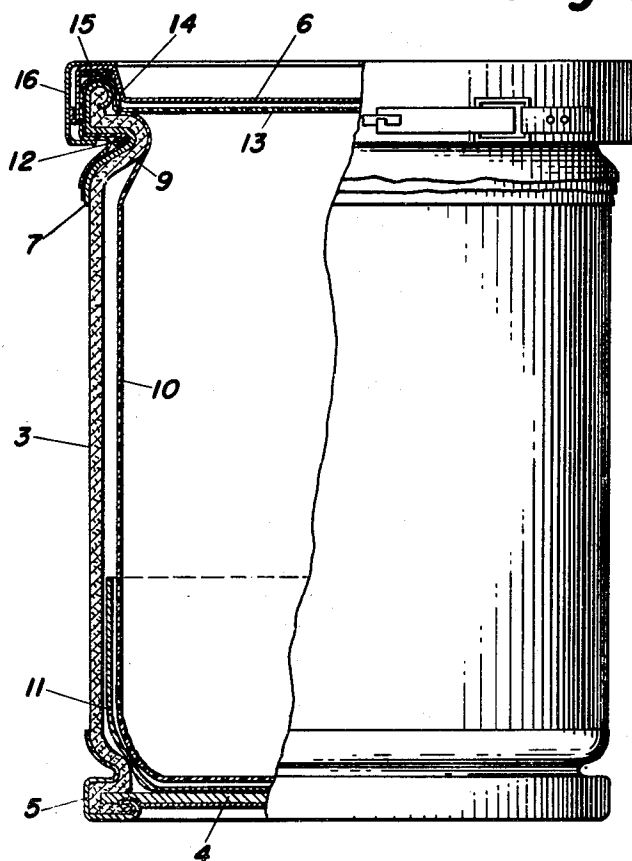


Fig. 2

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UNITED STATES PATENT OFFICE

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NEW-TYPE DRUM PACKAGE

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5 Claims. (Cl. 229-14)

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The present invention relates to containers and more particularly to barrels of relatively large size, such as fiber drums or the like, adapted for the shipment of large quantities of liquid.

An object of this invention is to provide a fiber drum construction or assembly adapted for shipment of liquids in amounts up to and in excess of fifty gallons.

Another object is to provide such drums as will withstand rough treatment in handling without leakage of liquid.

A still further object is to provide a container for liquids in amounts of the order above noted that are considerably less expensive than the metal or wooden barrels or drums in which liquids in such amounts have been shipped heretofore.

Other objects and advantages will be evident from what follows.

A preferred embodiment of this invention is illustrated in the accompanying drawing wherein Figure 1 is a side elevation partly in section and Figure 2 is an enlarged vertical section through an upper portion of the container shown in Figure 1.

With reference to the drawing in which the same number designates the same part in the two figures, there is shown a container structure comprising a body 3 of fiber, pulp, paper straw board or like material. The lower end of said body is provided with a bottom 4 suitably secured about its periphery to the lower end of body 3 by means of a metal chime or ring 5. Bottom 4 may be of the same material as body 3 or may be of wood, metal or other sufficiently strong material. Alternatively, bottom 4 may be a laminated structure, for instance, fiber board reinforced with sheet steel.

Around the upper end of body 3, there is placed a metal chime or ring 7 of substantial width. Ring 7 extends around the outer surface of the uppermost portion of body 3 and its upper edge is curled inwardly over the extreme upper edge of body 3 to provide a seating surface. Intermediate its width ring 7 is bent inwardly which, with the portion of body 3 that it surrounds, forms an external continuous groove 8 about the outer surface and a corresponding continuous internal shoulder 9.

The container is fitted with bag 10 which serves as a liner. Bag 10 is made of flexible sheet material impervious to and capable of retaining the liquid to be shipped. It may be of impregnated, laminated or coated paper. For many applications, it is preferred that bag 10 be made of plastic material, such as polyethylene, polyfluorinated ethylene, polyvinylidene chloride or similar inert flexible synthetic polymer. Bag 10 conforms to the contour of the inner portion of the walls and bottom of the container. The lower or closed end of bag 10 is provided with boot 11 about its

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outer portion which fits therebetween and the portion of the body 3 and bottom 4 with which bag 10 would otherwise be in contact. Boot 11 is of flexible sheet material and is preferably made of heavy kraft paper. It may be of laminated construction to provide additional strength if desired. This boot has been found to be an essential element in order to provide the necessary support and strength requisite to safe handling and shipment of the filled container. The open end of bag 10 contacts shoulder 9 of body 3 and is folded over the upper extremity of ring 7 then downwardly and inwardly to engage with and be held in place in groove 8 by means of a rubber band or other suitable holding means 12. Thus bag 10 is held in position with relation to the container during filling.

When the contents have been placed in the container, a sheet or disk 13 of flexible material, preferably of the same material as that from which the bag 10 is made, is placed over the open end thereof with its outer portion in contact with that portion of the open end of bag 10 folded over the upper extremity of ring 7 and extending downwardly to groove 8.

Top 6, preferably of metal, is provided about its periphery with a channel 14 in which is placed a gasket 15 of sponge rubber or other suitable sealing material. With the disk 13 in place, channel 14 and gasket 15 are brought into engagement with the portion of the disk extending around the upper extremity of ring 7 and pressed downwardly to bring about a fluid-tight seal between the engaging portions of bag 10 and disk 13. Thereupon top 6 is tightly clamped in place by clamping ring 16 of conventional design.

There is provided, in accordance with this invention, a container of substantial strength suitable for shipment of liquids in relatively large quantities. A distinct advantage thereof resides in the fact that once having been opened, the container may be readily and effectively resealed to preserve the liquid remaining therein for prolonged periods of storage or further shipment.

Variations in the illustrative embodiment, described above and shown in the drawing, will readily occur to those skilled in the art. All such variations, within the limitations of the appended claims, are within the scope of this invention.

I claim:

1. A container adapted for shipment of large bodies of liquid comprising a body of fiber board or the like having rigid members surrounding the upper and lower ends thereof, a rigid bottom secured to the lower end of said body, a bag of flexible material impervious to and capable of retaining liquid, said bag being of substantially the dimensions of the interior of said body and arranged therewithin and having the portion about its open end folded over the rigid member at the

3 top of the body portion and secured in place, a boot of flexible material enclosing the closed end portion of said bag interposed between said portion of said bag and the portion of said body and bottom that it would otherwise be in contact with, a sheet of liquid impervious flexible material extending over the open end of the bag and overlaying and in contact with the portion thereof folded over the upper rigid member, a top having a channel about its periphery in which is placed a gasket, said channel and gasket fitting over and engaging with the overlaying portion of said sheet, and means for removably securing the top in place upon and over the upper end of said body portion.

2. A container in accordance with claim 1 in which the bag and sheet are of a flexible synthetic polymer.

3. A container in accordance with claim 1 in which the bag and sheet are of polyethylene.

4. A container in accordance with claim 1 in

4 which the bag and sheet are of a flexible synthetic polymer and the boot is of heavy kraft paper.

5 5. A container in accordance with claim 1 in which the bag and sheet are of polyethylene and the boot is of heavy kraft paper.

EUGENE S. SCHNEIDER.

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