

**May 16, 1933.**

W. J. WAITE

**1,909,028**

## METALLIC SHIPPING AND STORING VESSEL

Filed July 15, 1931

INVENTOR.  
*William J. Waite.*  
BY *C. P. Goppel,*  
*his* ATTORNEY.

# UNITED STATES PATENT OFFICE

WILLIAM J. WAITE, OF NEW BRUNSWICK, NEW JERSEY, ASSIGNOR TO A. GUSMER, INC., OF WOODBRIDGE, NEW JERSEY, A CORPORATION OF NEW JERSEY

## METALLIC SHIPPING AND STORING VESSEL

Application filed July 15, 1931. Serial No. 550,842.

This invention relates to metallic shipping and storing vessels.

More particularly it relates to a new and useful metallic container for the storage, pasteurization and transportation of liquid and is intended to replace the wooden containers, as kegs, now in use for beer and the like.

Beer containers as at present used are ordinary wooden kegs made of thick staves and heads. Their weight is an important item which must be especially considered when transporting beer over long distances and in connection with which the freight charges incidental thereto become enormous.

It is an object of this invention, therefore, to provide a new and useful metallic container somewhat similar in overall dimensions and size of a wooden keg, but whose weight is considerably less than such keg.

Still another object of the invention is to provide a metallic container for liquid commodities which may be pasteurized thereby eliminating the necessity of storing them in cool places while in the containers.

A further and more particular object of the invention is to provide a metallic container for beer and the like, having a smooth inner surface which can be easily cleaned and sterilized, thus eliminating undesirable fermentative bacteria and enzymes ordinarily found adhering to the surfaces of the interior of the wooden kegs now generally used.

With the above objects and features in view, the invention in its preferred embodiment, consists of details of construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

The invention in its preferred embodiment comprises a cylinder having convex top and bottom ends to form a vessel with an aperture in its wall sufficiently large to enable a man to insert his arm therein to clean the interior of the container, and protective rings for protecting the respective convex ends from damage. In order to close the aperture of the container any suitable device which will effect a leakage proof closure of the opening may be used in connection

therewith whereby to allow for the transportation of the liquid commodities without any chance of leakage of the commodities from the container.

Referring in detail to the drawing, wherein is shown one simple and practical embodiment of the invention, and in which similar reference characters designate corresponding parts throughout the several views,—

Fig. 1 is a vertical partly sectional view of the preferred embodiment, and

Fig. 2 is a plan view of Fig. 1, in direction of line 2—2.

Referring in detail to the drawing, which for the sake of illustration shows the preferred embodiment of the invention, a cylindrical vessel or shell 10 made preferably of metal, such as annealed sheet metal, has annular extensions 12 and 14 spaced apart at certain intervals along the length of the shell for easily rolling the shell and to overcome small obstructions in the path of the shell during its rolling on its longer side.

The shell 10 is made into two halves by drawing the metal and then butt-welding the adjacent ends of each half along its periphery to form a welded joint 15 along its middle, and an integral cylindrical structure.

Closing each end of shell 10 are curvate or convex plates 16 and 18 shaped in any well known manner. Each plate is taken from the section of a cylinder to present an arc of a circle as will be noted in Fig. 1, imparting a convex end shaped appearance to the shell. The end plates 16 and 18 respectively, are preferably integral parts of their respective halves of the shell. They are made integral in any well known manner, such as drawing and shaping a steel plate to present a half of a shell with a cup-shaped appearance. The cup-shaped halves are then joined together as above described. It is to be noted, however, that instead of drawing and shaping a steel plate as above shown, the end plates 16 and 18 may be welded at their rims 17 and 19 to the cylinder of the shell so as to obtain an integrally

built container with bulging convex end portions.

One of the plates 16 of vessel 10 has an opening 20 in its wall into which a closing device is fitted in fixed engagement with the wall around the opening, to effect a seal when the vessel contains a liquid commodity either for storage, pasteurization or transportation. The opening may be of any shape, it having been found expedient and convenient to make an oblong or oval opening for easily covering the same with a closing device having the same general outline of the opening. The wall surrounding the opening of the vessel extends upwardly as indicated at 22 and 24 to form a flange whereby to afford anchoring means for retaining a closing device in fixed engagement with the vessel. It is to be noted that the opening 20 of vessel 10 is made sufficiently large for a man to insert his arm therein to clean and wash out the same. In order to retain an even contour of the end plate 16, a closing device is preferable for the vessel opening, which will not have a bung or other outlet within it extending above the curvature of end plate 16. By the arrangement of the device in such manner, the bung will not come into contact with the ground or objects when the vessel is moved about.

The vessel 10 has protective rings or bumpers 26 and 28 fixedly engaged to the periphery or rims of the vessel at its respective ends. Each ring has an extension annular plate 30 integral therewith bent over the end of plates 16 and 18 respectively, and extending over longitudinally along the periphery of the vessel. The rings 26 and 28 respectively, are retained in permanent engagement with the vessel 10 by means of spot welding along the circumference of the vessel at the part 32 as shown by Fig. 1, where the shell and plates of the vessel merge into each other as hereinabove described. At the opposite end of the extension 30 of the ring, the metal is rolled to afford an evenly smooth annular portion 31, whose diameter is less than the overall diameter of the vessel, to facilitate grasping thereof.

Each protective ring 28 has a plurality of indentations, openings or recesses 36 spaced apart from each other along the circumference of the ring to afford spaces whereby the vessel can be easily handled and moved about. It is to be noted that the vessel can be easily tilted from a horizontal to a vertical position by firm manual engagement with rings at the recessed portions 36. The upper part of openings 36 have the finger holds 36' so that when a man handles the vessel the palms of his hands will rest against bead 31 and the fingers against the holds 36' without any danger of injury to his hands.

From the foregoing description it will be evident that a vessel is obtained in accordance with this invention having an integral and compact structure in which there are no loose or disconnected parts. The structure of the embodiment is easy to handle and once the parts have been welded together there is effected a leak proof vessel which will withstand a minimum internal pressure of 60 pounds per square inch.

The specific embodiment described hereinabove may be made of blue annealed steel of relatively thin material without even approximating in weight a beer keg of the same dimensions and overall. The exterior of the vessel may be made rustproof by tinning, galvanizing or any other well known satisfactory means, thus adapting it for use under any adverse weather or storage conditions.

The inside wall of the vessel is rendered smooth by sand blasting it and then coating with a suitable film of specially prepared plastic material which adheres to the steel and which will not be chipped off by hard blows. The coating should also be one adapted to withstand pasteurization temperatures without any melting or deleterious effect on the liquid in the vessel. It has been found that beer pasteurized in vessels of the kind described herein and properly closed has kept for a period of six months at ordinary temperatures without turning sour or deteriorating. It is notable, therefore, that beer and other liquid commodities pasteurized in the vessels made in accordance with the present invention can be shipped over long distances without requiring the necessary refrigeration as where beer and the like are shipped in wooden containers or kegs.

From the foregoing description of the preferred embodiment considered in connection with the accompanying drawing, it will be seen that a simply constructed and effective vessel is provided for use in shipping and storing liquid commodities.

While one embodiment of the invention in its preferred practical form has been shown, yet it is to be understood that various changes of form, construction and size may be made without departing from the spirit and scope of the invention herein described and claimed, or prejudicing the derivative rights incidental to the grant of monopoly for this invention.

Accordingly, the privilege is hereby reserved of making any and all such changes without being limited in the scope of the invention hereof as defined in the following appended claim.

I claim:

A relatively thin walled cylindrical vessel for transporting liquid commodities, having convex end closure portions and an integral

protective bumper mounted at each end of the vessel, comprising a continuous annular portion embracing the end of the cylindrical portion of the vessel and crimped over  
5 the convex ends toward the long axis of the vessel to cover the cylindrical and convex adjoining ends of the vessel, an intermediate inwardly bent projecting cylindrical portion extending from the embracing portion forming  
10 ing a cup having openings at spaced intervals in said portion, and an outwardly and circularly inturned end portion forming an annular bead projecting away from the cup, said cup forming a finger grip, for the  
15 hands passing through the openings, protected by the side and top of the bead, said inwardly bent, intermediate and outwardly turned portions being of less diameter than the embracing portion and adapted to permit  
20 easy handling of the vessel, while the contiguous embracing portion extending from the cylindrical vessel over to the convex ends acts as a reinforcing means when the vessel is moved about.

25 In testimony that I claim the foregoing as my invention, I have signed my name hereto.

WILLIAM J. WAITE.

30

35

40

45

50

55

60

65