

L. NORMAN.
PAPER VESSEL.
APPLICATION FILED MAR. 24, 1911.

1,054,932.

Patented Mar. 4, 1913.

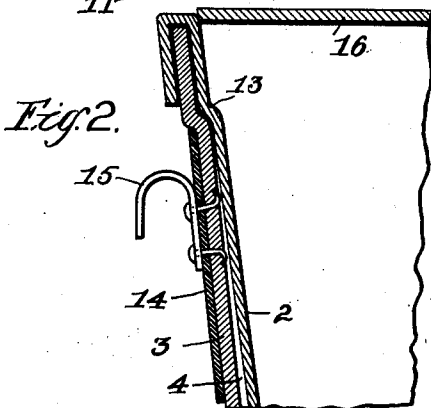
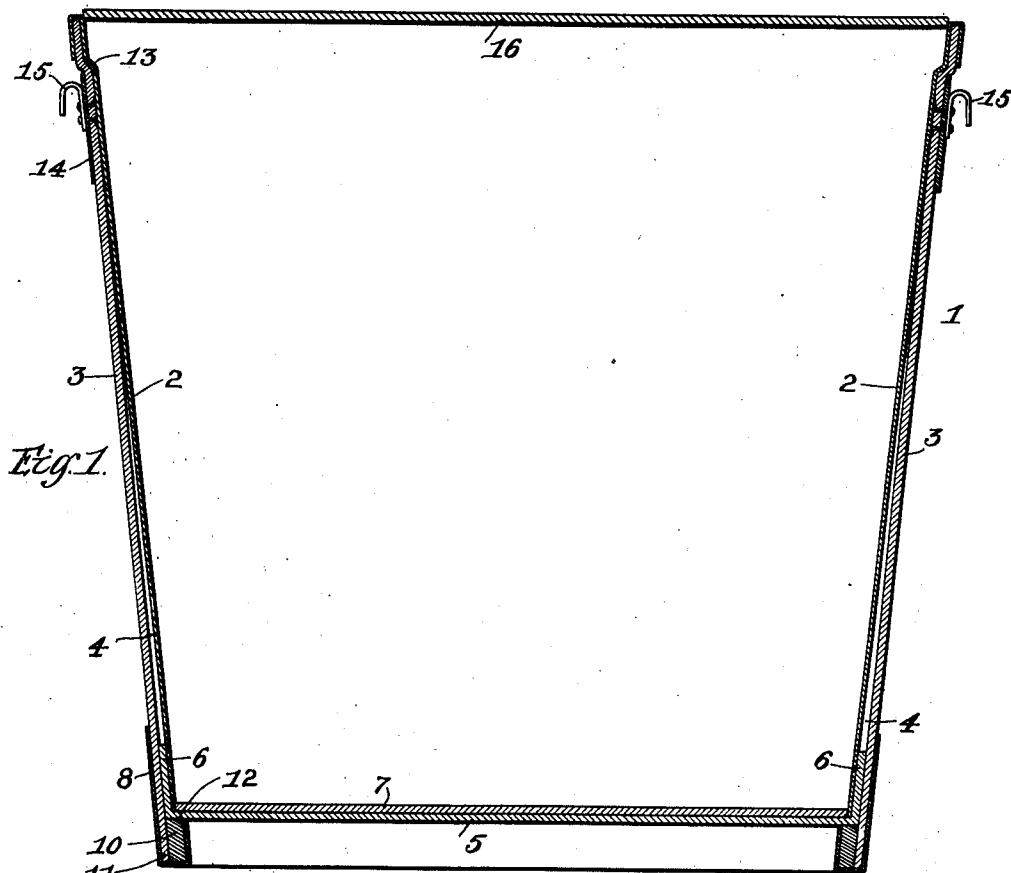
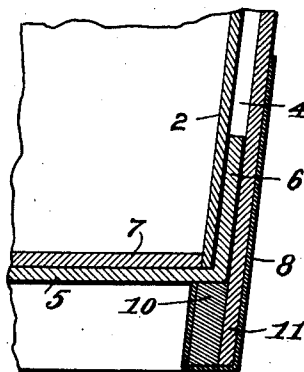


Fig. 3.



Witnesses
S. M. Rheems
Burton W. Cary

Inventor.
Lionel Norman
by his Attorneys
Phillips Van Curen & Fish

UNITED STATES PATENT OFFICE.

LIONEL NORMAN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO PURE FOOD PACKAGE COMPANY, OF BOSTON, MASSACHUSETTS. A CORPORATION OF MASSACHUSETTS.

PAPER VESSEL.

1,054,932.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed March 24, 1911. Serial No. 616,638.

To all whom it may concern:

Be it known that I, LIONEL NORMAN, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Paper Vessels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to paper vessels, and more particularly to a paper pail or other receptacle which is designed to contain butter, lard, or other semi-fluid or fluid substances.

One object of the present invention is to provide a paper vessel of the class referred to which is impervious to moisture and which absolutely prevents the leakage or escape of any fluid or semi-fluid substance contained therein through the walls of the vessel.

A further object of the invention is to provide a vessel of this character which is capable of sustaining a comparatively great weight without injury to the vessel and without causing any loss of the substances contained therein.

With these objects in view, the present invention consists in certain novel features of construction, combinations and arrangements of parts hereinafter described and claimed, the advantages of which will be apparent to those skilled in the art from the following description.

In the accompanying drawings illustrating the preferred form of the invention, Figure 1 is a view in sectional elevation of a paper vessel embodying the preferred form of the several features of the invention; Fig. 2 is a detail illustrating on an enlarged scale the means for securing a perfect closure of the top of the vessel; and Fig. 3 is a view similar to Fig. 1 illustrating the closure for the bottom of the vessel.

The paper vessel illustrated in the drawings is a pail or other receptacle of the usual shape, and having the sides tapering from top to bottom. The body portion of the vessel is indicated at 1, and consists preferably of an inner and outer layer of cardboard or thick paper. The inner layer 2 of paper is provided with an antiseptic water-proof coating and is separated from the

outer layer 3 by an air space. This air space is sealed at the top and bottom of the vessel, as will be hereinafter explained. The vessel is closed at the bottom by the disk 5 having an upturned edge 6 which is inserted between the inner and outer layers 2 and 3 respectively. The sides and bottom are securely held in place by any preferred form of cement or adhesive substance with which the disk is coated, in the manner indicated in Fig. 3. This type of joint prevents any egress of the liquid therethrough, and has also the additional feature of advantage that the walls are retained apart to form an air space 4. This joint also forms a seal at the lower end of the vessel for the air space 4. It has been found, however, that unless some means are provided for forcibly pressing the sides and bottom together and retaining them in this position, there will be a tendency for the contained liquid to percolate through between the layers at certain points around the seam. In order to prevent such an occurrence and to maintain the integrity of the seal for the air space, a reinforcing disk 7 is forced into the vessel after the bottom and sides have been assembled and operates to press the several parts firmly together. In order to enable the disk 7 to be forced in tightly, reinforcing means are provided for supporting the sides against the lateral thrust exerted by the disk. To this end a hoop of metal or other suitable material tightly surrounds the vessel adjacent to the bottom. With this construction and arrangement of parts it will be apparent that the sides and bottom are tightly bound together and a perfect closure obtained.

These vessels, of course, vary in size, and the character of the contents also changes, and in order to enable them to support a comparatively heavy weight, an annular ring 10 is arranged beneath the disk 5 and lies closely within the downwardly projecting rim 11 formed by the lower portion of the layer 3. Upon an inspection of Fig. 1, it will be noted that the ring 10 is provided with a broad upper face 12 which supports the downward thrust upon the bottom and prevents the breaking apart of the vessel, or the separation of the upturned edge 6 of the bottom from the inner and outer layers. It is necessary to provide means for retaining the ring 10 in place, and in the

simplest and most efficient form of the invention which has yet been devised, this is accomplished by turning up the lower end of the hoop 8 so that the same will surround and inclose the ring 10, as shown clearly in Fig. 1. With this construction, the rim is protected from moisture by the inclosing casing of metal and the bottom of the vessel is supported by the rim above the surface on which the vessel rests.

At the upper edge of the vessel the inner layer 2 is extended over the outer layer 3, and is folded down over the outer layer 3, and the two layers are cemented securely together in any preferred manner to form a seal at the upper end of the vessel for the air space 4. This acts not only to form an efficient seal for the air space and reinforce the upper edge of the vessel, but produces a vessel having a smooth and continuous inner surface, so that any leakage of the contents of the vessel between the inner and outer walls near the top is effectually prevented. After the vessel has been filled, the upper portion is closed securely by a suitable cover in order to prevent the egress of the contents therethrough. The cover consists of a plain disk 16 which is forced into the upper portion of the vessel in the same manner as the disk 7, and in order to securely seat the disk, a shoulder 13 is formed by molding the sides outwardly. From an inspection of Fig. 1 it will be seen that the cover 16 fits closely in the opening formed in the top of the vessel, thus insuring a tight joint when the cover is forced down upon the shoulder 13 to close the smaller opening at this point, and insuring the seal for the air space 4. In order to reinforce the sides against an outward thrust when the cover 16 is forced

in, a hoop 14 is provided which surrounds the vessel immediately below the shoulder 13. A pair of ball hooks 15 are arranged upon opposite sides of the vessel and are fastened to the hoop 14, the fasteners passing through the outer layer 3 only and being clenched between the inner and outer layers. This method of fastening enables the entire weight of the vessel and contents to be carried without danger of tearing out the fastening means, and at the same time maintains the integrity of the closure.

While it is preferred to employ the specific construction and arrangement of parts shown and described, it will be understood that this construction and arrangement is not essential except so far as specified in the claim, and may be changed or modified without departing from the broader features of the invention.

The invention having been thus described, what is claimed is:—

A paper vessel comprising an outer layer and an inner layer forming a body portion, a disk having an upturned edge inserted between the layers and forming a bottom closure, the outer layer having a downwardly projecting portion forming a rim and a supporting ring arranged beneath the bottom closure and within the rim, a hoop surrounding the body portion and provided with an upturned edge inclosing the ring, and a reinforcing disk within the vessel arranged to firmly secure the body portion and end closure together, substantially as described.

LIONEL NORMAN.

Witnesses:

RUTH A. SIMONDS,
WARREN G. OGDEN.