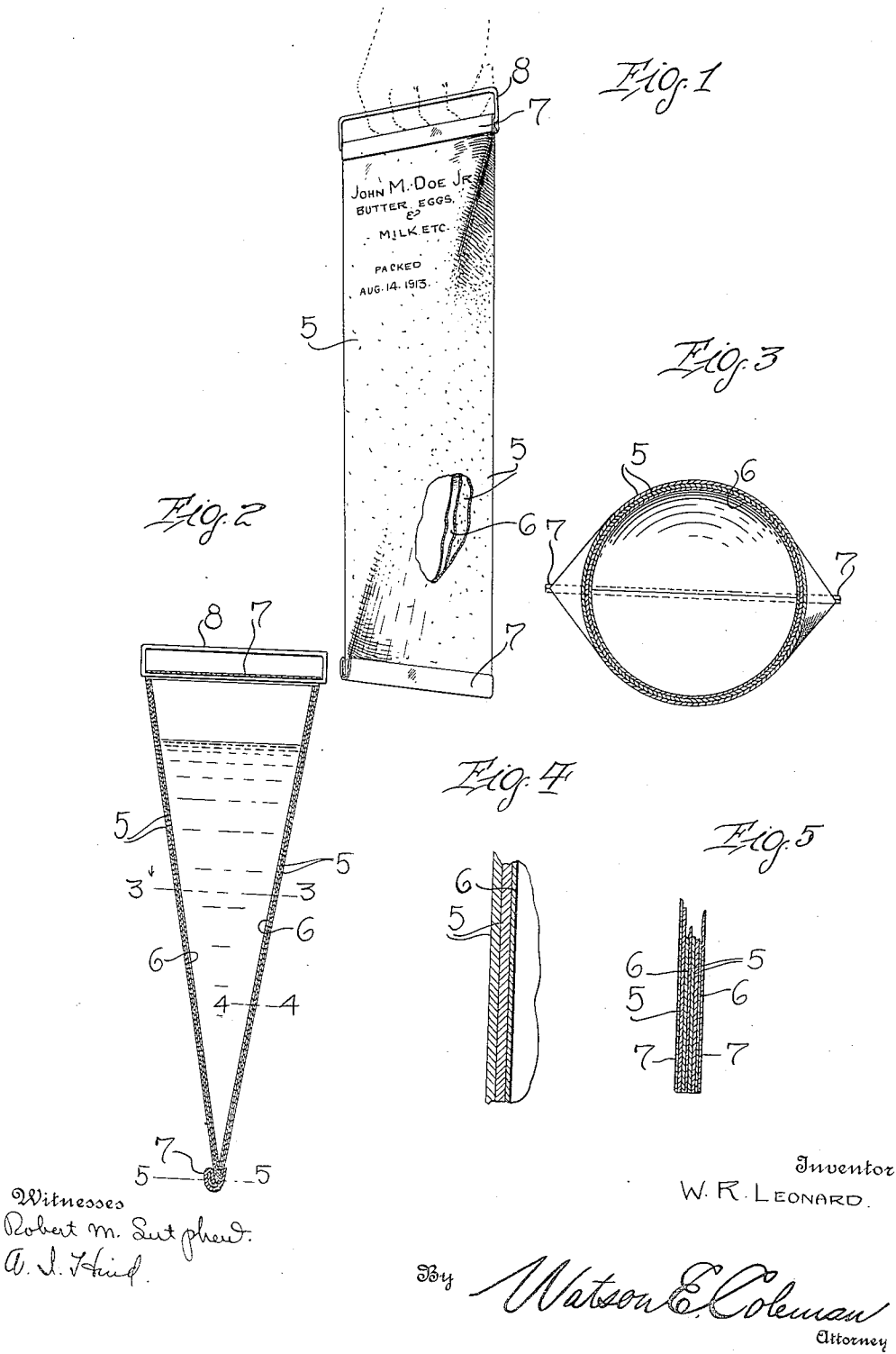


1,084,944.

W. R. LEONARD.
LIQUID CONTAINER.
APPLICATION FILED AUG. 20, 1913.

Patented Jan. 20, 1914.



UNITED STATES PATENT OFFICE.

WILLIAM R. LEONARD, OF CINCINNATI, OHIO.

LIQUID-CONTAINER.

1,084,944.

Specification of Letters Patent.

Patented Jan. 20, 1914.

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To all whom it may concern:

Be it known that I, WILLIAM R. LEONARD, citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Liquid-Containers, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to an improved liquid container or receptacle especially designed for containing milk and other liquids which it is desirable for hygienic reasons shall be maintained in a thoroughly sanitary condition and excluded from the contaminating influences of the open air during transportation.

15 The present invention has for its primary object to produce a device whereby the above mentioned desirable result is accomplished which may be manufactured at greatly reduced cost over that involved in the production of containers constructed of glass or other frangible materials such as are now in common use.

20 The invention has for another and more specific object to provide a receptacle or container for liquids constructed of paper, and metal binding strips applied to the opposite ends of the paper body in such a manner as to effectively obviate all liability of the collapse of said body under pressure sustained in the ordinary handling of the container.

25 The invention has for a further object the provision of a substantially cylindrical body consisting of an outer double thickness of water-proof paper and an inner sanitary lining sheet, and metal binding strips crimped upon and secured to the opposite ends of the cylindrical paper body and extending in lines relatively at right angles to each other.

30 My invention has for still another of its objects to provide a device of the above character which may be readily constructed by the dairyman or other dispenser at very small cost, the paper body of the container providing comparatively extensive advertising space, and the device as a whole being strong and substantial, and providing means whereby the contents of the container or receptacle may be maintained at a low temperature at comparatively little expense.

35 With the above and other objects in view as will become apparent as the description

proceeds, the invention consists in certain constructions, combinations and arrangements of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which—

Figure 1 is a perspective view of a liquid container or receptacle embodying my invention in its preferred form; Fig. 2 is a longitudinal section thereof; Fig. 3 is a section taken on the line 3—3 of Fig. 2. Fig. 4 is a fragmentary enlarged longitudinal section of the body wall; Fig. 5 is a section taken on the line 5—5 of Fig. 2.

Referring in detail to the drawing, 5 designates the outer paper body wall of my improved container or receptacle which is of double thickness and is preferably constructed of oiled paper. The overlapping edges of this outer double paper sheet are secured together by means of a suitable water-proof paste or glue, though it is within the purview of the present invention to employ any other desired fastening or securing means for the lapped edges of this body wall. In addition to the body wall 5, of water-proof paper, I provide a sanitary inner lining sheet 6. This lining sheet is preferably formed from paraffin paper and the lapping longitudinal edges thereof may be secured together by passing a hot iron over the same. If a cheaper grade of paper is employed for the lining, water-proof paste or glue may be used. The inner lining sheet 6 is coextensive in length with the outer cylindrical body wall 5 of the container.

7 designates metallic binding strips, one of which is applied to each end of the paper container body. These strips are formed of sheet metal and they may be secured upon the ends of the body in any desired or approved manner. The important feature in this connection resides in the fact that said strips are so applied to the opposite ends of the container body that they extend in lines of their length at right angles to each other. By so applying the binding strips, the elongated tubular body of the container or receptacle is materially strengthened and its collapse against such strains as may devolve thereon in the ordinary handling of the container is absolutely prevented. It is to be particularly observed that the central por-

tion of the container is of circular cross sectional form and tapers therefrom in opposite directions to its ends. By applying the metal binding strips to these comparatively
5 flat tapering ends of the container body so that they extend in planes at right angles to each other, it will be obvious that the body of the container is braced or stiffened so that longitudinal pressure upon the ends thereof will not cause the container to collapse. As shown in the accompanying drawing, the end of the outer body wall and of the inner paraffin sheet lining is bent together with one of the longitudinal edges of the metal binding strip. This strip is then reversely bent at a point intermediate of its edges and extended upon the body wall of the container in close engagement therewith. This latter bend of the binding strip which is applied to one end of the receptacle body is disposed a sufficient distance from the bent end of the paper body wall to accommodate the ends of a bail or handle indicated at 8 whereby the container may be conveniently carried or suspended from a nail or hook.

From the foregoing it is thought that the manner of construction of my improved container or receptacle will be readily understood.

It is obvious that by the application of the metal binding strips to opposite ends of the paper body, a substantially air tight closure for the ends of said body is obtained, so that the possible deleterious effect of atmospheric impurities upon the contents of the container is obviated. It will thus be seen that the milk or other contents of the container will not be lost by the breakage of the container as is frequently the case in the use of glass bottles. Owing to the extremely simple construction of the device, and the low cost of the materials employed, milk and like commodities can be delivered to the consumer at a greatly reduced cost over that involved in the use of the ordinary container now in general use. It is further to be borne in mind that an additional reduction of monetary expenditure results from the fact that the contents of the container can be maintained at a low temperature with but little consumption of ice. Owing to the cheapness of construction of the containers, they can be destroyed after once being used, thus eliminating washing of the same and possible injury to the user as is occasionally

the case in the use of glass bottles or containers. Another and by no means unimportant feature of my invention resides in the fact that by constructing the body of the container of paper, an extensive area upon
60 which advertising matter may be printed is produced. It is also intended that the date upon which the container or receptacle was filled shall also be printed upon the paper body of the container.

I have above set forth the several advantages which accrue to my invention, but it will of course be appreciated that these advantages will be in no wise sacrificed by resorting to minor changes in the form, proportions or materials of the several parts thereof, and I therefore reserve the privilege of resorting to all such legitimate changes as may be fairly embodied within the spirit and scope of the invention, as
75 claimed.

Having thus described the invention, what is claimed is:

1. A container comprising a body constructed of flexible sheet material, and
80 closures applied to opposite ends of said body and disposed in planes at right angles with relation to each other, thereby preventing collapse of said body under longitudinal pressures.

2. A container comprising a body constructed of flexible sheet material, said body having a central portion of circular cross sectional form and tapering therefrom to the opposite ends of the container, the end edges
90 of the tapering portions of said body extending in planes at right angles with relation to each other, and an air-tight closure secured upon the meeting edges of the tapering body walls.

3. A container comprising a tubular body constructed of flexible impervious sheet material, said body having a central cylindrical portion and longitudinally tapering end portions, and metal binding strips applied to the
100 opposite ends of said body to provide air-tight closures therefor, said strips being disposed in planes extending at right angles to each other.

In testimony whereof I hereunto affix my
signature in the presence of two witnesses.

WILLIAM R. LEONARD.

Witnesses:

AD. E. MEYER,
J. F. WIGGER.