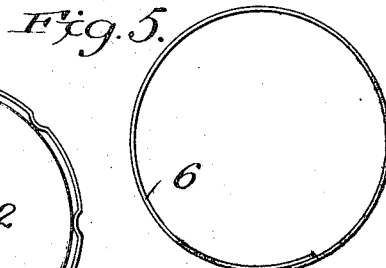
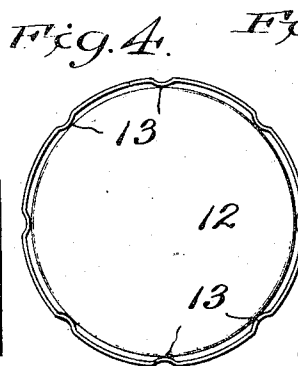
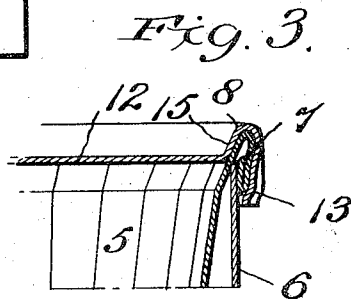
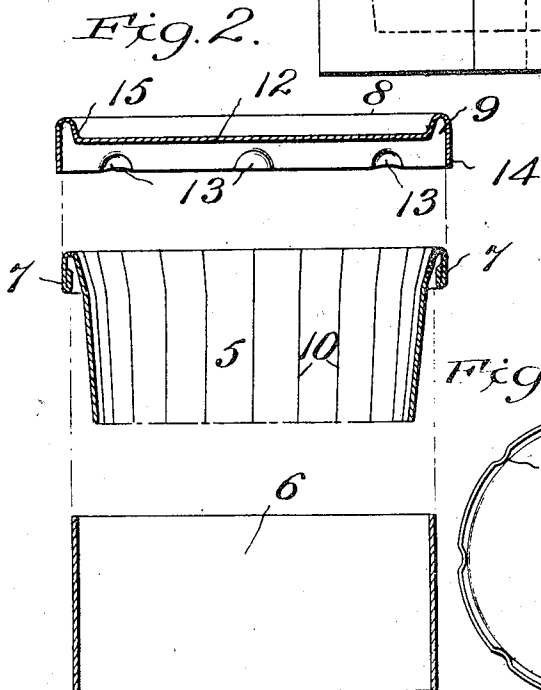
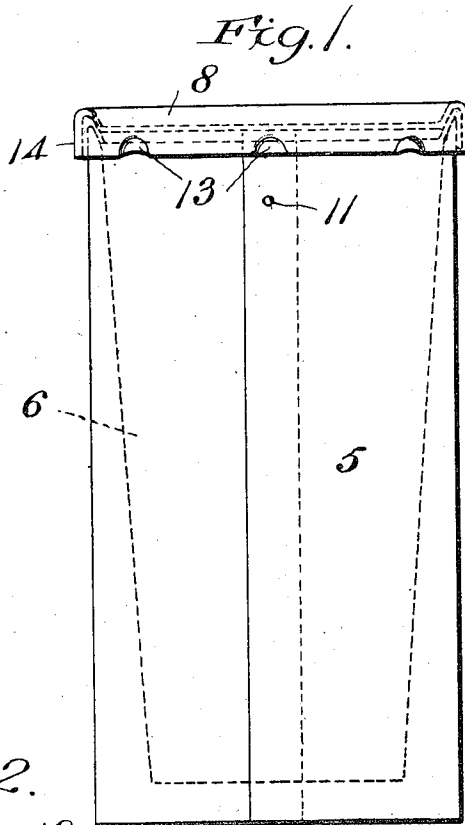


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PAPER RECEPTACLE.
APPLICATION FILED JAN. 26, 1916.

1,217,599.

Patented Feb. 27, 1917.



Witnesses

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PAPER RECEPTACLE.

1,217,599.

Specification of Letters Patent.

Patented Feb. 27, 1917.

Application filed January 26, 1916. Serial No. 74,320.

To all whom it may concern:

Be it known that I, HARRIET HILL, a citizen of the United States, residing at New York, county and State of New York, have invented a new and useful Improvement in Paper Receptacles, of which the following is a specification.

The present invention has relation to containers formed of paper and adapted for holding liquid. In the use of these containers leakage of the contents thereof invariably occurs from underneath the closure. The leakage is caused by the absence of sufficient inherent stability in the paper container to resist compression under the amount of hand pressure required to be applied to a full container in the act of lifting the same. This feature in paper containers by reason of exposing the contents thereof to the air has rendered their use less preferable, especially for milk bottles, to those made of glass. But glass containers are relatively expensive to manufacture and the great loss suffered by milk dealers incident to the breakage and loss of glass containers is well known. Moreover the user of milk supplied in glass bottles is not insured against the use of impure or infected milk by reason of the well known fact that unscrupulous dealers frequently refill returned empty bottles without subjecting these to a sterilizing process.

Coming now to the present invention the general object thereof is to impart to a paper liquid holding container, for instance a milk bottle, sufficient stability to enable the bottle to resist compression under ordinary conditions and at the same time to protect those portions of the surface of the container with which the milk comes into contact in flowing from the bottle until the bottle is opened ready for use. And to these ends the invention resides in providing a casing of relatively stout paper board for the liquid holding receptacle and in the construction of a closure disposed so as to reinforce the mouth of the receptacle and the casing.

Other objects will appear and be better understood from that embodiment of my invention of which the following is a specification, reference being had to the accompanying drawings forming part hereof, and in which:

Figure 1, is a side elevation of the device in use.

Fig. 2, is a detail vertical section of the upper portion of the container showing the parts thereof separated.

Fig. 3, is a fragmentary vertical section showing the parts of the container assembled.

Fig. 4, is a bottom plan view of the closure.

Fig. 5, is a detail plan of the casing.

The receptacle indicated generally by 5, is supported by the casing 6, the upper end of which is arranged in the space between the body of the receptacle and an outwardly and downwardly turned flange 7, at the upper end of the receptacle. The closure 8, is formed with annular channel 9, which receives the flange 7, and is further formed in its lower edge portion and on its inner face with a plurality of protuberances 13, which bear on the lower edge of flange 7.

The receptacle 5, is by preference formed of water proofed paper and for purposes of illustration I have shown the said receptacle as being formed with longitudinal plaits 10. The length of receptacle 5, is as shown in Fig. 1, less than that of casing 6, so that the receptacle hangs on or is supported entirely by the casing and its bottom prevented from coming into contact with the surface on which the container as a whole may rest. This feature is important in that the contents of the receptacle will not be disturbed when the container is in its normal position, it being obvious that the result would be otherwise if the bottom of the receptacle came into contact with the surface on which the container bears and be thereby bulged inwardly.

The casing 6, is formed of relatively stout paper board and when formed approximately in the shape shown will possess sufficient inherent stability to withstand being compressed by the amount of hand pressure which will be required to be applied in the act of lifting the container when full. In the present instance I have shown casing 6, in the form of an open ended hollow cylindrical structure. Lateral portions of the sides of the sheet of which the casing is formed overlapping and secured one to the other at a point adjacent to the upper end of the casing by a rivet 11. It will be noted that the diameter of the casing appreciably exceeds that of the receptacle and the presence of the rivet 11, in the upper end portion of the casing will hold the casing rigid when

the same is grasped in the region of the upper end, which is usually taken hold of in the act of lifting or handling a device of this kind. The presence of an appreciable amount of flexibility in the lower end portion of the casing resulting from the absence there of a connection between the lapped portions results in imparting a degree of yieldability to the lower end of the casing which is essential to prevent the contents of the receptacle from being disturbed by the knocks or jars which several receptacles will invariably inflict one upon the other when packed in a case and in transit.

The closure 8, is formed of a material possessing a greater degree of rigidity than the material of the casing 6. In the present instance I have shown the said closure as being formed of paper fiber board and so constructed as to hold the mouth of the receptacle 5, against compression and at the same time reinforce casing 6. A convenient structure for accomplishing these results is shown in the drawings where it will be observed, that the body portion 12, of the closure is a dish shaped structure and conforms in area to the area of the mouth of receptacle 5. A skirt 14, forms a depending continuation of the upstanding portion 15, of the body, these portions 14 and 15, cooperate to provide the channel 9, previously mentioned. The width of channel 9, is somewhat less than the combined thicknesses of flange 7, and casing 6, when these parts are connected as shown in Figs. 1 and 3, so that when the closure is positioned as shown in the said figures, the portions 14 and 15, will cause the flange and the casing to bind one upon the other while the body portion 12, of the closure operates as a plug in the mouth of receptacle 5. It will now be observed that if pressure be applied to the upper end of the container when the parts are arranged as shown in Figs. 1 and 3, such pressure will ultimately be transmitted to the body portion 12, of the closure and since this bears on the inner surface of the upper end of the receptacle it will thereby resist any tendency of the mouth of the receptacle to distort under the pressure applied to the casing 6. It will be noted that the skirt 14, extends considerably below body 12, and below the flange 7, when the parts are positioned as shown in Figs. 1 and 3, and it will be further noted in the same figures that the protuberances 13, when bearing on the lower edge of flange 7, operate as a means for locking the closure against accidental detachment. In fact if the container and its contents be lifted by taking hold of the closure the protuberances 13, will operate to support the container.

From the foregoing it is obvious that the container of this invention although

ideally adapted for milk may be used in connection with other liquids or with solid or viscous substances as well as with liquids.

What is claimed as new is:

1. A container comprising a receptacle formed of flexible water proofed paper and having at its upper end a downwardly extending flange spaced from the adjacent wall of the receptacle, an open ended casing of relatively rigid material surrounding the receptacle and having its upper edge portion disposed in the space between the flange and the body of the receptacle, and a closure arranged in the upper end of the receptacle and having a channeled portion receiving the upper edge of the receptacle and constructed so as to cause the flange and the body portion of the receptacle to clamp the upper end portion of the casing therebetween.

2. A container comprising a receptacle formed of flexible water proofed paper and having at its upper end a downwardly extending flange spaced from the adjacent wall of the receptacle, an open ended casing of relatively rigid material surrounding the receptacle and having its upper edge portion disposed in the space between the flange and the body of the receptacle, and a closure disposed in the upper end of the receptacle and having a channeled portion in which the upper edge of the receptacle is disposed and one side of which extends downwardly beyond the edge of the flange and contacts with the lower edge thereof.

3. A container comprising a receptacle having its upper end open and provided with an outwardly and downwardly extending flange, a casing surrounding the receptacle and having its upper end inserted between the receptacle and the flange thereof, and a closure having a dished body portion arranged in the open end of the receptacle and a channel portion bearing on the flange and operating to hold the flange and the casing in contact one with the other, and further having on one side of the channel portion a series of projections which bear on the lower end of the flange.

4. A container comprising a receptacle of water proofed paper having its upper end open and provided with an outwardly and downwardly extending flange, a casing of relatively stout material surrounding the receptacle and having its upper end disposed between the receptacle and the flange, said casing being appreciably greater in length and in diameter than the corresponding dimensions of the receptacle and including in its construction lapped edges extending for the full length of the casing and connected together at a point remote from the lower end thereof whereby the casing will yield under pressure applied at a point beyond the point of connection of the

lapped edges, and a closure arranged in the open end of the receptacle.

5 5. A container comprising a receptacle, a casing and a closure, the said receptacle being disposed within the casing and having its upper end open and provided with an outwardly and downwardly extending flange which connects with the upper edge of the casing whereby the latter wholly supports
10 the receptacle when the container is in an upright position, the said closure having a portion adapted to fit snugly in the open end of the receptacle and another portion

adapted to embrace the flange and arranged to cooperate with the first named portion 15 to hold the flange and the casing in binding contact one with the other.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this 21st day of 20 January, 1916.

HARRIET HILL.

Witnesses:

ALICE ADAMS,

MILTON A. JENKS.