No. 891,877. PATENTED JUNE 30, 1908.

H. D. THATCHER.

BOTTLE OR CONTAINER.

APPLICATION FILED MAR. 21, 1907.

Fig. 1.

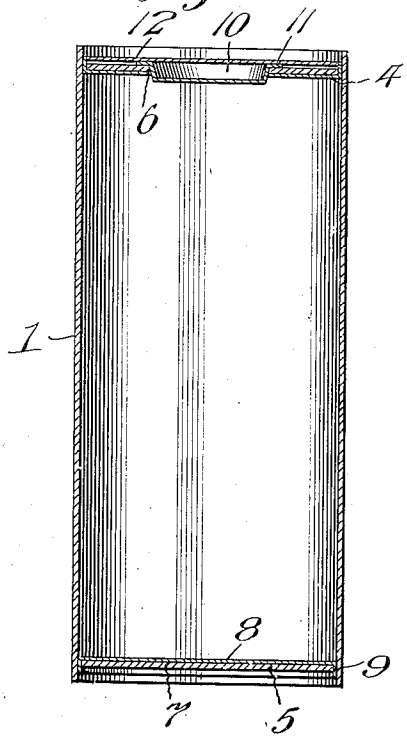


Fig. 2.

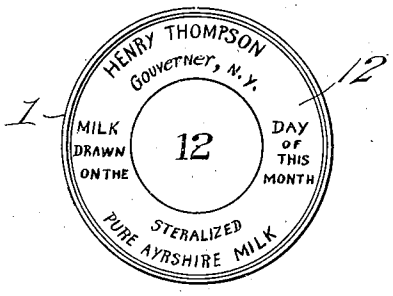
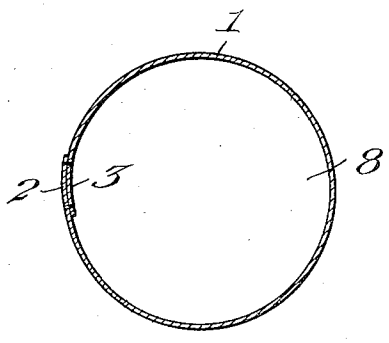


Fig. 3.



Inventor

Hervey Dexter Thatcher

Witnesses

Frank B. Hoffman.

C. C. Hines.

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

HERVEY DEXTER THATCHER, OF POTSDAM, NEW YORK.

BOTTLE OR CONTAINER.

No. 891,877. Specification of Letters Patent. Patented June 30, 1908.

Application filed March 21, 1907. Serial No. 363,616.

To all whom it may concern:

Be it known that I, HERVEY DEXTER THATCHER, a citizen of the United States, residing at Potsdam, in the county of St. Lawrence and State of New York, have invented new and useful Improvements in Bottles or Containers, of which the following is a specification.

This invention relates generally to improvements in bottles or containers, and specifically to improvements in bottles or the like constructed in whole or part of paper and designed to be used but a single time.

One of the objects of the invention is to provide a bottle formed of paper or other fibrous material especially designed for the delivery of milk from the producer or distributer to the consumer, which bottle may be manufactured in an expeditious and economical manner, is thoroughly sanitary and free from bacteria, may be hermetically sealed against the access of air and foreign substances to maintain the contents in a fresh and pure condition, and is moisture-proof so as to permit it to be submerged in or surrounded by a refrigerant for the purpose of keeping the milk cool without injury.

A further object is to provide a construction of paper bottle wherein the body and heads are formed and combined in a novel manner to secure strength of construction and tightness of the joints against leakage, as well as to provide one which when completed will be thoroughly sterile and will be maintained in such condition until used.

A still further object of the invention is to provide a bottle so constructed as to permit of the application thereto of a seal on which may be imprinted matter denoting the day on which the container was filled, the character of contents and the name of the producer or dealer, so as to protect both the dealer and consumer from substitution and the purchase of impure or inferior milk, as well as to enable the dealer or producer to identify his brand of goods and to acquire and maintain a reputation for the quality and purity thereof.

In the accompanying drawing showing the preferred embodiment of the invention,—Figure 1 is a vertical longitudinal section through a sealed container. Fig. 2 is a top plan view of the same. Fig. 3 is a horizontal cross section through the container.

Referring to the drawing, 1 designates the body of the container, which is of tubular form and made of paper pulp board or other similar fibrous material. In the construction of the same the material is cut into a sheet of the proper size to form a tube of the desired dimensions, and such sheet is then folded into tubular form with its side edges 2 and 3 arranged to overlap, and the latter are then secured together in any preferred manner, as by stitching them on a sewing machine or using mechanical fastenings, with or without the addition of a suitable cement.

The container is completed by the provision of top and bottom heads 4 and 5 which are alike in construction, except as to the production in the former of a filling and discharge opening 6, each head comprising a pair of fibrous disks 7 and 8 of different dimensions and united by an indissoluble or moisture-proof paste or cement. The bottom disk 7 is of increased thickness and strength with respect to the disk 8, which latter is designed to have greater flexibility, the said disk 8 being of greater diameter than the disk 7 to provide a lateral extension 9 designed to be turned at right angles about the edge of the disk 7 to form a sealing flange to hermetically closet he joint between the head and the bottle.

In the operation of inserting the heads in position, the body 1 is placed upon a suitable support and the head separately forced thereinto by the action of a suitable plunger, the lateral extension 9 of each head folding outward in the introduction of the head between the disk 9 and the wall of the container, thus increasing the frictional engagement between the head and body to effect the secure retention of the head in position.

A cover 10 of cup-form is provided to close the mouth or opening 6 in the head 4, and is preferably of tapered form to conform to the taper of the wall of the opening, allowing it to be tightly fitted in position, the upper edge of the cover being formed with a flange 11 to rest upon the upper surface of the head for an obvious purpose. In order to permit ready removal and reapplication of the cover from time to time, as in the operation of discharging small portions of the contents at different periods and sealing the container thereafter, either the outer surface of the cover and wall of the opening, or both, are coated with beeswax, a substance which will not only serve as a lubricant to permit ready insertion and removal of the cover and will hermetically seal the joints between them,

but will also prevent injury to the wall of the opening and any tendency of the same to contract and expand in the application and extraction of the cover. The cover may be made of wood or metal, but may be formed of paper coated with a suitable waterproof substance, such as paraffin. Stoppers of this character when inserted in an opening formed in a paper body are liable to spring back to a greater or less extent on account of the lack of rigidity of the material composing the body. This is wholly overcome by coating the contact surface of either the stopper or walls of the opening with the beeswax, which I have found, by repeated experimentations, to hold the stopper in position and permit of almost any number of insertions and removals as no other similar substance will. I, therefore, regard this an important feature of my invention.

After the bottle is formed in the manner described, it is dipped into a body of molten paraffin, which coats the entire outer surface thereof and fills the container and also coats the entire inner surface, the surplus material being allowed to discharge through the opening 6. The said opening 6 is then closed by the stopper, thus sealing the container until ready to be used. By this mode of treatment the container is rendered moisture-proof in and out, its joints sealed in a hermetic manner, and the container rendered wholly antiseptic or bacteria-proof, any bacteria that may be present in the article being destroyed by the molten paraffin. By the exclusion of air, this condition is maintained until the container is filled with the milk or other liquid to be stored therein for use, thus thoroughly and effectually preventing contamination of the contents.

In connection with the bottle, a trade-mark seal 12 may be employed, and upon the same may be printed the date on which the milk was put up, the nature and quality of the milk and the name of the dealer or producer, and such other matter as may be desired, such as the percentage of butter fat in the contents, etc. This seal is preferably made of oil paper or paper coated with paraffiin or other substance to render it water-proof, and is applied above the head 4 so as to rest upon the flange 11 and against the edge of the upwardly projecting portion of the sealing flange of said head, so that it will act as an additional sealing medium to prevent any possibility of the entrance of air or moisture at the top of the container. The prime object of the use of this seal with the data contained thereon is to enable the consumer to better judge of the quality of the goods as well as to require the dealer or producer to exercise care as respects quality in putting up his goods for sale, in order that the consumer may decline to purchase inferior goods and a dealer of probity may acquire a reputation for his better product and maintain a market therefor.

The container is intended to be used once only, and may be manufactured cheap enough to be discarded after use, thus insuring the delivery of milk in cleanly utensils to the consumer. As a result of the submersion of the article in the liquid paraffin, which is preferably heated to a temperature of about 240 degrees, Fahr., the container is water-proof so that it may be submerged in or surrounded by a refrigerant without injury, thereby enabling the milk to be kept cool in a refrigerator in the usual manner, and at the same time the article is subjected initially to a pasteurizing treatment which kills all bacteria and is maintained by the closing of the container until the latter is used.

Having thus described the invention, what is claimed as new, is:—

A container comprising a tubular body, formed of fibrous material, closing heads each including an outer disk and an inner flexible disk extending beyond the edge of the outer disk and folded between said outer disk and the inner surface of the tubular body portion, one of said heads being provided with an opening, a cover fitting said opening and having a flange engaging the outer face of said head, said container being coated interiorly with a moisture-proof substance, and a separate sealing disk fitting the outer end of said tubular body outside of the head and cover and retaining the cover in place.

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

HERVEY DEXTER THATCHER.

Witnesses:
FREDERICK P. BARNHART,
ADDA C. BARNHART.