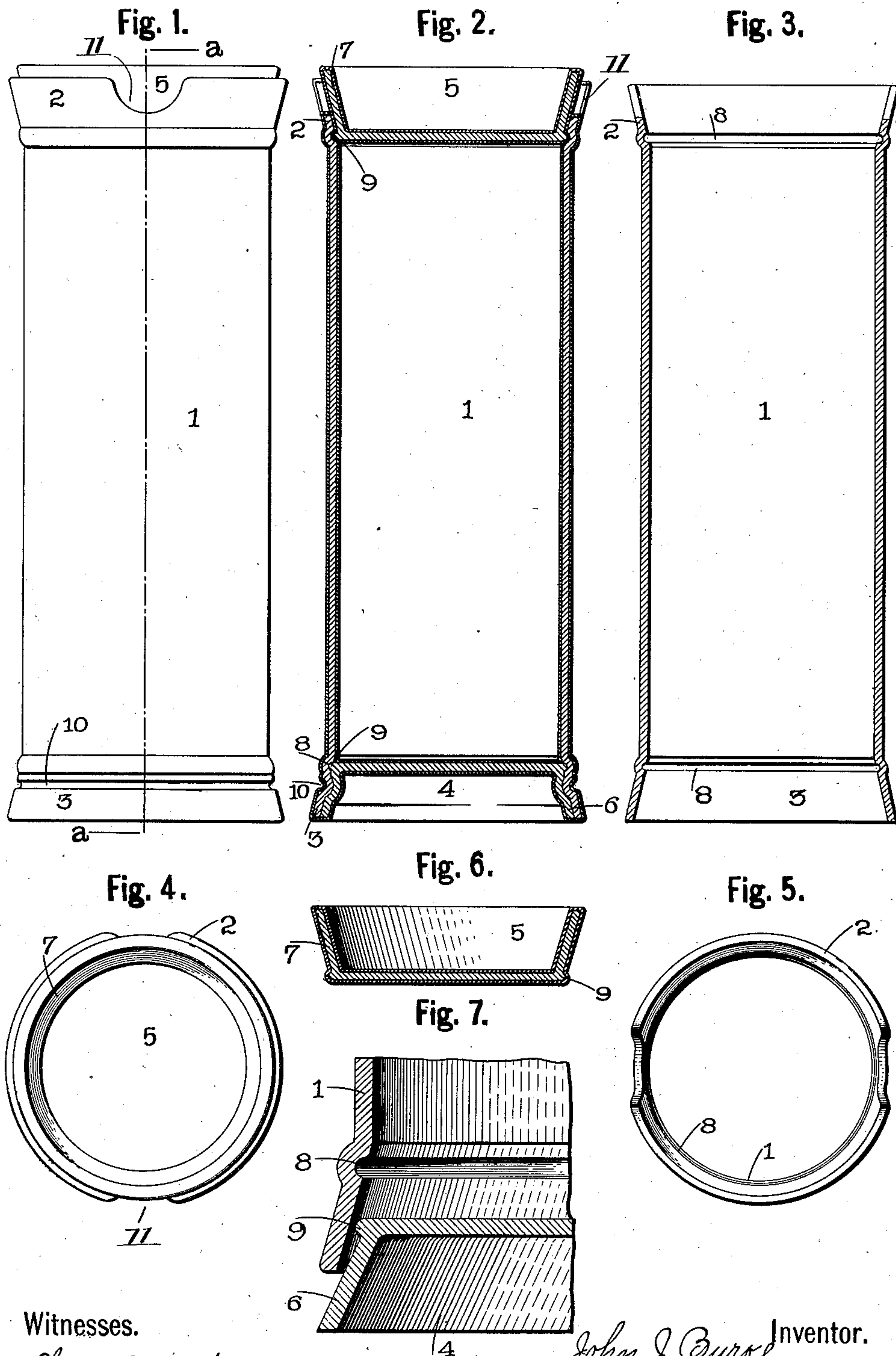


No. 889,758.

PATENTED JUNE 2, 1908.

J. J. BURKE.
PAPER MILK BOTTLE.
APPLICATION FILED APR. 14, 1905.



Witnesses.

L. M. Dangler.
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By

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UNITED STATES PATENT OFFICE.

JOHN J. BURKE, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO MARIANA MONROE, OF BUFFALO, NEW YORK.

PAPER MILK-BOTTLE.

No. 889,758.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed April 14, 1905. Serial No. 255,669.

To all whom it may concern:

Be it known that I, JOHN J. BURKE, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Paper Milk-Bottles, of which the following is a specification.

This invention relates to a receptacle or bottle for milk and like liquid, which is constructed of paper or analogous material, and the principal object of the invention is to simplify and cheapen the manufacture of receptacles of this character by assembling and fastening the component parts thereof in place without the aid of metal or other extra fastenings.

The invention also relates to certain details of construction which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings in which,—

Figure 1 represents a side elevation of the improved receptacle or bottle. Fig. 2 represents a longitudinal section on line *a a*, Fig. 1. Fig. 3 is a central vertical longitudinal section through the improved receptacle. Fig. 4 is a top plan view. Fig. 5 is a top plan view of the cylindrical body before the end pieces are fitted in place. Fig. 6 is a vertical central section through one of the end pieces detached from the remainder of the receptacle. Fig. 7 is an enlarged fragmentary section through one of the ends of the body and one of the end pieces, the end piece being partially fitted in place to disclose the greater taper of the flange of the end piece.

The improved receptacle includes at least in part a cylindrical or tubular body having a flaring or tapering end and an end piece fitting in said end for closing the opening and also having a flaring or tapering annular flange which fits against the interior surface of the flaring end of the body.

In referring to the drawings in detail, like numerals designate like parts.

The entire receptacle or bottle is constructed of paper or analogous material and consists of a tubular or cylindrical body 1, having its end portions 2 and 3, tapered or flared, a bottom end piece 4, and a top end piece 5.

The end pieces or closures 4 and 5, are of circular disk form and have tapering annular flanges 6 and 7, which are tapered to a slightly greater degree than the tapered end portions 2 and 3, of the body 1, so that as

they are fitted into said tapered ends, the elasticity of the paper causes the tapering annular surfaces of the ends 2 and 3, and the flanges 6 and 7, to wedge into close contact.

Grooves 8, are formed at the juncture of the tapered ends with the body proper and the end pieces 4 and 5, each have a small bead or annular enlargement 9, at the margin of their smaller extremity which are adapted to spring into the grooves to lock the end pieces in place.

In manufacturing this improved bottle or receptacle the cylinder body is first formed with the end portions thereof tapered as shown, and the annular interior grooves 8, at or near the jointure points of the tapered end portions with the remainder of the body, the lower tapered end thereof is moistened or dampened and the lower end piece 4, is fitted in the moistened lower tapered end 3, of the body sufficiently to spring the annular bead or enlargement 9, into the groove 8, as shown in Fig. 2. An annular groove 10, is now formed or swaged inwardly in the telescoped tapering end 3, and flange 6, to permanently fasten the lower end piece in place. The article is now dipped into melted paraffin or other suitable water proofing material and is then dried.

In drying the tapered end 3, shrinks upon the end piece 4, and thus more firmly secures the same in place.

The upper end piece 5, which in reality constitutes the stopper of the milk bottle is preferably formed with a flange 7, of greater depth than the tapered upper end 2, of the body so that when fitted in place the flange 7, will project sufficiently to afford a convenient finger grasp for the purpose of withdrawing the end piece or stopper.

To increase the extent of finger grasp, the upper tapered portion can have two semi-circular or similar recesses 11, cut in the top margin thereof on opposite sides as shown in Figs. 1, 2, 3, 4, and 5, to expose more of the end piece or stopper at two opposite points.

When the end pieces are in place, their flanges at all points throughout are under compression from the tapered end portion of the body, and provide an annular telescoping sealing portion of fairly wide extent to insure an absolute air and water tight condition. The upper end piece 5, is likewise water proofed by dipping and is forced into the upper tapered end of the body when it is de-

sired to close the receptacle until the bead 9, springs into the groove 8.

The great advantages of this improved construction are the simplicity and cheapness 5 of manufacture, the air tight sealing of the end pieces in the body when fitted in place which is due to the different degrees of taper of the end portions of the body and the flanges of the end pieces and the perfect sani- 10 tary condition of the receptacle.

I claim as my invention.

In a device of the class described, a cylindrical body of water-proofed paper having oppositely tapered end portions and annular 15 interior grooves at the lower termination of each of the tapering end portions, a permanent end piece or closure of water-proofed paper comprising a circular disk, a tapered annular flange extending from said disk and 20 tapered to a greater degree than the taper of the end portions, and an annular projecting bead at the juncture of the flange and disk forming an annular enlargement of rolling or curving outline; said end piece being 25 adapted to be permanently secured in place in one end of the body by first moistening the

tapered end portion of the body, then fitting the end piece in position in said end portion with the bead sprung into the interior groove in said end, and finally forming a groove in 30 the telescoped tapered flange and end portion below the interlocking annular groove and bead, and a removable end piece or closure of water-proofed paper comprising a circular disk, a tapered annular flange ex- 35 tending from said disk and tapered to a greater degree than the tapered end portion of the body and an annular bead at the juncture of the disk and flange; said end piece being adapted to be removably fitted in place 40 with the bead sprung into the annular groove and the tapered flange telescoped into the tapered end portion, and one of the tapered end portions of said body having a portion cut away to expose the removable tapered 45 end piece to afford a finger grasp for the convenient removal of said end piece, substantially as set forth.

JOHN J. BURKE.

Witnesses:

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