

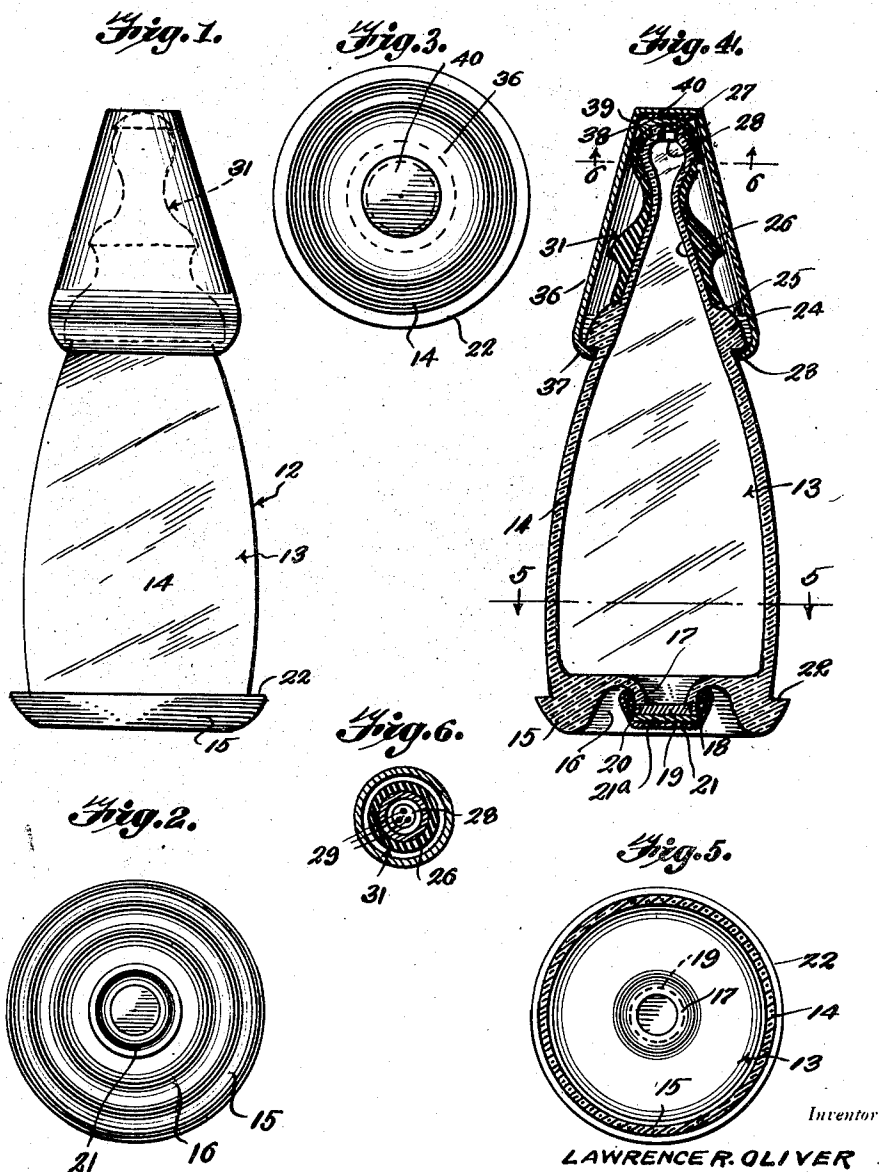
May 29, 1951

L. R. OLIVER
NURSING BOTTLE

2,555,054

Filed Nov. 5, 1947

2 Sheets-Sheet 1



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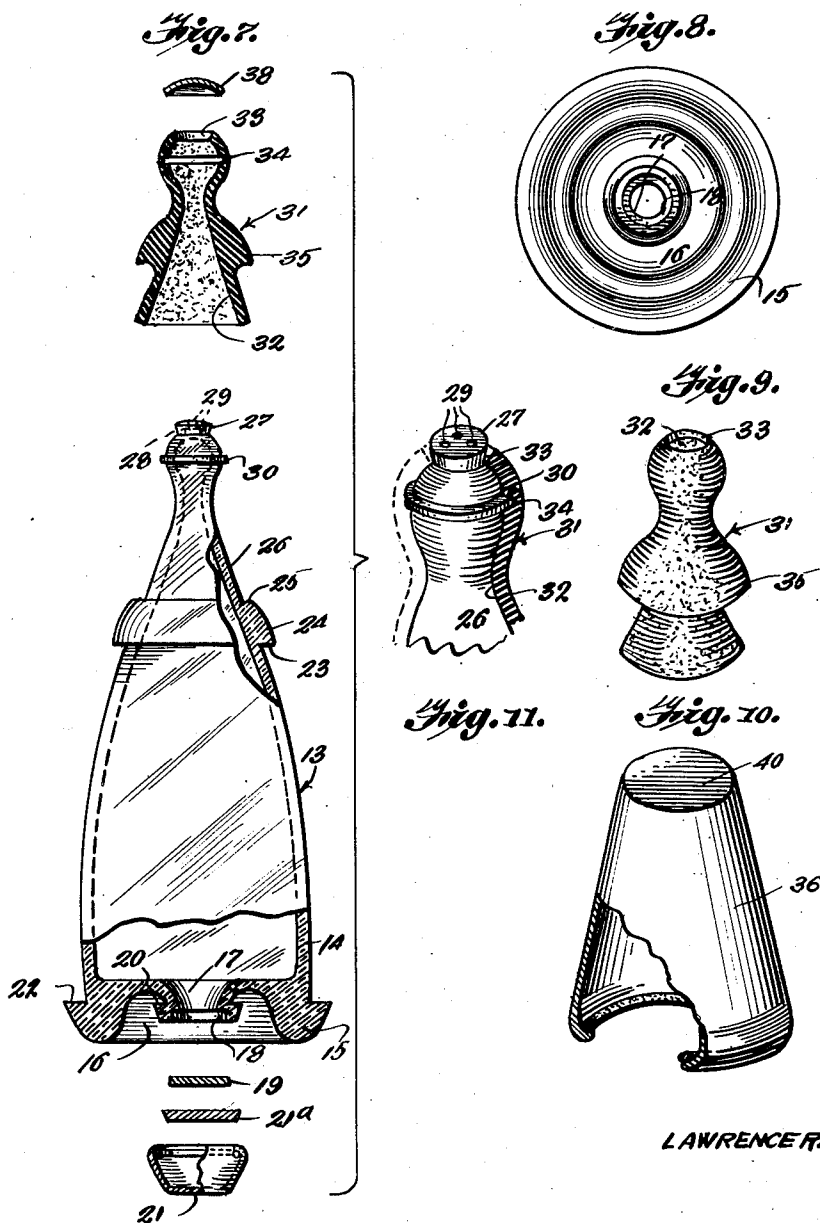
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UNITED STATES PATENT OFFICE

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NURSING BOTTLE

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4 Claims. (Cl. 215—11)

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This invention relates to an improved construction of nursing bottle for babies and is primarily intended to provide a nursing bottle the contents of which may be readily sealed thereby adapting it for use as a sealed container for a prepared formula intended to be sold commercially at retail stores for consumption by infants and which will eliminate the need for home preparation of formulas and enable mothers to purchase accurately prepared formulas, ready for use except for heating.

Another object of the invention is to provide a container of the aforesdescribed character wherein the nipple will constitute an integral part of the container body and is sheathed in a yieldable covering simulating a conventional nipple.

Still a further object of the invention is to provide a container adapted to be filled from the bottom and having dispensing opening or openings in the integral, nipple portion thereof that will insure proper discharge of the contents of the container and which will eliminate the guesswork adherent in the puncturing of rubber nipples to provide discharge ports.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a side elevational view showing the assembled, sealed container;

Figure 2 is a bottom plan view thereof;

Figure 3 is a top plan view of the container of Figure 1;

Figure 4 is a longitudinal, substantially central sectional view thereof;

Figures 5 and 6 are cross sectional views of the container taken substantially along the planes as indicated by the lines 5—5 and 6—6, respectively, of Figure 4;

Figure 7 is an exploded side elevational view, partly in longitudinal section of certain of the parts of the container;

Figure 8 is a bottom plan view of the container with the closure thereof removed;

Figure 9 is a perspective view of the nipple sheath;

Figure 10 is a similar view, partly in section of the nipple closure, and

Figure 11 is a perspective view of the nipple end of the container and with a portion of the sheath shown in section applied thereto.

Referring more particularly to the drawings, the improved nursing bottle, designated generally 12 and comprising the invention includes a

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body, designated generally 13 which is preferably formed of glass or similar material and which may be made in various colors. The body 13 may be of various sizes and shapes and preferably includes an annular wall 14 which increases slightly in diameter from the bottom 15 thereof for a distance approximately one-third the length of the body 13 and which thereafter diminishes in diameter toward the opposite, normally upper end of said body. The bottom 15, which is integral with the side wall 14 is substantially thickened and is provided in its under side with an indentation or recess 16 and is provided with an integral filling neck 17 which extends partially into the recess 16 and the rim of which is internally recessed at 18 to receive a vapor and vacuum seal 19 in the form of a disc which may be formed of glass or stainless steel. The rim of the neck 17 is also provided with an annular inwardly facing shoulder 20 over which is adapted to be snapped a rim of a closure cap 21, which is preferably formed of a spring metal and which is provided in the central part thereof with a sealing gasket or disc 21a which bears against the rim of the neck 17 and against the seal 19 for hygienically and hermetically sealing the neck 17. The thickened bottom 15 is also provided with an upwardly facing annular shoulder 22 by means of which said bottom is radially extended to protect the bottle 12 in shipment and to provide a shoulder capable of being engaged by suitable packing means for holding the nursing bottle 12 in a fixed position within a container.

The side wall 14 at a point nearer the upper end of the bottle than the bottom 15 is externally thickened to provide an annular shoulder 23, which faces toward the bottom end of the body 13, an annular tapered outer portion 24 and an annular shoulder 25 which faces toward the upper end of the body 13. The side wall 14, above said annular thickened portion is externally reduced in thickness and shaped to form a nipple 26 which likewise constitutes an integral part of the body 13 and the tip or end of which is externally thickened as seen in 27. Said thickened tip 27, as seen in Figure 4 is provided with an internal recess 28 and the outer portion thereof, as best seen in Figure 11 is provided with one or more discharge ports 29 the inner ends of which communicate with the recessed portion 28. The nipple 26, as best seen in Figures 7 and 11 is provided adjacent its upper end or nearer the thickened portion 27 with an annular, external rib 30 which is formed integral therewith.

An elongated, tubular sheath 31, which is pref-

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erably formed of rubber, is disposed over the nipple 26 and is provided with a bore 32 which is shaped to fit said nipple and which has an opening 33 in one end thereof which is shaped to fit around the external enlargement 27. The bore 32, adjacent the opening 33 is provided with an annular, internal groove 34 to receive the annular rib 30 by means of which the sheath 31 is retained in an applied position on the nipple 26. The opposite, enlarged end of the sheath 31 seats against the shoulder 25 and said sheath 31 is provided with an externally thickened intermediate portion 35, adapted to be engaged by the lips of an infant. The nipple and sheath are adapted to be closed and hermetically and hygienically sealed in a cap 36 and preferably formed of a spring metal and which is adapted to fit over the upper end of the body 13 and has a frusto-conical side wall which is open at its enlarged end and which enlarged end portion is flared inwardly, as seen at 37. The inwardly flared portion of the side wall of the cap 36 when being applied initially engages the outer surface 24 of the enlargement and is spread thereby as the cap is pressed down over the upper end of the body 13 until said intumed edge of the portion 37 passes beyond the enlarged lower end of the surface 24 whereupon being released snaps into engagement under the shoulder 23 for retaining the cap 36 securely on the upper end of the body 13. A concavo-convex vapor vacuum seal, which may be formed of glass or stainless steel, fits over the enlargement 27 of the nipple 26 and over the adjacent portion of the sheath 31 and is yieldably held thereagainst by a disc or gasket 39, which is preferably formed of rubber and which is disposed against the inner side of the restricted, closed end 40 of the cap 36.

From the foregoing it will be readily apparent that the nursing bottle 12 readily adapts itself as a container for a pre-prepared baby formula which is adapted to be filled through the filling neck 17 in the bottom thereof, after the nipple 26 has been sealed by the seal 38 and cap 36 and, after filling, the seal 19 and cap 21 provided with the gasket 21a are applied for hermetically and hygienically sealing the contents of the bottle body 13. The nursing bottle 12 thus completely assembled, as illustrated in Figures 1 and 4 is adapted to be sold in retail outlets such as grocery stores and drug stores ready to be used except possibly for heating the body 13 and which can be accomplished before the bottle 12 is unsealed. By then removing the cap 36 by prying the intumed rim 37 out of engagement with the shoulder 23, and removing the seal 38 the bottle is ready to be used as a conventional nursing bottle for infants and with the ports 29 affording a proper discharge of the formula contents and with the sheath 31 protecting the mouth of the infant, applied thereto, while at the same time preventing cessation of the discharge of the contents as frequently results with conventional rubber nipples which are collapsed by the pressure of the lips of the infant and which is impossible with the non-collapsible, rigid nipple 26.

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Various modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A glass nursing bottle having an integral nipple-shaped portion defining one end thereof and provided with a rounded outer end portion, said rounded outer end portion having an integral externally thickened head projecting from the extremity thereof and provided with an aperture opening outwardly thereof and extending through the rounded outer end of said nipple-shaped portion to define a discharge port of the nursing bottle, and a tubular sheath of a resilient material disposed over and substantially enclosing the nipple-shaped end of the bottle and sized and shaped to snugly engage thereon, said sheath having an opening in one end thereof engaging snugly around said thickened head, the outer end of the thickened head being exposed through said sheath opening.

2. A nursing bottle as in claim 1, said nipple-shape end having a restricted intermediate portion of a smaller external diameter than its rounded outer end.

3. A nursing bottle as in claim 1, said nipple-shaped end having a restricted intermediate portion of a smaller external diameter than its rounded outer end, said rounded outer end having an annular externally disposed retaining flange, and said tubular sheath having an annular internal groove to receive the retaining flange for retaining the sheath properly positioned on the nipple-shaped bottle end.

4. A nursing bottle as in claim 1, said thickened head including an annular outwardly flared wall extending from the rounded end portion of the nipple-shaped end against which the annular wall defining the sheath opening seats.

LAWRENCE R. OLIVER.

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