Nov. 26, 1935. E. GEISTLINGER 2,022,083

NURSING BOTTLE

Filed May 13, 1931

Fig. 1.

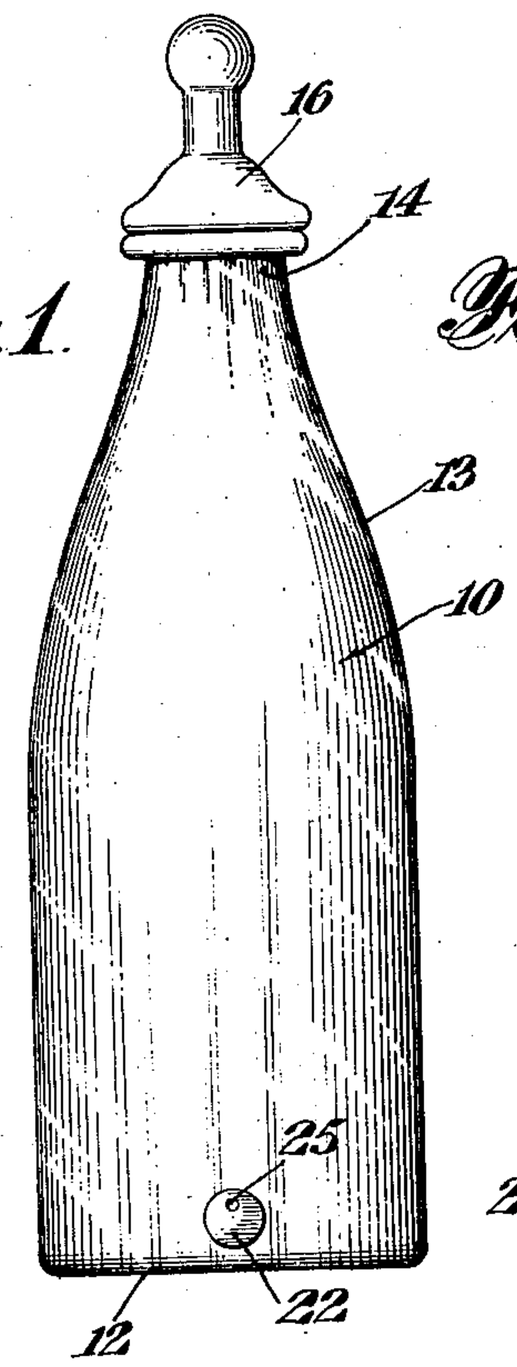


Fig. 2.

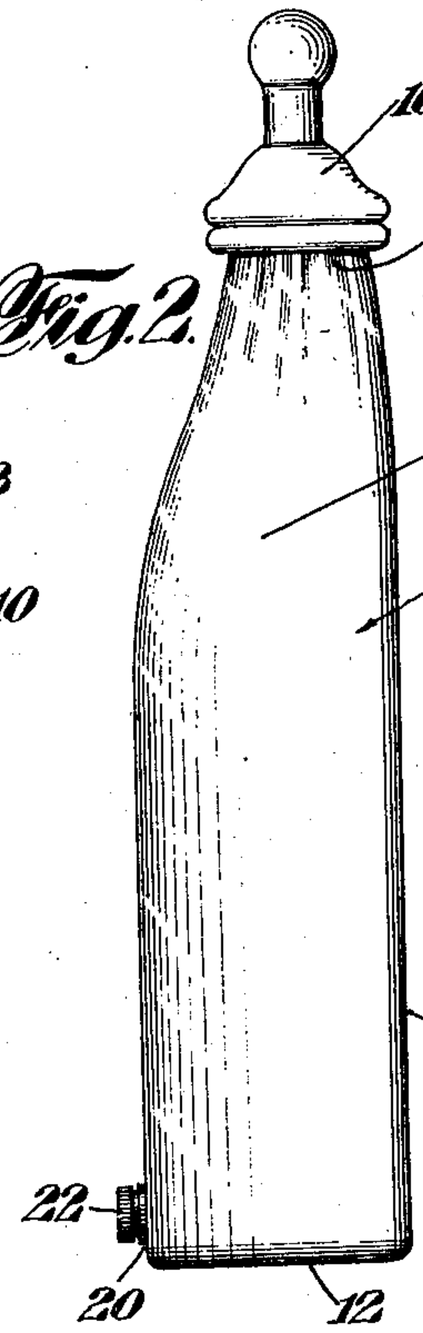


Fig. 3.

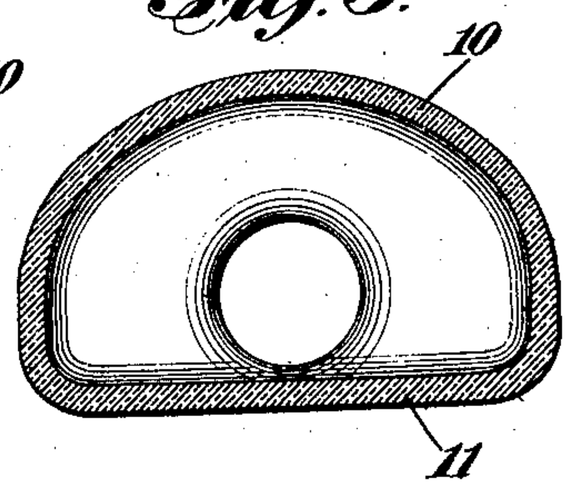


Fig. 4.

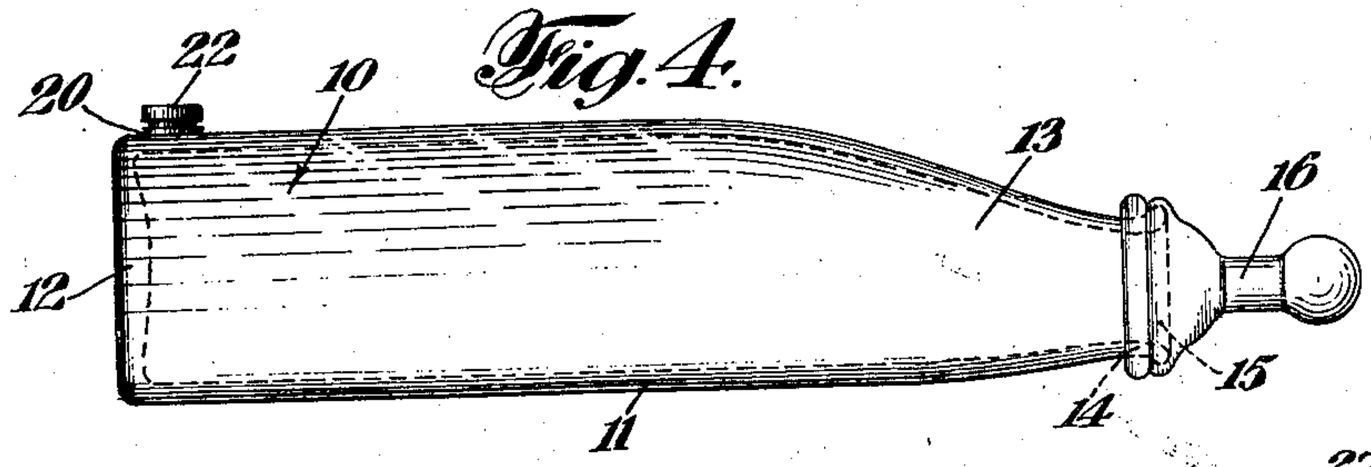


Fig. 5.

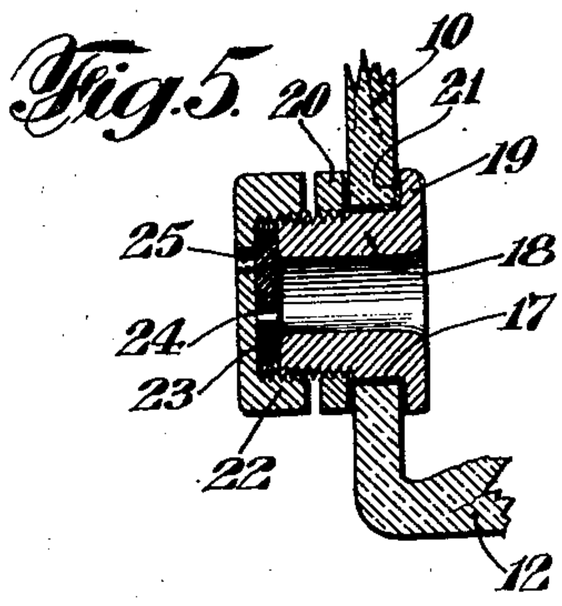


Fig. 6.

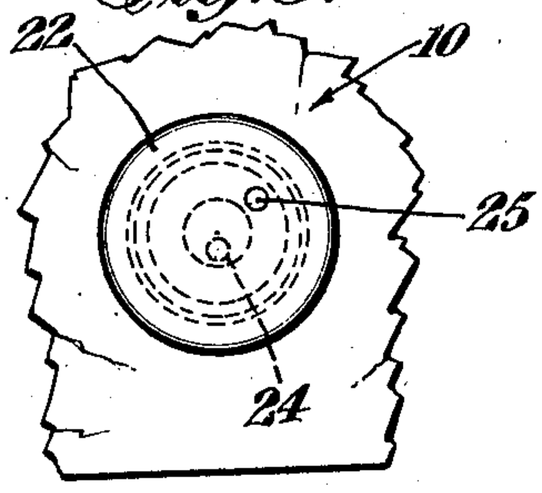
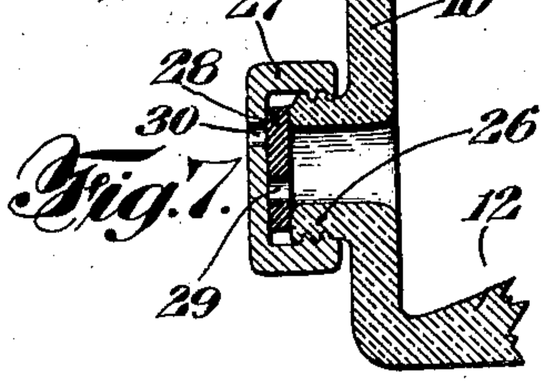


Fig. 7.



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NURSING BOTTLE

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Application May 13, 1931, Serial No. 537,024

5 Claims. (Cl. 215—11)

This invention relates to improvements in nursing bottles and has as an object to provide a bottle with an adjustable air inlet whereby the sucking effect of the mouth of an infant, as applied to a nipple on the bottle, will produce a flow of liquid with a minimum of effort.

Another object of the invention is to provide a sanitary nursing bottle having an air venting means which may be assembled and disassembled and which may be readily sterilized.

A further feature is in the provision of a bottle so designed as to prevent rolling and which is normally retained in a horizontal position transversely, with the air inlet uppermost longitudinally.

Another aim is to produce bottles which may be readily handled and correctly positioned in the dark as well as in the light.

Other and further objects of the invention will be obvious upon an understanding of the illustrative embodiment about to be described, or will be indicated in the appended claims, and various advantages not referred to herein will occur to one skilled in the art upon employment of the invention in practice.

In a bottle of ordinary type a continued suction on the nipple creates a partial vacuum therein, causing the walls of the nipple to collapse and close the passage therethrough.

In this case considerable air may pass into the infant's stomach, causing flatulency, colic and like disorders, in addition to depriving the infant of food, and creating a distinct annoyance.

Having these matters in mind, the present bottle, including the characteristic features indicated by the foregoing objects, has been evolved, the same consisting in the novel design, construction and arrangement of parts hereinafter described and illustrated in the accompanying drawing, forming an essential part of the disclosure, and in which:—

Figure 1 is a front elevational view of a nursing bottle made in accordance with the invention.

Figure 2 is a side elevational view of the same.

Figure 3 is an enlarged transverse sectional view taken on line 3—3 of Figure 1.

Figure 4 is a side view of the bottle as disposed in its preferred position for use.

Figure 5 is a fragmentary sectional view showing the air inlet vent.

Figure 6 is a front view of the same.

Figure 7 is a view similar to Figure 5, but showing a modified form of vent.

Referring in greater detail to the drawing, it will be seen that the main portion of the wall 10 of the bottle body is arcuate in cross section, its side edges being integrally connected by a flat member 11, the main portion of the body being parallel from its junction with the bottom 12, at the opposite end the body is contracted, as at 13, to a neck 14, provided with the usual outstanding annular rim or bead 15 surrounding its mouth, over which is attached a nipple 16 of any preferred form.

As shown in Figure 5 an opening 17 may be formed in the body wall 10, the opening being adapted to receive a sleeve 18 having a flange 19 of larger diameter than that of the opening, and which is drawn firmly against the bottle wall by a nut 20 screw threaded on the outer extending end of the sleeve 18, there being interposed between the sleeve, flange and nut, a pliable packing 21 to prevent leakage through the joints.

Also threaded on the outer extending end of the sleeve is a cap nut 22 used to compressively engage a washer 23 between the inner surface of the nut and extreme end of the sleeve.

The washer 23, preferably rubber, is provided with an orifice 24, while a similar aperture 25 is formd through the cap nut in such manner that these openings are in offset relation, incapable of being placed in registration, either fully or partially, to permit the direct entrance of air, but the nut may be turned to release the pressure on the washer whereby a thin film of air may enter the bottle as may be desired although liquid is prevented from escaping.

In Figure 7 a hollow boss 26 is formed integrally with the bottle body 10, this boss being externally threaded on its end portion to engage a cap nut 27, similar to the nut 23, and used like it to retain in operative position as pliable washer 28 provided with an orifice 29, which is offset from an aperture 30 in the cap nut, these openings operating in the manner above recited.

From the foregoing it will be seen that means are provided for entering an adjusted quantity of air to the interior of the bottle without permeating the residual milk during use when the bottle is on its flat side and inclined longitudinally with the vent uppermost, without permeating the residual milk during use when the bottle is on its flat side with the vent uppermost, whereby the flow of liquid through its mouth, as covered by a nipple 16, is materially facilitated, these means when properly adjusted retaining the liquid without waste when the bottle is not in use.

It will also be noted that, by reason of the shape

of the bottle, it is easily manipulated merely by touch and when disposed on its flat side, will not roll off its support or out of reach of an infant.

Although the improvements have been described with considerable detail and with respect to certain particular forms of the invention it is not desired to be limited to such details since many changes and modifications may well be made without departing from the spirit and scope of the invention in its broadest aspect.

Having thus described the invention, what is claimed as new and desired to secure by Letters Patent, is:—

1. In a device of the class described, the combination of a nursing bottle having a neck adapted to receive a nipple and having a substantially flat side wall, the inner side of said flat side wall being substantially in a plane tangent to one side of the neck of the bottle to permit the contents of the bottle to run to the mouth thereof without obstruction when the bottle is in substantially horizontal position on a baby's chest, said bottle having a substantially flat bottom to permit it to be stood upright during sterilization and having an aperture in the side wall thereof opposite said flat wall and adjacent to said flat bottom, venting means in said aperture comprising a tubular threaded member having a portion fitting about the aperture on the inside of the bottle, an annular gasket on said tubular member fitting against the wall of the bottle, a threaded collar member fitting about the aperture on the outside of the bottle to hold the tubular member in position, a screw cap threaded to one of said tubular members, and a valve member intermediate said screw cap and one of said threaded members for venting the bottle when said cap is loose.

2. In a device of the class described, the combination of a nursing bottle having a neck adapted to receive a nipple and having a substantially flat side wall, the inner side of said flat side wall being substantially in a plane tangent to one side of the neck of the bottle to permit the contents of the bottle to run to the mouth thereof without obstruction when the bottle is in substantially horizontal position on a baby's chest, said neck flaring outwardly to merge with the other side walls of the bottle to prevent the bottle from being in improper position on a baby's chest, said bottle having a substantially flat bottom to permit it to be stood upright during sterilization, and having an aperture in the side wall thereof opposite said flat wall and adjacent to said flat bottom, and venting means in said aperture comprising a threaded member having a flange fitting about the aperture on the inside of the bottle, a threaded collar fitting about the aperture on the outside of the bottle to hold the flange in position, a screw cap threaded to said threaded member, and a valve member intermediate said screw cap and said threaded member for venting the bottle when the cap is loose.

3. In a device of the class described, the combination of a nursing bottle having a venting aperture in the wall of the bottle, a flanged threaded member adapted to extend through said aperture with the flange fitting about the aperture on the inside of the bottle, a collar threaded onto said threaded member and fitting about the aperture on the outside of the bottle to hold the threaded member rigidly and securely in position, a valve member, and a screw cap threaded about the end of said threaded member for controlling the operation of said valve member and for venting the bottle to prevent the formation of a partial vacuum therein.

4. In a device of the class described, the combination of a nursing bottle having a venting aperture in the wall of the bottle, a flanged threaded member adapted to extend through said aperture with the flange fitting about the aperture on the inside of the bottle, a collar threaded onto said threaded member and fitting about the aperture on the outside of the bottle to hold the threaded member rigidly and securely in position, a screw cap threaded about the end of said threaded member, and a valve member intermediate the cover part of said screw cap and the outer end of said flanged threaded member to provide a valve action for venting the bottle when said cap is loose and for preventing leakage of the contents of the bottle.

5. In a venting device for attachment to a nursing bottle having a venting aperture in the wall thereof, the combination of a flanged threaded member adapted to extend through the aperture of the bottle with the flange adapted to fit about the aperture on the inside of the bottle, a collar adapted to be threaded onto said threaded member and to fit about the aperture on the outside of the bottle to hold the threaded member rigidly and securely in position, a screw cap threaded to said threaded member, and a disc member intermediate the cover part of said screw cap and the outer end of said threaded member, said disc member and said cap having offset apertures therein to provide a valve permitting entrance of air therethrough and preventing milk from leaking therethrough out of the bottle.

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