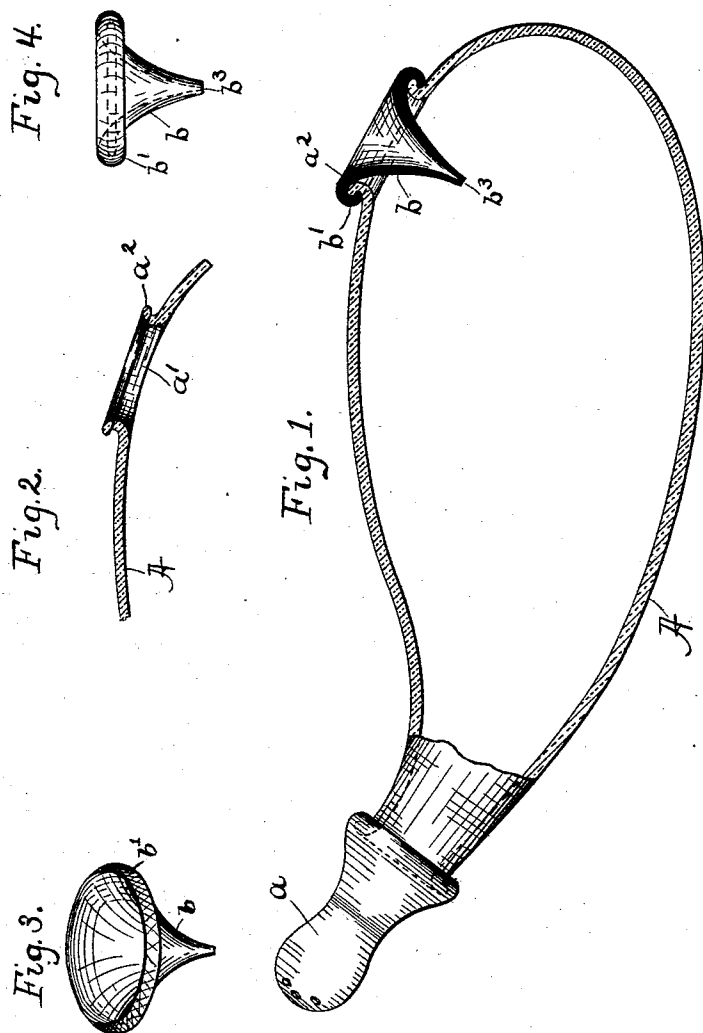


(No Model.)

O. K. NEWELL.
NURSING BOTTLE.

No. 484,811.

Patented Oct. 25, 1892.



Witnesses.
Howard F. Eaton.
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Inventor:
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UNITED STATES PATENT OFFICE.

OTIS K. NEWELL, OF BOSTON, MASSACHUSETTS.

NURSING-BOTTLE.

SPECIFICATION forming part of Letters Patent No. 484,811, dated October 25, 1892.

Application filed March 7, 1892. Serial No. 423,967. (No model.)

To all whom it may concern:

Be it known that I, OTIS K. NEWELL, residing at Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Nursing-Bottles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to nursing-bottles of that class in which a vent is provided for the admission of air to the bottle, and has for its object to improve the construction of the same.

Prior to my present invention I am aware that nursing-bottles have been provided with vented stoppers inserted into an opening in the bottles to form an automatic vent for the same. These vented stoppers are objectionable on account of the liability of the stopper leaking and becoming loosened, so as to be suddenly forced out of the bottle by the pressure of its contents, as when the bottle is grasped by its neck and carried in the hand. The vented stoppers are further objectionable on account of the difficulty to keep the same clean and their liability to become foul, thereby causing the milk to become tainted after the bottle has been used but a substantially-short time.

My invention has for its object to provide a nursing-bottle with an automatic vent which possesses all the advantages of the vented stopper without its attendant disadvantages.

In accordance with my invention the bottle is provided, preferably in or substantially near its end opposite to the neck of the bottle, with a preferably-circular opening having an outwardly-extended circular lip or flange, upon which is fitted a vented cap, preferably made of rubber and consisting of a conical body portion inserted or projected into the bottle through the opening and an annular outwardly and downwardly extended rim which is adapted to be snapped over the flange of the opening in the bottle and by which the vented cap is securely held on or attached to the bottle until positively detached by hand, the conical body portion inserted into the bottle through the opening therein being provided with a vent or opening which is normally closed by the elasticity

of the material, but which is adapted to be opened by suction applied to the outlet end of the bottle.

The particular features in which my invention consists will be pointed out in the claim at the end of this specification.

Figure 1 represents a nursing-bottle embodying my invention, the said figure being partially broken out to more clearly show the vented cap; Fig. 2, a detail of the bottle to more clearly show the annular flange or lip; Figs. 3 and 4, details of the vented cap to be referred to.

The bottle A, of glass or other suitable material and provided with the usual nipple *a*, may be of any desired shape or size. The bottle A is provided, preferably on its upper side, substantially near its end opposite to the nipple *a*, with an opening *a'*, which I prefer to make circular in form and substantially large. The opening *a'* is encircled by an outwardly-extended annular flange or lip *a*², preferably beveled or made outwardly flaring, as shown in Figs. 1 and 2. The opening *a'* is normally closed by a vented cap, preferably made as a single piece of rubber and consisting of a body portion *b*, inserted into the bottle through the opening *a* and made, for the best results, in the shape of an inverted hollow cone, and a downwardly and preferably inwardly curved annular rim *b'*, which is adapted to be snapped over and fitted upon the flange or lip *a*², the said annular rim fitting the flange or lip snugly to form an air and liquid tight joint, whereby the opening *a'* is closed and leakage at this point prevented. The body portion *b* of the vented cap is provided with a vent or opening. (Herein represented as a small hole or opening in the apex of the cone, as at *b*³.) The body portion *b* is preferably made of flexible or collapsible rubber and is preferably prolonged to substantially a point, so that the vent *b*³ is normally closed by the elasticity of the material by the pressure of the liquid in the bottle, but which is automatically opened to admit air into the bottle when suction is applied to the nipple, as in the act of nursing a baby. The vented cap is firmly attached to the bottle by the flexible rim *b'*, fitting over the flange or lip *a*², and is held in place by the elasticity of the cap and cannot become

detached from the bottle except when positively removed by hand. Furthermore, the vented cap may be readily removed from the bottle and washed both on its inner and outer side, and any particles of decomposed milk adhering to the cap can readily be removed by rubbing the cap between the fingers.

In view of the quite-recent discoveries relating to fermentive bowel-disturbances in infants the absolute cleanliness of the bottle and the vented portion thereof is of vital importance, and for this reason the vented cap herein shown is particularly advantageous, owing to the thoroughness with which it may be washed and cleaned. The vented cap herein shown, while possessing all the properties of a vented stopper, is not a stopper, strictly speaking, and possesses advantages which a vented stopper does not possess—such, for instance, as ability to be used for

an indefinite time without danger of leaking or becoming forced out of the bottle by the contents of the same, and also the capability of being washed thoroughly clean.

I claim—

The combination, with a nursing-bottle A, provided with an opening having an outwardly-extended lip or flange, of a vented cap consisting of a body portion *b*, inserted into the bottle through the opening and provided with a normally-closed vent or opening and a rim fitted over the flange or lip, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OTIS K. NEWELL.

Witnesses:

JAS. H. CHURCHILL,
SADIE C. FEARING.