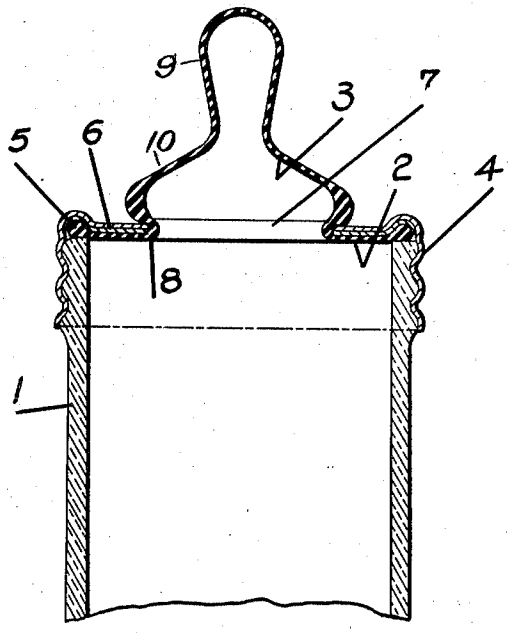
A. C. EGGERS.

NURSING BOTTLE.

APPLICATION FILED FEB. 15, 1916.

1,303,546. Patented May 13, 1919.



WITNESS:

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NURSING-BOTTLE.

1,303,546. Specification of Letters Patent. Patented May 13, 1919.

Application filed February 15, 1916. Serial No. 78,351

To all whom it may concern:

Be it known that I, ANTON C. EGGERS, a citizen of the United States, and a resident of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Nursing-Bottles, of which the following is a full, clear, and exact description.

The present invention relates to nursing bottles and has for its primary object to provide means for securing the rubber nipple to the bottle without distorting the former.

Referring to the drawing the figure shows a fragmental sectional view of a nursing bottle with the nipple attached thereto.

Nipples for nursing bottles have a comparatively short life. They must, of course, be frequently cleansed and made perfectly sanitary while in use and this coupled with other necessary harsh treatment to which they are subjected results, in a comparatively short time in taking much of the life out of the rubber. This prevents the nipple from standing out firmly in its original shape, and causes it to assume a rather collapsed condition. The surface moreover develops a slight sticky condition which tends to hold the walls together thereby causing the nipple to become useless.

Nipples heretofore, as far as I am aware, have been applied to the nursing bottles by directing their margins downwardly and stretching them over the outside of the bottle. The margin must be made considerably smaller than the bottle in order to secure a tight joint when the former is stretched over the latter. This stretching distorts the nipple from its original shape when applied and destroys the uniformity of resistance against compression which is much to be desired in order to insure a ready and uniform return of the nipple to its original shape. Moreover, as soon as the life of the rubber begins to diminish it takes more or less of a permanent set in its stretched condition and but loosely fits the bottle so that leaking results.

I obviate these objections by attaching the nipple to the bottle without subjecting it to the usual stretching action. This is accomplished by providing independent means for securing the nipple and bottle together. There may be numerous contrivances for accomplishing this, the means shown in the drawing presents a simple construction but it is to be understood that my invention is not limited to this as the main feature of the invention resides in securing the nipple to the bottle without distorting the former.

In the present instance the bottle 1 is provided with a sufficiently even upper edge or rim to provide a seat for the outwardly flaring substantially flat annular margin 2 of the nipple 3. A ready means of securing the margin and bottle together is by the use of a cap 4 which sets upon the top of the margin and is provided with means for securing it to the bottle and for producing the required pressure upon the rubber margin to make the required tight joint. In the present illustration this is accomplished by threading the cap and the bottle so that the cap may be readily secured and detached and the required pressure produced. To facilitate this the edge of the margin 2 is thickened to form a bead 5 and the cap is correspondingly bulged upwardly to provide an engaging groove for the bead. This holds the margin in place and prevents any likelihood of its being squeezed or pulled from the rim of the bottle on which it is seated. To insure a free turning of the cap a washer 6 may be interposed between it and the rubber margin 2.

There is often a partial vacuum set up in the bottle due to the withdrawal of its contents and the temporary sealing which prevents the ingress of air. This produces a suction upon the nipple which would tend to draw it into the bottle. To prevent this tendency the nipple is provided with a restricted throat 7, which is formed by extending the side walls above the margin, that is in a direction toward the apex of the nipple, outwardly at a sharp acute angle to the margin, which itself lies at substantially right angles to the longitudinal axis of the nipple. There is thus provided an external groove 8 into which the rim about the perforation of the cap 4 snugly fits. The head 9 of the nipple is relatively narrow and its walls converge somewhat inwardly. The head adjoins a breast portion 10 whose walls flare outwardly until they join the inwardly turned walls which meet the margin. According to this construction of the lower walls of the breast portion the nipple is firmly held against any possibility of being drawn into the bottle, and the breast, while providing a free flow of liquid, thus successfully resists any inward suction, due to the

formation of a vacuum. The restriction of the mouth is not so great however, but that the rubber nipple may be easily passed through it when the parts are assembled.

From the foregoing it will thus be seen that I provide a nursing bottle which is simple in construction, easily cleaned to maintain it perfectly sanitary, and wherein the nipple is quickly and easily secured to the bottle without any distortion of the former.

Having thus described my invention, what I claim and desire to protect by Letters Patent is:—

1. A nipple for a nursing bottle having a substantially flat, smooth margin constituting the extremity of the nipple and adapted to rest on the edge of the bottle, and side walls molded into the form of an inwardly converging flange to meet said margin at a sharp acute angle.

2. A nipple for a nursing bottle provided with a narrow head portion adjoining an outwardly flaring breast portion, and a substantially flat margin adapted to rest on the edge of the bottle, the lower walls of said breast portion being molded into the form of an inwardly converging flange to meet said margin at a sharp acute angle.

3. A nipple for a nursing bottle provided with a narrow head portion adjoining an outwardly flaring breast portion, and a substantially flat margin lying at substantially right angles to the longitudinal axis of the nipple, the walls of said breast portion being inwardly turned to meet said margin at a sharp acute angle.

4. In combination, a bottle, a perforated cap detachably secured to the bottle, and a nipple extending through the perforation and secured to the bottle by the cap, said nipple being provided with a narrow head portion adjoining an outwardly flaring breast portion, and a substantially flat margin adapted to rest on the edge of the bottle, the lower walls of said breast portion being molded into the form of an inwardly converging flange to meet said margin at a sharp acute angle.

Signed at New York city, county of New York, State of New York, this 14th day of February, 1916.

ANTON C. EGGERS.