July 25, 1939. H. R. SAUDER 2,167,284

SHIELD FOR NURSING NIPPLES

Filed Feb. 11, 1939

FIG 1

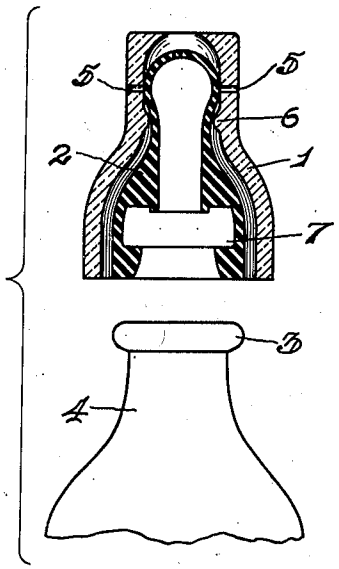


FIG 2

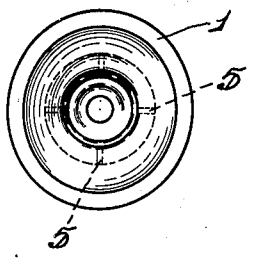


FIG 3

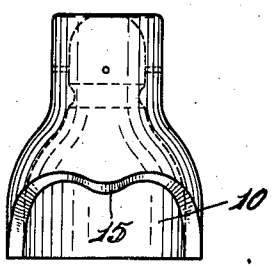
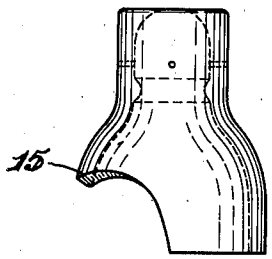


FIG 4



INVENTOR

Howard R. Sauder.

BY Martin J. Munion

ATTORNEY

Patented July 25, 1939 2,167,284

UNITED STATES PATENT OFFICE

2,167,284

SHIELD FOR NURSING NIPPLES

Howard R. Sauder, Wheeling, W. Va.

Application February 11, 1939, Serial No. 255,815

1 Claim. (Cl. 128—252)

This invention relates broadly to shields for the nipples of infants' nursing bottles, and more particularly to a shield for preserving the sterility of such nipples during the period required to attach the same to the neck of the nursing bottle.

Rubber nursing nipples are invariably sterilized prior to application to the nursing bottle containing the liquid to be administered to the infant. However, the nipples not infrequently become contaminated by contact with the hands of the person attaching the same to the bottle.

The present invention is designed to provide a simple and inexpensive device for completely encasing the nipple during the process of sterilization and subsequent application to the bottle so that the sterile nipple is untouched by the hands during application to the bottle and is, therefore, not thus contaminated.

Moreover, the invention contemplates the provision of a device which may readily and easily be detached from the nipple after attachment of the latter to the bottle neck.

Reference will now be had to the drawing forming a part of this specification, wherein—

Figure 1 is a vertical sectional view of the invention housing a nipple and spaced above the neck of the bottle to which the nipple is to be attached;

Figure 2 is a bottom plan view of the invention;

Figure 3 is a front view of a modified form of the invention; and—

Figure 4 is a side elevational view of the modification illustrated in Fig. 3.

Referring to Figures 1 and 2 of said drawing, wherein the preferred form of the invention is depicted, the reference numeral 1 designates the nipple shield, preferably made of glass, but which may be made of any other suitable material. The shield 1 has a hollow interior construction extending throughout its longitudinal extent of a contour substantially conforming to the contour of the resilient rubber nipple 2 which it is intended to encase, as shown in Fig. 1 of the drawing.

The upper portion of the shield is reduced in diameter so that its internal diameter is smaller than the external diameter of the upper portion of the nipple so that this portion of the nipple is frictionally engaged by and retained in suspended relation in the shield.

The lower portion of the shield is enlarged so that its wall is spaced away a distance from the lower, or bottle engaging, portion of the nipple to permit the expansion of this portion of the nipple during attachment to the neck bead 3 of the nursing bottle 4. Moreover, it will be observed in Fig. 2 of the drawing that the hollow interior of the lower end of the shield is slightly elliptical, rather than circular, in shape since expansion of the nipple during application to the bottle is not uniform. Practice teaches that the maximum expansion of the nipple is laterally in opposite directions from that portion of the nipple first contacting the bottle neck during application. Additionally, the opening in the lower end of the shield is larger than the diameter of the bottle neck bead 3.

A plurality of spaced, radially extending, apertures 5 are provided in the shield wall. An inwardly extending, integral, annular bead 6 is provided on the inner wall of the shield beneath the swelled outer end of the nipple to prevent chance disengagement of the nipple from the shield.

In practice, the nipple 2 is forced into frictional engagement within the shield 1 so as to occupy the nested position illustrated in Figure 1 of the drawing. The shield 1 and the thereby encased nipple are together immersed in a sterilizing liquid, as boiling water, for a predetermined period of time and the two articles are together sterilized. Provision of the apertures 5 affords means to facilitate access of the sterilizing solution over the entire area of the confined nipple.

Following sterilization, the nipple may be immediately applied to the nursing bottle, or, in event a plurality are sterilized simultaneously, they may be placed and retained in a sterile container until used.

Attachment of the nipple to the neck of the bottle is accomplished in the following manner: The shield 1 encasing the nipple 2 is firmly grasped by one hand while the nursing bottle is grasped by the other hand. The shield is then placed above the bead 2 of the bottle and tilted at an angle so as to force a segmental part of the bead engaging portion 7 of the nipple 2 into contacting relation with the bottle neck bead 3. The shield is then firmly depressed further to force expansion or dilation of the nipple over the larger neck bead 3, after which the resilience of the rubber retracts the nipple so that the bead engaging portion 7 of the nipple tightly encircles the neck bead 3 and firmly retains the nipple on the bottle neck.

The shield is then disengaged from the nipple merely by pulling the latter away from the former. Since the frictional force between nipple and shield is less than the frictional force be-

tween the bottle and attached nipple, it is obvious that the shield may be readily separated from the nipple, thus leaving a sterile nipple attached to the bottle.

In the modification shown in Figs. 3 and 4 a portion of the wall of the shield is omitted to provide a recess 10. A downwardly extending projection 15 is provided in the recess, the projection 15 engaging the nipple during attachment to the bottle and serving as a depressing finger.

Practice teaches that, in addition to preserving the sterility of nipples, use of the device also greatly facilitates application of a nipple to a bottle, application being accomplished with ease and speed.

What is claimed is—

In a shield for preserving the sterility of rubber nipples while attaching the same to an infant's nursing bottle consisting of a shield adapted to envelop a nipple, said shield having an axial bore extending longitudinally of the shield, and an inwardly extending annular rib provided in said bore adapted to engage a nipple at a point near but below the teat portion of said nipple when the latter is enveloped by the shield.

HOWARD R. SAUDER.