

EXHIBIT 1026:

U.S. PATENT NUMBER 2,588,069 TO ALLEN. (“ALLEN (‘069)’”)

Munchkin, Inc. & Toys “R” Us, Inc.: 1026

March 4, 1952

A. M. ALLEN
NURSING UNIT

2,588,069

Filed Dec. 27, 1948

2 SHEETS—SHEET 1

Fig. 2.

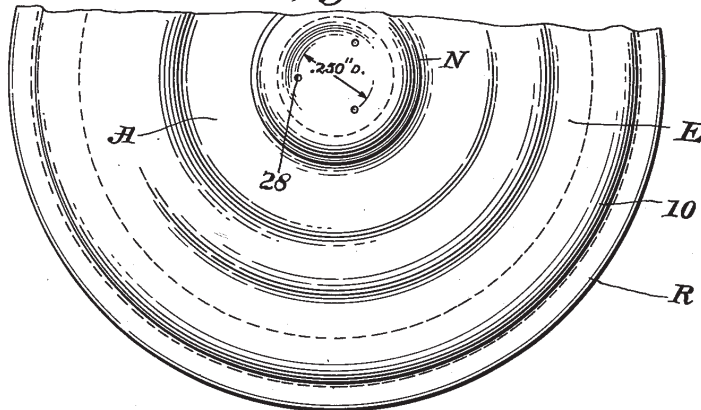
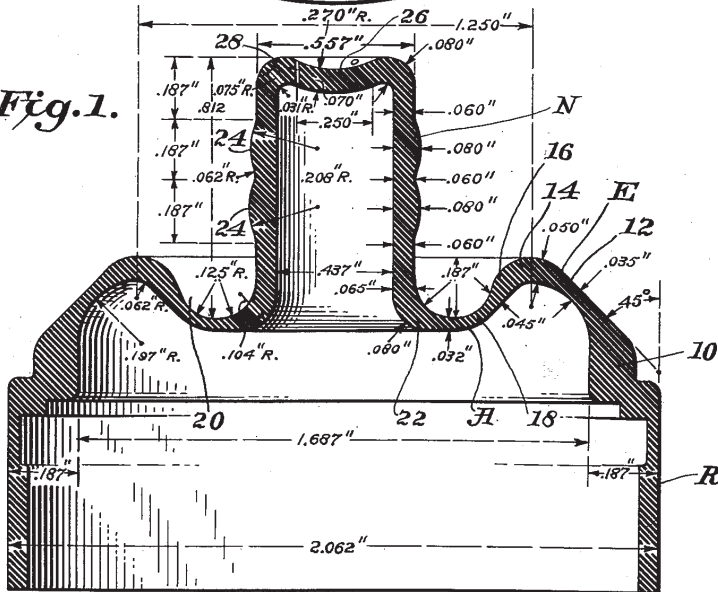


Fig. 1.



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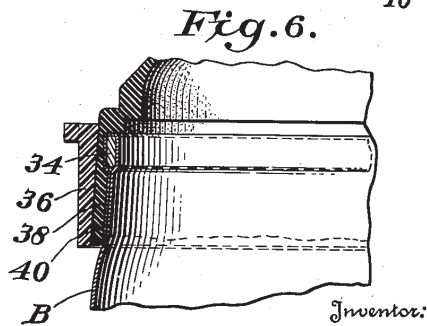
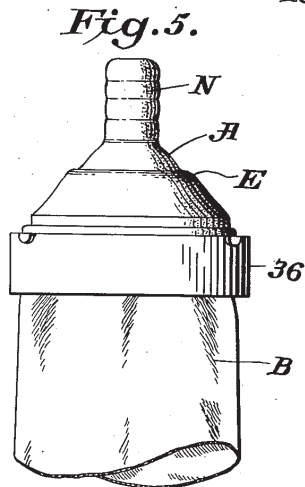
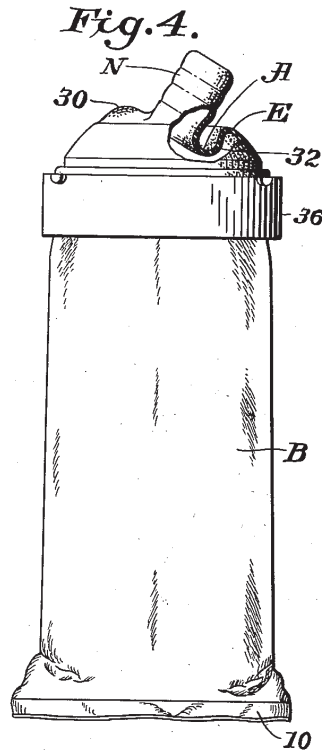
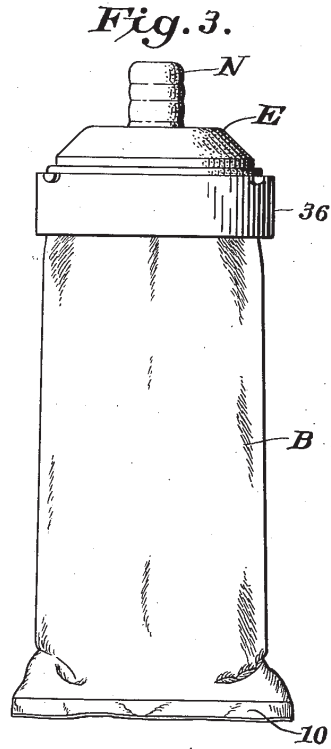
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2 SHEETS—SHEET 2



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UNITED STATES PATENT OFFICE

2,588,069

NURSING UNIT

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Application December 27, 1948, Serial No. 67,345

4 Claims. (Cl. 128—252)

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The present invention relates to a nursing unit having a nursing device of rubber or the like including a peripheral rim for attachment to a container, a central outwardly presented nipple of relatively thick section and semi-rigid nature, and an areola portion connecting said rim and said nipple and merging into the latter. The areola portion comprises a thin collapsible rubber membrane of such nature as to be substantially incapable in itself of normally supporting said nipple in distended position above the mouth of the container, whereby the relaxation of said areola portion normally permits said nipple to retract toward the mouth of the container, the membrane permitting the nursing baby to freely draw said nipple outwardly and to elongate said nipple depending on his size and strength.

The nursing device is further characterized by an areola portion immediately adjacent said nipple and where it merges therewith consisting of a thin collapsible rubber membrane of sufficient area when in its relaxed condition to form a plurality of folds between the nipple and the rim, including an outwardly bent fold at the base of the nipple and a surrounding reversely bent fold adjacent the rim. As stated, the membrane is of such nature as to be normally incapable of supporting the nipple in its distended position beyond said reversely bent fold, whereby the relaxation of the areola portion permits the nipple to collapse inwardly within the reversely bent fold. The membrane is of such nature as to permit a nursing baby to freely draw the nipple outwardly toward its distended position by unfolding the membrane material without necessarily stretching it in a direction parallel to its surface.

The invention also relates to an improved nursing device of the above type which is associated with a flexible, pliant, disposable container bag sealed to the rim of the nursing device, both of the opposed container and nursing device portions being of a flexible or collapsible nature, whereby the retractible action of the nursing device is facilitated by the action of the pliant container, in that the pliant container presents little or no resistance to the elongation of the nipple of the nursing device, as will be apparent as the specification progresses. In a nursing unit of the type described, the nipple of the nursing device may be flexed inwardly and outwardly to assist the baby during nursing by applying pressure by hand to the container bag, thus distending the nipple portion of the nursing device and forcing the formula through the openings therein, to accomplish forced feed-

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ing of the infant. It will also be apparent, as the specification progresses, that the nipple may be distended and thus presented to the infant for feeding, with facility, by applying hand pressure to the pliant container bag.

The present application is an improvement in the nursing device and the associated container bag, as described and claimed in my copending application, Serial No. 672,474, filed May 27, 1946, which issued as Patent 2,517,457, August 1, 1950, and the objects and advantages of the present invention include those of the apparatus of my said copending application, with additional advantages as described herein.

The principal object of the invention is to provide a nursing device having a nipple which may be moved between distended and retracted positions, the design of the device being such that the nipple is constantly maintained in such position as to be freely available to the lips of the infant, even in its retracted position, to facilitate the commencement of the nursing operation.

A further object of the invention is to provide a nursing device designed to provide for the positive retraction of the nipple to its relaxed position in the absence of a force tending to distend the nipple, but with the nipple in convenient position to be engaged by the lips of the infant when in its relaxed position.

A further object of the invention is to provide a nursing device of such design that the nipple may be distended by application of hand pressure to the filled container bag, to present the nipple to the infant at the commencement of feeding, the design being such that the nipple tends to positively retract toward its relaxed position as the feeding progresses and as the infant intermittently relaxes his suction when swallowing, whereby the resulting nursing action closely approaches that of natural breast feeding, with all of the benefits to the infant which result therefrom. Such benefits include stimulation of the flow of saliva important to the digestive processes.

In the drawings, which are illustrative of an improved design of the nursing device and which show one manner in which the nursing device may be attached to a pliant container bag in assembling the nursing unit:

Figure 1 is an enlarged central vertical sectional view through the nursing device, indicating the various dimensions of a device which has been found to be satisfactory in use. Precise dimensions of the particular design are given in order to teach those skilled in the art how to construct such a device, but it will be understood

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that there may be variations in the dimensions disclosed, while still retaining the benefits of the invention. It will be understood that the peripheral rim of the nursing device may be subject to wide variation in construction, depending on the type of container to which it is attached, and the manner of attachment, particularly with respect to the manner of attachment of the nursing device to the open end of a pliable container bag;

Figure 2 is a partial top plan view of the nursing device illustrated in Figure 1;

Figures 3, 4 and 5 are side elevational views of the assembled nursing unit comprising the nursing device and the pliable container bag, illustrating different positions of the nipple of the nursing device, from its collapsed or retracted position to its fully distended position, Figure 4 being partially in section in order to illustrate a manner of transition of the nipple between relaxed and distended positions;

Figure 6 is a partial vertical sectional view through the rim of the nursing device, showing one manner in which the latter is secured to the open end of a pliable container, in such manner as to form a seal therewith.

It will be understood that the container bag B (Figs. 3, 4 and 5) may be made of thin, pliant, retractable, preferably transparent, material, which is thin enough to have its shape altered by the presence of liquid therein, and to be retractable toward and into the collar of the nursing device or the rim thereof, as the infant withdraws formula from the container bag. Such a container bag and the manner in which the same functions is disclosed in my prior Patent 2,446,451, dated August 3, 1948. A type of material which is suitable for the container bag and the general construction thereof is as described in more detail in my copending application, Serial No. 771,329, filed August 29, 1947, which issued as Patent 2,508,481, May 23, 1950. The container bag has a lower end which is closed by a seam 10, and its opposite end is open so that it may be secured to the collar of the nursing device or the rim thereof, as will be apparent from consideration of the aforesaid patent, and from the description which follows. It will be understood, however, that any effective means may be used to secure the open end of the container bag to the rim of the nursing device, either by making the rim of the nursing device of sufficient rigidity to provide for effective sealing attachment of the open end of the container bag or by providing a separate stiffening skirt or collar around which the open end of the bag may be wrapped, the nursing device being attached to this separate stiffening collar or skirt, as disclosed herein.

Referring to Figure 1, the nursing device has a rim portion R, a breast comprising a ridge portion E and an areola portion A, and a central nipple portion N.

The rim portion R is shown as a straight cylindrical flange, adapted, for instance, to surround any type of inner neck ring or skirt around which the open end of the container bag might be wrapped or folded, but it will be understood that the design of the rim may vary widely depending on the type of connection to the container bag which is being used.

It is desirable that the rim should have adequate thickness to secure a proper attachment to the container, and for this reason, the upper end of the rim may include an inwardly offset portion 10 which may be of somewhat thick section

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as compared with the rest of the nursing device. The annular ridge E is located closely adjacent to the rim and inwardly thereof and is positioned above said rim, or above the open end of the container. This ridge consists of an upwardly and inwardly tapered relatively thin portion 12, and an outwardly convex portion 14 which is of relatively thick section, the portion 14 including a downwardly bent portion 16 which merges with the relatively thin membrane 18 of the areola portion. The areola portion is annular, being located between the ridge E and the nipple N, and it is outwardly concave, thus providing an annular well 20 around the nipple when the nursing device is in its relaxed condition as shown in Figure 1. The inner zone of the areola portion widens in section as it merges into the nipple as at 22, and the nipple is of relatively thick section as shown, for instance, as compared with the areola portion 18, so that the nipple is stable and remains erect in both the retracted position, as shown, and its distended position as hereinafter referred to.

The nipple is of considerable length as shown with respect to the depth of the well 20, whereby the major portion of its length protrudes upwardly beyond the top of the ridge E even when the nipple is in its relaxed position, whereby the infant may always have available a substantial portion of the length of the nipple to grasp with his lips, at the commencement of and during the nursing action.

Two or more smooth annular protruding rings 24 may be provided on the exterior of the nipple to assist the infant in grasping same, and in retaining a hold on the nipple, whereby to facilitate easy nursing action. The end of the nipple staff may be made concave as at 26, and several nursing openings 28 are provided extending through the end wall of the nipple staff.

It will be apparent from Figure 1 that the area of the areola portion of the nursing device is somewhat greater than the annular overlying area in any plane between the ridge E and the nipple N, whereby there is available a sufficient amount of material to permit an unfolding action of the areola portion outwardly and inwardly through the ridge portion E, depending on the pull which the infant applies to the nipple.

For instance, when an infant applies a pulling force to the nipple N, the areola portion A, which is not visible in Figure 3, will unfold outwardly, for instance, in the manner shown in Figure 4, passing through the ridge portion E until it is in the distended position shown in Figure 5. The nursing device is formed by a conventional molding operation in which it takes a set or assumes the condition as shown in Figure 1, having the capability and tendency to return to that molded or set condition when it is distorted therefrom. That is to say, in the case of rubber or the like, the nursing device is formed using the necessary heat and pressure to cure it to the stabilized condition of Figure 1, the molecular structure of the device as formed positively holding it in this condition until sufficient force is applied to distort it therefrom. When in the condition of Figure 1, the downwardly concave bend 18 of the areola portion tends to maintain itself, and tends to pull the nipple downwardly if it is moved upwardly from this position. Similarly, the outwardly convex ridge E, with its downward bend 16, tends to retain the nipple in its downward or inward position. When the nipple is pulled outwardly, the

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