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2,495,548

NURSING UNIT WITH FLOW ADJUSTMENT MEANS

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Fig. 1.

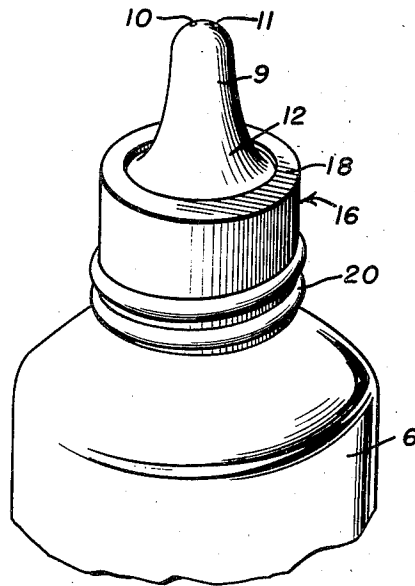


Fig. 3.



Fig. 2.

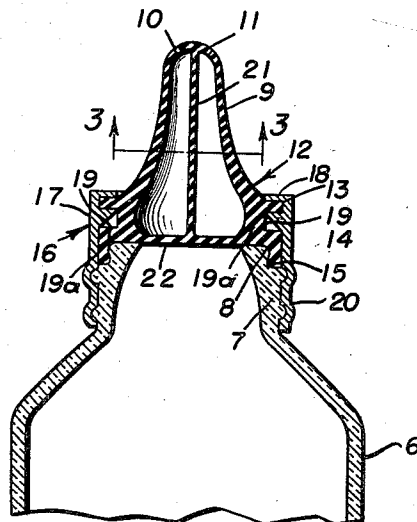
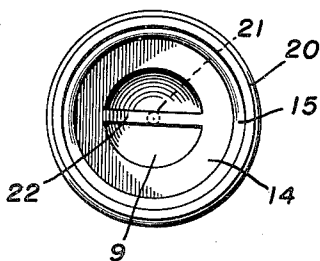


Fig. 4.



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NURSING UNIT WITH FLOW ADJUSTMENT
MEANS

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5 Claims. (Cl. 215-11)

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The present invention relates to improvements in nursing nipples and has more particular reference to means carried by and built into the nipple for purposes of overcoming the likelihood that said nipple, when in use, will clog and prevent free discharge of milk through the customary outlet holes.

It is a matter of common knowledge that nursing nipples are often objectionable in that they prevent free flow of milk from the bottle, through the nipple and into the mouth of an infant. As a matter of fact, discharge holes in nipples are often either too large or too small and, here again, a nipple which is not "right" in that it either clogs or flows too freely, is objectionable. Then, too, when a nipple clogs due to the closing of the discharge hole or holes, it will collapse and will thus both irritate and considerably annoy the infant.

The purpose of the present invention is to provide a nipple having internal stay means and external flange and coacting screw-cap means, all coacting to provide an improved nipple possessed of requisite efficiency.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a fragmentary perspective view of a nursing bottle and nipple, the latter constructed in accordance with the principles of the present invention;

Figure 2 is a central, longitudinal or vertical sectional view through the structural assemblage seen in Figure 1;

Figure 3 is a cross-section on the line 3-3 of Figure 2, looking in the direction of the arrows;

Figure 4 is a bottom plan view of the nipple and cap detached from the bottle.

Referring now to the drawings and particularly to Figure 2, a nursing bottle is denoted by the numeral 6 and is provided with an externally screw-threaded discharge neck 7 and a suitably shouldered nipple attaching lip 8.

The body of the nipple, which is externally conventional in shape, is denoted by the numeral 9 and the tip of said nipple is provided with diverging discharge ports 10 and 11. The base or attaching portion of the nipple, denoted at 12, embodies an outstanding annular flange 13 and a similar outstanding somewhat thicker flange 14 having an annulus 15, which is suitably beaded, internally, to snap over the beaded lip 8. The

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flanged portion of the nipple is adjustably and detachably mounted on the neck of the bottle by way of a plastic or equivalent screw-cap 16. This cap comprises an annular portion 17 having intumed annular flanges 18 and 19 mounted between the flanges 13 and 14, and serving to properly act on said flanges for appropriate coaction and assemblage of parts. The screw-portion 20 is secured to the threaded neck 7. The top or outer surface of flange 19 is flat to correspond with flange 18; while the underside of said flange is cut away and beveled, as at 19a, to provide desired clearance and play between coacting surfaces.

The reason for a slanting, or a circular edge, on flange 19 is to allow a sufficient amount of play or downward movement of screw-cap 20 and still retain pressure on the nipple holding it securely against the top of the bottle.

The means for spreading and thus forcing the discharge holes 10 and 11 open, comprises a substantially T-shaped device which includes a relatively rigid stay or stem 21 which is axially arranged in the body portion of the nipple and which is connected at its inner end to a cross-member or spider 22. The spider is formed integral with the base portion of the nipple. The elements forming the stay means are somewhat more rigid, and constructed from hard rubber, than the rest of the nipple.

It is evident that by screwing the cap down on the neck of the bottle, the intumed flanges coact with the outstanding flanges on the annular basal portion of the nipple. The coaction of parts is such that the desired stress is imposed on the rubber portions of the nipple to tauten and thus lengthen the body of the nipple with respect to the stay means which is relatively rigid. The end-thrust action, thus produced, serves to spread and press the openings 10 and 11 open and thus facilitate the free passage of milk therethrough, this in an obvious manner.

Novelty is predicated, on the one hand, on a pliable nipple body with discharge apertures in its tip-portion and suitable stay means interiorly arranged, with cap-controlled marginal flange means which brings the stay means into play and which, in turn, provides an adaptation, whereby the degree of effectiveness of the discharge holes may be rendered more-or-less effective depending on the freedom of flow desired.

More specifically, novelty is predicated upon the annular basal portion of the stay-equipped nipple, which portion has outstanding flanges providing for accommodation of internal flanges

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on the screw-cap, whereby to provide a novel co-action between cap and flanges and the neck of the bottle, to bring about the desired expandable and contractible facilities for said nipple.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawings will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty sufficient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

I claim:

1. As a new article of manufacture, a nursing bottle nipple comprising a nipple body of conventional shape, the reduced outer tip end of said body having customary expandible and contractible milk passages formed therein, a substantially rigid stay integrally connected at its outer end with said tip portion at a point midway between said milk passages, a spider formed integral with the inner basal end portion of said body, the adjacent end of said stay being connected to the central portion of said spider to allow unobstructed passage of milk into and through the nipple and to at the same time stabilize the entire nipple, the inner end of said nipple being of cap-like form to fit over the neck of a nursing bottle, said basal portion having a circumferentially extending flange spaced from the cap portion and of imperforate form and adapted to be flexed in a manner to lengthen and shorten the nipple body in relation to said stay and to impose a valving action on said passages to cause same to become restricted or enlarged according to the discretion of the user.

2. The structure specified in claim 1, together with a rigid cap adapted to be threaded on the neck of the nursing bottle, said cap having a pair of spaced parallel flanges, said flanges defining a channel between themselves, the circumferential flange on said nipple fitting snugly into said channel.

3. The structure specified in claim 1, together

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with a rigid cap adapted to be threaded on the neck of the nursing bottle, said cap having a pair of spaced parallel flanges, said flanges defining a channel between themselves, the circumferential flange on said nipple fitting snugly into said channel, and the surface of one of the cap flanges being circumferentially bevelled.

4. As a new article of manufacture, a nursing bottle nipple comprising a nipple body, the outer tip-end of said body having expandible and contractible milk passages therein, a central stay mounted in said body and connected at its outer end to said tip-portion at a point between said passages, a spider attached to the inner basal end-portion of said body, said stay being connected at its corresponding inner end to said spider, said inner end having a cap-like basal portion and further including outstanding circumferential flanges.

5. As a new article of manufacture, a nursing bottle nipple comprising a nipple body, the outer tip-end of said body having expandible and contractible milk passages therein, a central stay mounted in said body and connected at its outer end to said tip-portion at a point between said passages, a spider attached to the inner basal end-portion of said body, said stay being connected at its corresponding inner end to said spider, said inner end having a cap-like basal portion and further including imperforate outstanding circumferential flanges, and a screw-cap having flanges clamped to one of the flanges on said nipple.

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