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J. LITTLE

2,196,870

LARGE MOUTH NIPPLE CONSTRUCTION

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Fig. 1.

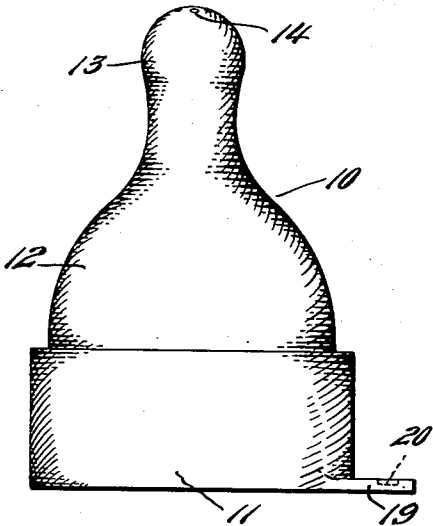


Fig. 2.

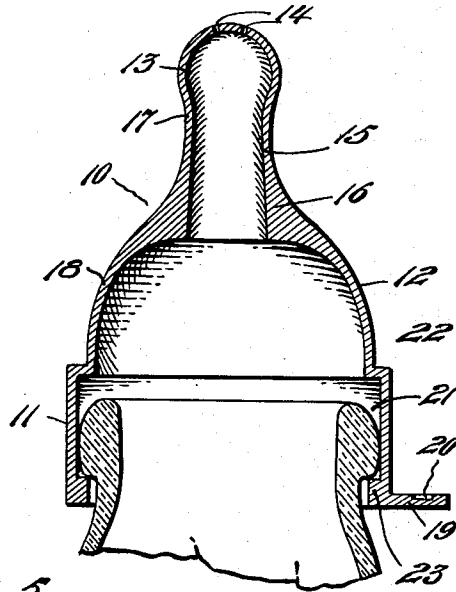


Fig. 5.

Fig. 3.

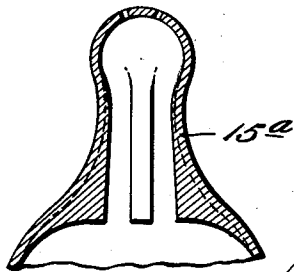
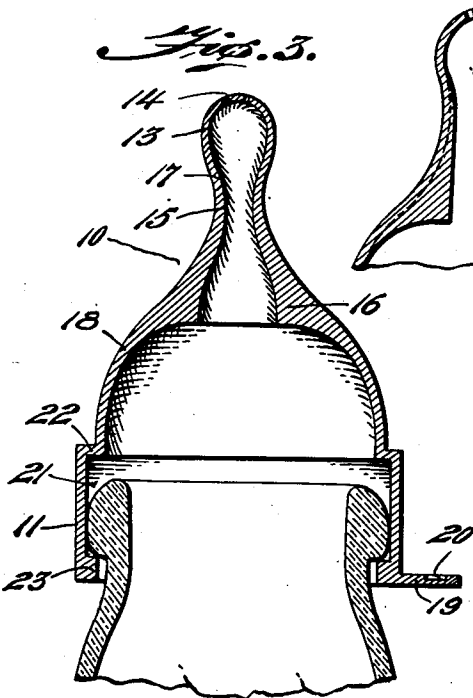
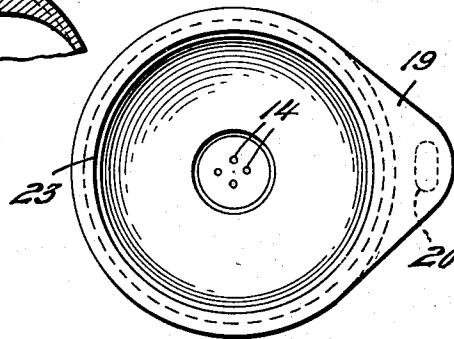


Fig. 4.



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UNITED STATES PATENT OFFICE

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LARGE MOUTH NIPPLE CONSTRUCTION

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4 Claims. (Cl. 128—252)

My present invention relates to the manufacture of rubber articles, and has particular reference to a nipple construction suitable for large mouth bottles.

It is the principal object of my invention to provide a construction that will permit suitable pressing of the nipple parts but will exert continuously increasing force tending to keep the nipple open as the nipple parts approach each other in use, thus preventing collapsing.

It is an additional object of my invention to provide a large mouth nipple which has a short, rather than a long tip, and is designed so as to be sufficiently firm to prevent collapse of the nipple in use.

It is a further object of my invention to provide a nipple of the large mouth type having firm shoulders to simulate and take the place of the areola of the breast, thus promoting a natural development of the muscular system of an infant's face.

With the above and other objects and advantageous features in view, my invention consists in a novel arrangement of parts more fully disclosed in the detailed description following, in conjunction with the accompanying drawing, and more specifically defined in the claims appended thereto.

In the drawing

Fig. 1 is an elevation of the novel nipple;

Fig. 2 is a vertical central section thereof, the mouth of a nursing bottle being disclosed and broken away;

Fig. 3 is a view similar to Fig. 2 showing the position of the parts during feeding;

Fig. 4 is a bottom plan view of Fig. 1, and

Fig. 5 is a sectional detail of a modified construction.

Large mouthed nipples have been used for infant feeding, as they more closely simulate the formation of the breast, and are easily kept sanitary. The standard type of construction utilizes a base section which is adapted to be placed over the rim of a bottle neck, an intermediate section, and a tip section having feeding openings therethrough. I have devised a construction in which the intermediate section is thickened at the upper portion thereof, whereby the action of sucking promotes a natural development of the muscular system of the face, the lower portion of the intermediate section being sufficiently yieldable in response to pressure of the mouth to exactly simulate the resistance of the breast. Referring to the drawing, the nipple has a wide mouth base section 11, an inter-

mediate section 12, and a tip section 13, the tip section being provided with the usual feeding passageways or openings 14. The tip section is of generally spherical shape, as indicated in Fig. 2, and joins the intermediate section in a uniformly outwardly flaring curve; the inner portion of the intermediate section at the upper end is substantially vertical as indicated at 15, in order to provide a thickened portion 16 at the upper end of the intermediate section, but is slightly tapered in order to permit insertion of a pencil or the like for readily turning the nipple inside out to be sterilized. The intermediate section thus has a thin wall 17 at its upper end, which gradually widens to provide the thicker portion 16, and then abruptly narrows to provide a lower portion 18 of smaller thickness which is integral with the base 11. The base 11 preferably has an outwardly extending tab 19 provided with a finger grip recess 20 for facilitating the mounting of the nipple on a bottle top and the removal therefrom, and an inner recess 21 for receiving the rim of the bottle, the recess being formed by an outwardly extending flange 22 at the join with the intermediate section and a lower bead 23, the tab 19 thus being a lateral prolongation of the lower bead.

When the infant's lips press on the tip section, and particularly at the junction of the tip and intermediate sections, the nipple assumes the shape shown in Fig. 3, the effect of the gradually increasing width of the intermediate wall being to exert a force against collapsing of the nipple, the entire nipple however being sufficiently yieldable so that excessive resistance to the feeding movement does not occur. As a result, the new design of nipple accurately simulates the natural conditions of breast feeding and promotes a natural developing of the jaw.

Although I have disclosed a preferred construction in which the section 16 is conical in cross section and is annular, it may be desirable for certain constructions to use spaced ribs having the same cross section as section 16 and positioned around the interior of the upper end of the intermediate section. Referring to Fig. 5, the intermediate sections 15a may be provided with a plurality of spaced vertical ribs 19, each being generally conical, the width being selected to give a desired resistance to closing of the nipple tip during the feeding operation.

Other changes in size, form, and arrangement of parts may be made to suit different requirements for nipples, within the spirit and the scope

of the invention as defined in the appended claims.

I claim:

1. In a nipple, a base of cylindrical shape, a spherical tip having a fluid passageway, and an intermediate portion extending from said tip to said base, said intermediate portion having an outer surface flaring outwardly from said tip convexly and then concavely to said base, and having an inner surface extending downwardly substantially cylindrically to the concave portion of said outer surface, whereby an upper annular conical section is provided, and then concavely to said base, whereby a lower relatively thin walled section is provided.

2. In a nipple, a base of cylindrical shape, a spherical tip having a fluid passageway, and an intermediate portion extending from said tip to said base, said intermediate portion having an outer surface flaring outwardly from said tip convexly and then concavely to said base, and having an inner surface with vertical ribs which have inner vertical walls extending downwardly to the concave portion of said outer surface, whereby spaced conical ribs are provided, the inner surface below the ribs then extending concavely to said base, whereby a lower relatively thin walled section is provided.

3. In a nipple, a base of cylindrical shape, a

spherical tip having a fluid passageway, and an intermediate portion extending from said tip to said base, said intermediate portion having an outer surface flaring outwardly from said tip convexly and then concavely to said base, and having an inner surface extending downwardly substantially cylindrically to the concave portion of said outer surface, whereby an upper annular conical section is provided, and then concavely to said base, whereby a lower relatively thin walled section is provided, said base having a manually engageable tab extending laterally therefrom.

4. In a nipple, a base of cylindrical shape, a spherical tip having a fluid passageway, and an intermediate portion extending from said tip to said base, said intermediate portion having an outer surface flaring outwardly from said tip convexly and then concavely to said base, and having an inner surface with vertical ribs which have inner vertical walls extending downwardly to the concave portion of said outer surface, whereby spaced conical ribs are provided, the inner surface below the ribs then extending concavely to said base, whereby a lower relatively thin walled section is provided, said base having a manually engageable tab extending laterally therefrom.

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