Nov. 12, 1957 L. R. CRISP 2,812,764

NURSING BOTTLE AND NIPPLE CONSTRUCTION

Filed Dec. 12, 1955

FIG. 1

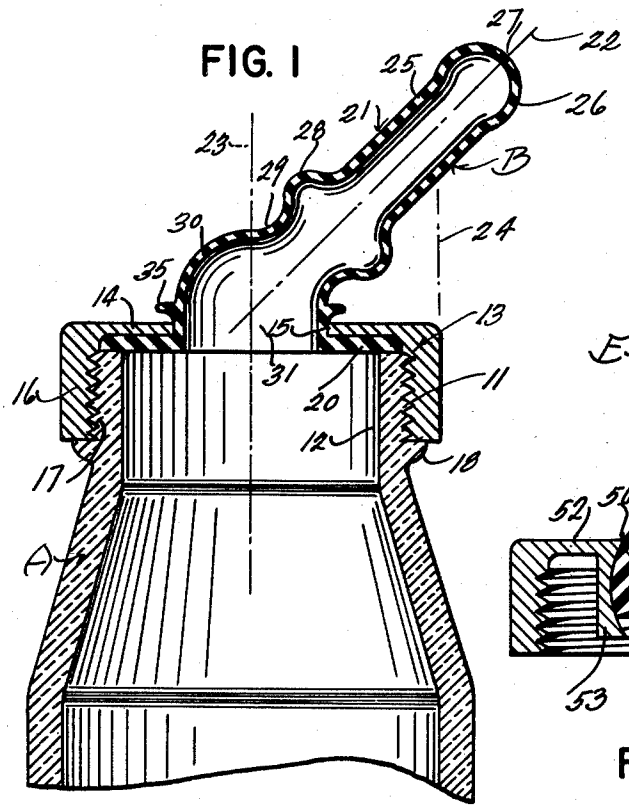


FIG. 3

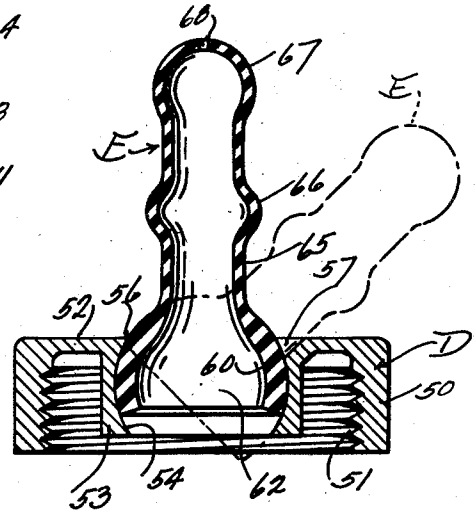


FIG. 4

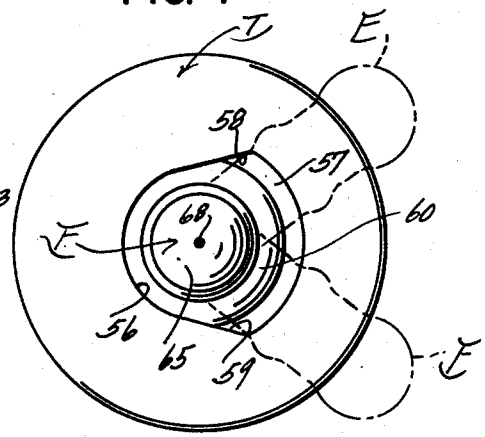
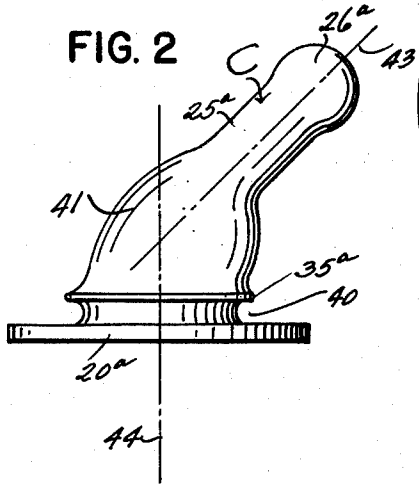


FIG. 2



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United States Patent Office 2,812,764
Patented Nov. 12, 1957

2,812,764

NURSING BOTTLE AND NIPPLE CONSTRUCTION

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Application December 12, 1955, Serial No. 552,323

1 Claim. (Cl. 128—252)

This invention relates to improvements in nursing bottles and nipples.

It is well known that nursing infants very often have difficulty in proper positioning the bottle and the nipple for effective feeding. It is an object of this invention to provide a nursing nipple adapted for angular attachment to nursing bottles out of the axial line of the bottle in order that the mouth inserting end of the nipple may overhang the side of the bottle to facilitate feeding.

It is a further object of this invention to provide a flexible elongated type of nursing nipple for nursing bottles which may be positioned in various axial relationships with respect to the axis of the nursing bottle for the purpose of properly positioning the nipple upon the bottle to suit the characteristic position of an infant at the time of feeding.

It is a further object of this invention to provide a nursing nipple having means for attachment to a conventional nursing bottle under such circumstances that the elongated nipple portion will be positioned at an acute angle with respect to the longitudinal axis of the bottle.

It is a further object of this invention to provide an improved type of cap and nipple for nursing bottles in which the nipple may be adjusted in axial alignment with the axis of the cap and the nursing bottle, or swung laterally to acutely angled positions with respect to the axis of the cap and bottle to suit the comfort and convenience of the infant during feeding.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the accompanying drawing, forming a part of this specification and wherein similar reference characters designate corresponding parts throughout the several views:

Figure 1 is a vertical cross sectional view taken through the upper part of a conventional nursing bottle, showing one form of my improved nipple.

Figure 2 is a side elevation of a nipple having some of the characteristics of the nipple shown in Figure 1, but with a somewhat different shape.

Figure 3 is a vertical cross sectional view taken through another improved type of nipple and cap whereon the nipple may be adjusted to suit the desires and posture of the infant during nursing.

Figure 4 is a plan view of the nipple and cap shown in Figure 3.

In the drawing, wherein for the purpose of illustration are shown preferred and modified forms of the invention, the letter A may generally designate a conventional type of nursing bottle, adapted to receive my improved nipples B or C. I may provide a modified form of cap D for conventional nursing bottles having associated therewith an improved nipple E mounted upon the cap for adjustment to various positions with respect to the plane of the cap.

The nursing bottle A consists of a body **10** of glass or any suitable plastic material, having an externally screw

threaded neck **11** provided with a passageway **12** therethrough.

The cap **13** may be of thermo-setting plastic or any approved material. It includes a top wall **14** having a nipple receiving passageway **15** therethrough and side walls **16** internally screw threaded at **17** for engaging with the screw threads **11** of the bottle neck. The bottle may include the conventional flange **18** to limit downward adjustment of the cap upon the bottle.

The nipples B, C and E are preferably formed of flexible rubber or rubber like material.

The nipple B preferably includes a flat base **20** and an upwardly and laterally extending elongated nipple body **21** the axis **22** of which is at an acute angle with respect to the axis **23** of the bottle and its cap. The body **21** is sufficiently long that the mouth inserting end and tip project for an appreciable distance laterally of the extreme side margin of the cap wall **16**. This overhang is designated in Figure 1 where the line **24** represents the other side surface of the cap.

The nipple B preferably includes a mouth inserting cylindrical portion **25** having the enlarged tip **26** with an opening **27** therethrough. Intermediate its ends the nipple **21** is laterally enlarged at **28** and downwardly therefrom the nipple is reduced at **29** and then enlarged at **30**. This portion **30** is integrally connected with the base **20** and defines a very large chamber **31** for entrance of the milk into the nipple. Above the top surface of the wall **14** the nipple may have an outwardly extending retaining flange **35** which can be deformed to permit removal and placement of the nipple through the opening **15** of the cap **13**.

The nipple B when attached to the cap of the bottle has the base **20** clamped between the under surface of the top wall **14** and the top edge of the neck of the bottle as shown in Figure 1.

The nipple C substantially conforms to the angular characteristics of the nipple B. It has a base **20a** similar to the base **20** of nipple B. A flange **35a** corresponds to the flange **35** of the nipple B. The bottle cap top wall is inserted in the space **40** between the flange **35a** and the base **20a**. The nipple C includes a large bulbular portion **41** immediately above the flange **35a** which continues with a reducing diameter. It has a cylindrical portion **25a** which corresponds to the portion **25** of the nipple **21**. The nipple tip **26a** corresponds to the nipple tip **26** of the form of invention B and has a feed aperture therethrough (not shown). It is noted that the axis **43** of the nipple portion **25a** is disposed at an acute angle to the bottle axis **44**, which is at right angles to the plane of the base **20a**.

Referring to the form of invention shown in Figures 3 and 4 I prefer to provide an elongated nipple E formed upon a straight line axis. It has a ball and socket type connection upon the cap D in order that the nipple may be axially aligned with the axis of the cap D or moved to any of several acutely angled positions with respect to the axis of the cap and bottle, such as shown by the dot and dash lines in Figures 3 and 4 of the drawings.

The cap D is preferably of some thermo-setting plastic or other desirable material, including an annular side wall **50** internally screw threaded at **51** and having a top wall **52** provided with a depending central nipple supporting wall **53**, the outer surfacing of which is spaced from the screw threads **51**. This wall **53** terminates at its bottom edge in a plane above the plane of the bottom edge of the side walls **50**. The wall **52** and the depending nipple supporting wall **53** provides a passageway **54** therethrough, defining a receiving socket **54** the surfacing of which is concaved. Where the socket **54** opens into the bottom of the cap it is restricted and therefrom gradually increases in width to a point intermediate the height of the socket **54**. From there the socket **54** decreases in width

to the point **56** where it opens upon the top wall **52**. The top wall **52** is bevelled at **57** for a short arc, between the points **58** and **59**. The nipple may be rotatably adjusted through this arc and laterally angled between the dot and dash line positions shown in Figure 4.

The nipple E preferably includes a segmental ball type base **60** which is appreciably thicker than the walls of the other part of the nipple, to stiffen the same, although the base **60** is flexible and deformable so that the nipple E may be placed within and removed with respect to the socket **54**. The chamber **62** in the nipple base **60** opens at a location within in the cap wall **53**. The nipple E includes an elongated flexible nipple portion **65** preferably having a limiting bulge **66** intermediate the ends thereof. Its tip **67** may be enlarged and provided with the usual liquid passageway **68** therethrough.

The hemispherical base portion **60** of the nipple fits snugly in the moulded plastic cap socket **50** and frictionally engages the socket surfacing throughout the major height thereof and with sufficient force to retain the position of the nipple during feeding. Limiting the bevel **57** to the arc shown in Fig. 5, which is less than 180° permits the hemispherical base to have sufficient gripping surfacing in the socket **54** to maintain the position of it in properly adjusted location.

The wall **50** of the cap D engages the screw threads of a conventional nursing bottle neck such as shown in Figure 1. It will be noted that not only can the nipple E be positioned in the line of the axis of the milk bottle, but it may be laterally angled to any of several positions between the limiting shoulders **58** and **59**, and the overhang thereof extends laterally beyond the outer side surfacing of the cap wall **50** notwithstanding that the axis of the nipple from end to end constitutes a single straight line axis.

Various changes may be made to the form of invention herein shown and described without departing from the spirit of the invention or scope of the claim.

I claim:

In a nursing cap and nipple construction for nursing bottles the combination of a nursing bottle attaching cap including a top wall having an outer depending attaching flange which is internally screw-threaded, said top wall centrally thereof having an opening, a depending central

nipple supporting wall connected to the top wall the lower edge of which terminates in a plane above the lower edge of the attaching wall of the cap, said nipple supporting wall having a socket therein which communicates with the opening of the top wall of the cap, said socket having internal concaved walls facing the axis of the socket struck from a single radius and so located that the top of said socket is of a width less than the width of said socket intermediate the height thereof, and the bottom of the socket having a restricted opening which is also of less width than the intermediate width of said socket, and a flexible single piece nipple comprising a flexible segmental ball-shaped lower anchoring portion which is hollow and has an enlarged chamber therein, said segmental ball-shaped portion having an outer convex surfacing which is in intimate contact with the entire concave surfacing of the socket of the cap, the lower edge of the nipple when the nipple is in axial alignment with the axis of the cap terminating in a plane above the lower edge of the socket of said cap and with the upper portion of the segmental ball portion projecting above the top surfacing of the cap, said segmental ball portion having an elongated body portion in the same axial line as the axis of the segmental ball portion having a passageway therethrough communicating with the chamber of said segmental ball portion, said body portion at its outer end having a feeding opening therein, said cap in a top wall thereof for a distance of less than 180° being grooved around the opening therein and the ends of said groove defining shoulders against which the body portion of the nipple will contact when the nipple is angularly disposed with its axis out of line with the axis of the cap whereby to limit the movement of the nipple in a plane parallel with the plane of the cap through an arc of less than 180°.

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