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2,956,702

INFANT NURSING BOTTLE AND NIPPLE ARRANGEMENT

Filed March 19, 1956

2 Sheets-Sheet 1

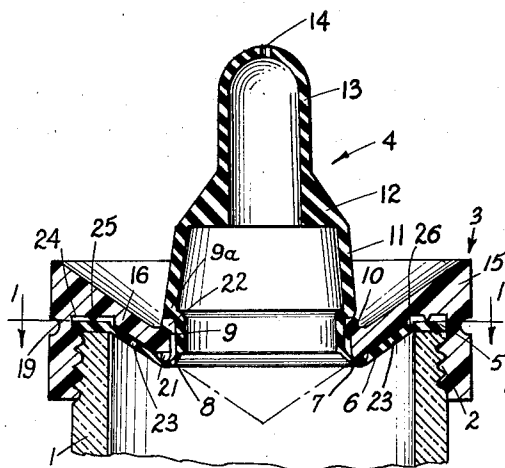


Fig. 1

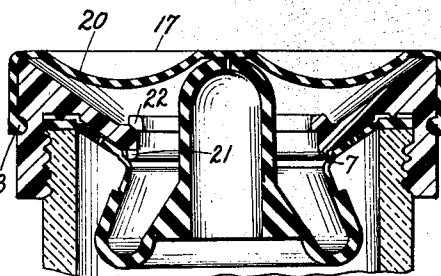


Fig. 2

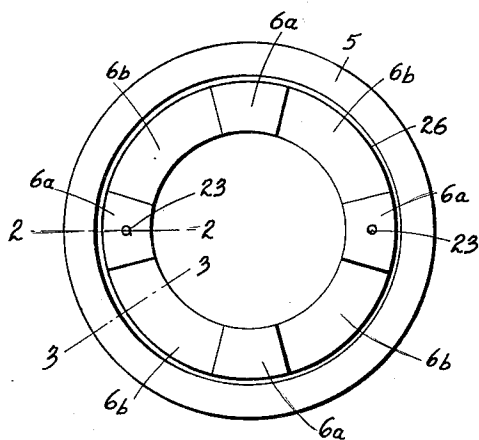


Fig. 3

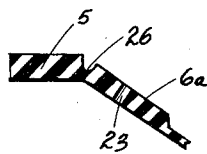


Fig. 4

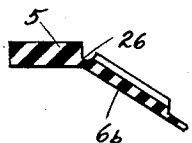


Fig. 5

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2 Sheets-Sheet 2

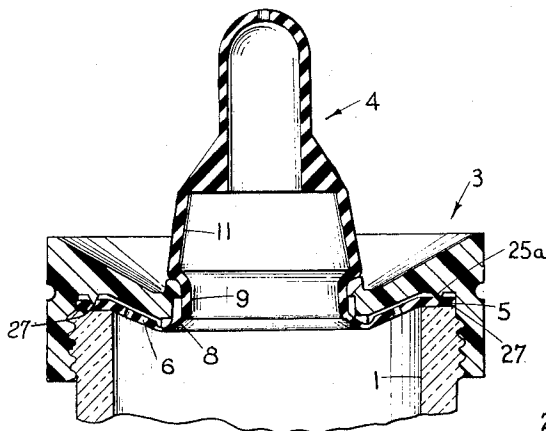


Fig. 6

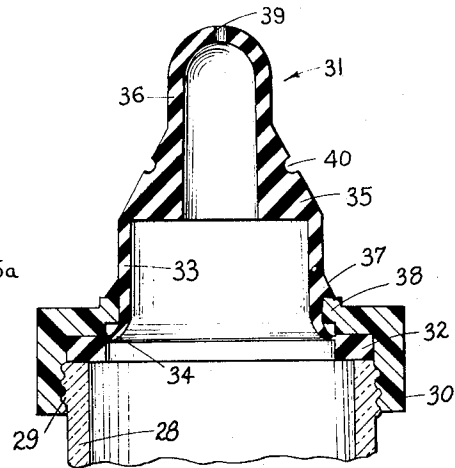


Fig. 7

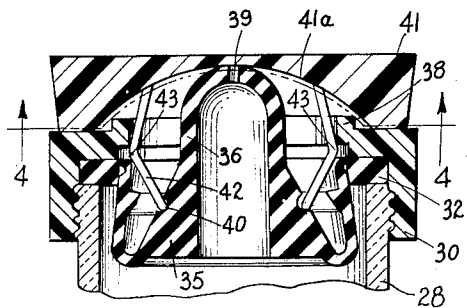


Fig. 8

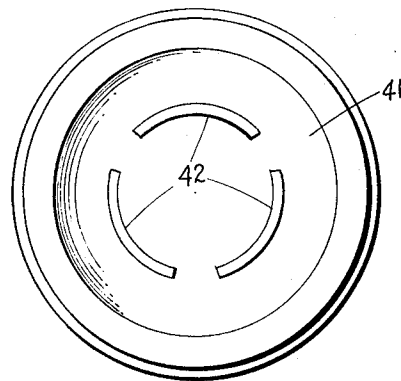


Fig. 9

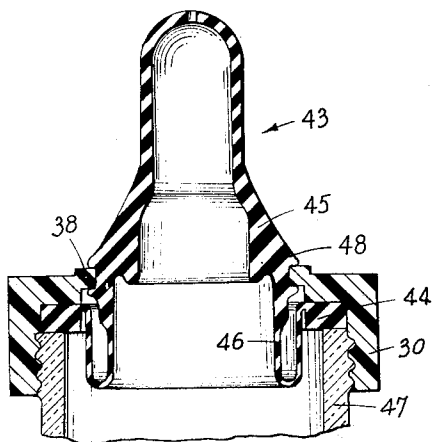


Fig. 10

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INFANT NURSING BOTTLE AND NIPPLE ARRANGEMENT

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8 Claims. (Cl. 215—11)

My invention relates to infant nursing bottles and in particular to nipple arrangements therefor.

As is well known, it has been a common practice in preparing and sterilizing infant nursing bottles for storage and use in the home, to invert the nipple in the bottle either before or after sterilization, with a suitable sealing cap being thereafter placed over the end of the bottle to provide a seal against fluid leakage during either storage or movement of the bottle. When it is desired to prepare the bottle for use, it is necessary to remove the sealing cap as well as the retainer cap from the bottle and then re-invert the nipple to the upright position, after which the retainer cap is replaced and the bottle is ready for use. It will be appreciated that the amount of handling required in the preceding operations increases the risk of contamination and that, in order to minimize this risk, tedious methods of handling must be employed and in some cases, special tools such as tongs and the like are commonly used. Further, it is well known that when the foregoing procedure is employed, a film of milk tends to form on the nipple when the bottle is stored with the nipple in the inverted position for any appreciable length of time, which film tends to clog the nipple openings and is difficult to remove in the cleaning process.

Another problem which has been the subject of considerable effort is that of providing means for admitting air to the bottle when fluid is removed therefrom by suction on the nipple while the bottle is in the inverted position. By way of example, one arrangement for accomplishing this is of the type described and claimed in United States Patent 2,628,616, issued on an application Serial No. 263,338, filed by me on December 26, 1951.

It is accordingly one of the objects of my invention to provide an improved infant nursing bottle and nipple arrangement for use in the home including an improved nipple construction permitting greater ease of sanitary handling and storage thereof than has heretofore been possible.

It is a further object of my invention to provide an improved nursing nipple arrangement including means permitting the retraction of the nipple to a position at least partially within the mouth of the nursing bottle to which it is attached to provide for greater ease of sanitary handling and storage thereof.

It is another object of my invention to provide an improved nipple of the aforementioned type having in combination therewith means for enclosing the nipple in the retracted position as well as for withdrawing the nipple from the retracted position within the mouth of a nursing bottle to the fully extended position in a sanitary and convenient manner.

It is still a further object of my invention to provide a nursing nipple having improved valve means formed therein for admitting air to the bottle to which the nipple is secured upon removal of fluid therefrom through the nipple.

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It is still another object of my invention to provide an improved infant nursing bottle including a nipple of the retractable type, together with improved means for securing the nipple to the bottle and for enclosing the nipple in the retracted position as well as for sealing off the end thereof to permit greater ease of handling and storage of the bottle after it has been filled with the desired fluid and passed through the sterilization process.

Briefly stated, my invention provides, in accordance with one aspect thereof, an improved nursing bottle comprising a nursing nipple of a configuration such as to permit the folding or telescoping of the nipple to a retracted position at least partially within the mouth of the bottle. I also provide, in combination with the foregoing, closure means for enclosing and sealing off the exposed portion of the nipple when it is in the folded or retracted position. In one embodiment of my invention, means are provided for withdrawing the nipple from the retracted position within the mouth of the bottle to the extended position through the agency of the closure means upon removal thereof from the bottle. The advantages of such an arrangement will be set forth in detail below.

Improved means for securing the nipple to the mouth of the bottle are also provided in combination with valve means in the nipple which cooperate with the securing or retaining means to admit air to the bottle as the fluid is withdrawn from the bottle through the nipple, the valving arrangement being such as to prevent leakage of the fluid from the bottle in the process of admitting air thereto.

Other objects and advantages of my invention will be apparent from the following description taken in connection with the accompanying drawings, and its scope will be pointed out in the appended claims.

Referring to the drawings, Fig. 1 is a cross sectional view of a nursing bottle illustrating a nipple and cap arrangement embodying my invention; Fig. 2 is a cross sectional view of the bottle of Fig. 1 showing the nipple in the folded or retracted position and illustrating the combination including a cover member secured to the cap and extending over the nipple in the retracted position; Fig. 3 is a plan, cross sectional view of the bottle of Fig. 1 taken along the section line 1—1, while Figs. 4 and 5 are cross sectional views taken along the lines 2—2 and 3—3 respectively of Fig. 3; Fig. 6 is a cross sectional view of a nipple and cap arrangement illustrating another embodiment of my invention with the modifications over Fig. 1 being principally related to the valving arrangement; Figs. 7 and 8 illustrate in cross section an alternative nipple and cap arrangement representing still another embodiment of my invention. Fig. 8 showing the nipple in the folded position in combination with a closure member of alternative construction to that shown in Fig. 2; Fig. 9 is a plan view of the closure cap shown in Fig. 8 taken along the line 4—4; while Fig. 10 is a cross sectional view of a nipple and cap arrangement illustrating a further embodiment of my invention.

Referring now in particular to the arrangement of Figs. 1 through 5, illustrating one embodiment of my invention, there is shown a fragmentary, cross sectional view of a nursing bottle 1 which may be provided with a suitable threaded portion 2 capable of receiving an internally threaded retainer cap 3 as shown. A nursing nipple 4 is shown attached to the bottle 1 and comprises a flange portion 5 capable of engaging the mouth of the bottle to provide communication with the interior thereof. Extending inwardly from the flange portion 5 is a web portion 6 which, in the configuration shown, is essentially conically shaped to conform to the inner surface of the cap 3.

Extending from the web 6 and around an annular lip 7 on the cap 3 is a portion 8 of relatively thin cross section, the purpose of which will be hereinafter explained, which blends into a relatively heavier indented section 9. As will be observed by reference to Fig. 1, the indented section 9 extends over a second annular lip 10 on the cap 3 and connects with an essentially conically shaped portion 11 which in turn extends down from a relatively heavy section 12 situated at the base of an upper nipple portion 13. The upper nipple portion 13 is provided with one or more apertures 14 in the usual manner to allow withdrawal of fluid from the bottle.

The retainer cap 3, which is preferably formed of a suitable moldable plastic material, comprises an internally threaded cylindrical portion 15 and a conically shaped or dished in section 16 forming a central aperture through which the nipple extends and having the annular lips 8 and 10 positioned near the periphery of the central aperture.

Referring now in particular to Fig. 2 showing the nipple 4 in the folded or retracted position in combination with a closure cap 17 extending thereover, it will be seen that the indented portion 9 and the conical section 11 have been deflected by longitudinal movement of the upper nipple portion 13 so as to extend within the mouth of the bottle and assume the configuration shown. The upper nipple portion 13 is prevented from being substantially deformed from its original shape by the relatively heavy section 12. Thus, the upper nipple portion 13 may be moved essentially as an independent entity to the telescoped position shown in Fig. 2, the relatively flexible sections 9 and 11 being deformed to a second equilibrium position in the process.

It will be observed that the lip 10 extends radially inward by a slight amount from the central aperture formed by the main body of the cap portion 16, thus minimizing the area of contact between the nipple and the central aperture in the cap and permitting the nipple to be moved through the aperture from the extended to the folded position and vice versa with greater ease.

The closure member 17 may be conveniently formed of a flexible material such as rubber or of a suitable plastic and is provided with an annular ridge or lip 18 extending radially inward as shown so as to be capable of snapping into place in a channel or depression 19 extending around the cap 3 and thus secure the cover 17 in place over the nipple. The cover 17 is preferably shaped in such a manner that the central portion thereof is brought into contact with the top of the nipple, as shown in Fig. 2, when the cover is secured to the bottle thus directly sealing off the aperture 14 in the nipple to prevent leakage therethrough.

The cover 17 is formed with two or more finger wells or depressions 20 therein to permit ease of grasping the cover with the fingers, the material of the cover being sufficiently flexible to permit deflection under pressure of the fingers to permit grasping of the nipple through the cover so that the nipple may be withdrawn to the extended position along with removal of the cover from the bottle.

Referring now to Fig. 3, which is a plan view, partly in cross section, taken along the line 1—1 of Fig. 1, the web portion 6 of the nipple 4 is formed of a series of sectors 6a of a cross section as shown in Fig. 4 and of a series of intermediate relatively thin sectors 6b of a cross section as shown in Fig. 5. It will be appreciated that when the sectors 6a are brought into contact with the underside of the conical section 16 of the cap 3 as the cap is secured in place on the bottle, a slight separation remains between the underside of the conical portion 16 and the sectors 6b.

The lips 7 and 10 on the cap are each provided with a series of aligned radial slots, 21 and 22 respectively, which are sufficient in number such that, regardless of

the angular position of the cap 3, at least one pair of aligned slots is positioned so as to communicate with each of the web sectors 6b and vent atmospheric air thereto. Thus when fluid is removed from the bottle by suction on the nipple, the pressure inside the bottle is reduced below atmospheric, thus creating a pressure difference across the web sectors 6b resulting in a force tending to deflect the web 6, including the sectors 6a, away from contact with the underside of the cap 3.

One or more valve apertures 23 are provided in the sectors 6a as shown. It will be observed that when the sectors 6a are in contact with the underside of the cap 3, the valve openings 23 are sealed off thus preventing fluid from escaping therethrough and when the sectors 6a are deflected away from the underside of the cap 3 by a decrease in pressure within the bottle resulting in a pressure difference across the sectors 6b, air is allowed to flow into the bottle to equalize the pressure therein. As the pressure within the bottle is raised to the level of atmospheric pressure, the force on the sectors 6b disappears and the web resumes its normal shape once again forcing the sectors 6a into contact with the underside of the cap and sealing off the valve openings 23. Thus fluid may be removed smoothly and at an even rate from the bottle, the web 6 flexing back and forth to admit air to the bottle in process at a rate corresponding to the rate of removal of fluid.

It will be observed by reference to Figs. 1 and 2 that the cap 3 is provided with an annular channel 24 of a depth somewhat less than the thickness of the flange 5 and a width greater than the flange 5. An annular ridge 25 is positioned approximately at the center of the channel 24, which ridge is imbedded in the flange 5 upon tightening of the cap 3 securely in place on the bottle. The purpose of the ridge 25 is to permit the flange 5 to be secured tightly to the mouth of the bottle without the cap binding against the flange in the tightening process and distorting it out of shape. In the process of tightening down on the flange, however, a certain amount of material in the flange is displaced and tends to flow, ordinarily transmitting forces and stresses to other parts of the nipple.

The purpose of the channel therefore is to substantially contain the flange when the cap is tightened thereon, restraining the tendency of the material to flow to other parts of the nipple, thus preventing transmission of such forces to the web portion 6, which forces would otherwise tend to deflect the web 6 such as to remove the sectors 6a from contact with the underside of the cap and thus cause leakage through the valve apertures 23.

In addition to the foregoing, an annular channel of depression 26 is provided at or near the point where the web 6 joins the flange 5. The channel 26 is capable of receiving such material as does flow from deformation of the flange 5 in the cap tightening process, thus further insuring that the web 6 is not deflected from operative engagement with the underside of the cap 3 when the cap is secured to the bottle. It will be seen therefore that the web 6 is substantially isolated from the effects of deformation of the flange 5.

The web 6 is also isolated, in a manner now to be described, from the effects of deflection and movement of the nipple such as occur in normal usage. This is accomplished by the provision of the very thin section 8 previously identified in the description of the nipple configuration. The portion 8 is sufficiently thin so as to be incapable of transmitting from the upper nipple portion stresses and strains which would otherwise deflect or deform the web portion 6 from cooperative engagement with the underside of the cap 3.

Further isolation of the web 6 is achieved by indentation of the portion 9 in the manner shown in Fig. 1 such that a ridge or overlapping portion 9a extending over the lip 10 is formed. It will be appreciated that with

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the configuration just described, downward forces on the upper nipple portion are deflected by the lip 10 and are converted to forces tending to bow in the portion 9. These forces then appear as radially inward stretching forces on the thin portion 8 which tend to slide the web 6 along the underside of the retainer cap portion 16 rather than to deflect the web away from operative engagement with the underside of the cap.

Thus it will be observed that the embodiment of my invention set forth in Figs. 1 through 5 provides, among other advantages, an improved nursing nipple arrangement including a retainer cap and a cover of configuration such that when the bottle is filled with fluid, sterilized and prepared for storage and use in the home, the dimensions of the assembled parts are only slightly greater than the bottle itself.

Further, the nipple is sealed off from leakage in the assembly and may be withdrawn to the extended position in a completely sanitary manner along with removal of the cover member 17. In addition, the nipple is provided with a new and improved valving arrangement for admitting air to the bottle upon removal of fluid therefrom through the nipple.

With reference now to the embodiment of my invention illustrated in Fig. 6, it will be observed that the retainer cap 3 is provided with an annular ridge 25a which is of the same general shape as the ridge 25 of Fig. 1 but of considerably greater size. The flange 5 of the nipple 4 has also been modified over the arrangement of Fig. 1 in that an annular channel or depression 27 has been provided therein and the channel 26 has been eliminated.

The ridge 25a is positioned so as to be capable of entering the channel 27 when the cap 3 is secured to the bottle. It will be appreciated that the ridge 25a still performs the function of preventing the cap 3 from seizing against the flange 5 when the cap is tightened against the bottle. The tendency of the flange 5 to flow off the rim of the bottle and disturb the configuration of the air valve is greatly reduced, however, by reason of the fact that the outer portion of the flange 5 is securely gripped in position and restrained from radial inward flow by engagement of the enlarged ridge 25a with the channel 27. With such an arrangement, it has been found that the provision of the annular channel 26 shown in Fig. 1 is unnecessary.

Referring now to the embodiment illustrated in Figs. 7 through 9, there is shown in Figs. 7 and 8 a fragmentary, cross sectional view of a nursing bottle 28 provided with an externally threaded portion 29 capable of receiving an internally threaded cap 30 as shown. Attached to the bottle 28 is a nursing nipple 31 which is provided with a flange 32 adapted to mate with the mouth of the bottle 28 to permit securing of the nipple thereon.

A relatively flexible, cylindrically shaped portion 33 extends up from the flange 32 as shown, the portion 33 tapering down to a relatively thin section 34 near the junction point with the flange 32. As will be observed by reference to Fig. 7, the cylindrical portion 33 connects at its upper end with a relatively heavy section 35 situated at the base of an upper nipple portion 36. A flange or ridge member 37 is provided around the outer periphery of the cylindrical portion 33 and is positioned to snap into place over an inner lip 38 on the cap 30 when the nipple is withdrawn to the extended position as shown in Fig. 7. Thus, the nipple is secured in the extended position by the flange 37 upon engagement thereof with the lip 38.

The nipple 31 may be provided with one or more apertures 39 in the usual manner to permit withdrawal of fluid from the bottle. An annular channel or depression 40 is provided in the heavy section 35 of the nipple, the purpose of which will be hereinafter explained.

Referring now in particular to Fig. 8, illustrating the nipple 31 in the folded position in combination with a

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cover 41 secured thereover, it will be seen that in the folded position, the upper nipple portion 36 and the heavy section 35 have retained substantial identity of shape while the relatively flexible portion 33 has been deflected to extend within the mouth of the bottle as shown. Movement of the nipple from the extended position of Fig. 7 to the retracted position of Fig. 8 is therefore accomplished by telescoping of the upper nipple portion 36 along with the heavy section 35 within the flange 32, the relatively flexible member 33 being deformed to a second equilibrium position in the process.

As will be observed from Figs. 8 and 9, the cover 41 is provided with a series of inwardly extending, deformable prongs 42, preferably formed of a metallic material, and having securing portions 43 formed therein and engageable with the underside of the lip 38 on the retainer cap 30. The cover 41 may be conveniently formed of a moldable plastic material with the upper ends of the metallic prongs 42 being molded therein. It will be appreciated that the securing prongs 42 may be formed of other than metallic materials, although it has been found that metallic materials offer superior wear characteristics in the particular configuration shown in Fig. 8.

The cover 41 may be removed from the bottle by grasping the outer periphery of the cover and applying a radial inward pressure thereon to inwardly deflect the prongs 42 by a slight amount, thus permitting withdrawal of the cover along the axis of the bottle. The positioning of the channel 40 relative to the prongs 42 is such that when the cover 41 is secured to the bottle as shown in Fig. 8, the prongs engage the channel 40 and are pressed into tighter engagement therewith upon radial inward deflection of the prongs when the cover 41 is removed from the bottle.

Thus, it will be seen that upon removal of the cover from the bottle, the nipple 31 is gripped by the prongs 42 and is withdrawn to the retracted position along with the withdrawal of the cover. The cover 41 is shaped such that an inner surface 41a thereof engages the nipple openings 39 when the cover is secured to the bottle as shown, thus preventing leakage of fluid from the bottle during storage or movement thereof.

Referring now to Fig. 10, illustrating still another embodiment of my invention, there is shown a nipple 43 having a bottle engaging flange 44, an upper nipple portion 45, and an interconnecting, relatively flexible member 46 extending therebetween. The nipple 43 is secured to a bottle 47 by means of a retainer cap 30 identical in configuration to the retainer cap shown in Figs. 7 and 8 and therefore referenced by like numerals.

The upper nipple portion 45 is provided with a channel or groove 48 extending around the outer periphery of its base portion, which channel is capable of engaging the lip 38 on the cap to prevent accidental or random movement of the nipple along its longitudinal axis. The nipple may be retracted to a position within the mouth of the bottle by disengaging the channel 48 from the lip 38 and moving the upper nipple portion 45 as a unit into the mouth of the bottle essentially along the axis thereof, the relatively thin, interconnecting member 46 deflecting in the process until it is completely extended within the bottle.

While I have shown and described several embodiments of my invention for the purpose of setting forth a full and clear disclosure thereof, it will be appreciated that my invention is not limited to the particular arrangements set forth herein and that various modifications, substitutions and combinations falling within the true scope and spirit of my invention as defined in the appended claims will occur to those skilled in the art.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. An infant nursing arrangement comprising a nipple and a cap for securing said nipple in fluid communication with a nursing bottle, said nipple comprising means

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capable of engaging said nursing bottle near the open end thereof to connect said nipple in cooperative relationship therewith, an upper nipple portion having one or more fluid dispensing apertures therein, and a relatively flexible portion interconnecting said upper nipple portion and said bottle engaging portion, said interconnecting portion permitting telescoping movement of said upper nipple portion relative to said bottle engaging portion when said nipple is secured to said bottle, whereby said nipple may be moved between an extended configuration and a retracted configuration at least partially within the mouth of said bottle, said securing cap comprising an outer cylindrical portion engageable with the upper end of said bottle, means engageable with the bottle engaging portion of said nipple to secure said nipple to said bottle, and a portion extending inwardly from said cylindrical portion and downwardly in the direction of the interior of said bottle, said last mentioned portion having an aperture therein to permit said nipple to extend therethrough and to permit telescoping movement of said nipple between the extended and retracted positions.

2. An infant nursing nipple comprising a longitudinally extending fluid dispensing portion having one or more apertures therein, flange means engageable with the mouth of a nursing bottle to permit securing of the nipple thereto, and a web section extending between said flange means and said longitudinally extending portion so as to be engageable with the underside of a securing cap when said nipple is secured to a nursing bottle therewith, said web section comprising a series of relatively thick sectors, at least one of said relatively thick sectors having a valve aperture extending therethrough, and a series of relatively thin sectors situated intermediate said relatively heavy sectors, the configuration being such that a series of air spaces are formed between the underside of said cap and said thin sectors when said nipple and said cap are assembled together, whereby atmospheric air pressure may be vented to said air spaces when said nipple is secured to a nursing bottle to cause inward deflection of said web section away from the underside of said securing cap upon removal of fluid from said bottle, thereby permitting air to enter said bottle through said valve aperture to equalize the pressure therein.

3. An infant nursing arrangement comprising a bottle, a nipple, and means for securing said nipple in fluid communication relationship with said bottle, said nipple comprising an upper nipple portion of a relatively rigid configuration, a flange member engageable with the mouth of said bottle to connect said nipple in cooperative relationship therewith, said flange member being of greater diameter than said upper nipple portion, a relatively flexible member interconnecting said upper nipple portion and said flange member, said interconnecting member permitting movement of said upper nipple portion relative to said flange member along the axis of said nipple when said nipple is secured to said bottle, said interconnecting member being shaped so as to provide at least two equilibrium positions, one of said equilibrium positions being an extended position with the upper nipple portion extended for use, the other of said equilibrium positions being a retracted position with the upper nipple portion being telescoped within said flange member, said nipple securing means comprising a cap including an outer cylindrical portion engageable with the upper end of said bottle and an inwardly extending portion dished downwardly in the direction of the interior of said bottle, said inwardly extending portion having an aperture therein to permit said nipple to extend therethrough.

4. An infant nursing arrangement comprising a nipple, said nipple comprising an upper nipple portion having one or more fluid dispensing apertures therein, a bottle engaging portion for connecting said nipple in cooperative relationship with a nursing bottle, and means interconnecting said upper nipple portion and said bottle en-

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gaging portion and permitting telescoping movement of said upper nipple portion between an extended position and a retracted position at least partially within the mouth of said bottle, said interconnecting means being of sufficient rigidity to establish each of said positions as an equilibrium position, a cap for securing said nipple in fluid communication relationship with said nursing bottle, a cover member comprising means capable of permitting attachment thereof so as to extend over the upper end of said nipple when said nipple is in the retracted position, and means in the cover member comprising deformable finger wells deflectable under the pressure of the fingers to permit grasping and withdrawal of said nipple portion to the extended position when said cover is removed from the nipple, bottle and cap assembly.

5. An infant nursing arrangement comprising a nipple, said nipple comprising an upper nipple portion having one or more fluid dispensing apertures therein, a bottle engaging portion for connecting said nipple in cooperative relationship with a nursing bottle, and means interconnecting said nipple portion and said bottle engaging portion and permitting telescoping movement of said upper nipple portion between an extended position and a retracted position at least partially within the mouth of said bottle, said interconnecting means being of sufficient rigidity to establish each of said position as an equilibrium position capable of withstanding gravity forces, a cap for securing said nipple in fluid communication relationship with said nursing bottle, and a cover member including means capable of permitting attachment thereof so as to extend over the upper end of said nipple when said nipple is in the retracted position and while in such position being capable of sealing off the fluid dispensing apertures, said cover being constructed at least partially of flexible material adjacent the position of the nipple, the flexible portion of said cover capable of being deflectable under the pressure of human fingers to permit grasping and withdrawal of said upper nipple portion from the retracted to the extended position at the same time the cover is removed from the nipple, bottle and cap assembly.

6. An infant nursing nipple comprising a longitudinally extending fluid dispensing portion having one or more apertures therein, flange means engageable with the mouth of a nursing bottle to permit securing of the nipple thereto, and a web section extending between said flange means and said longitudinally extending portion so as to be engageable with the underside of a securing cap when said nipple is secured to a nursing bottle therewith, said web section being joined to said longitudinally extending portion around the periphery thereof through a portion of relatively thin cross section, said web section comprising a series of relatively thick sectors, at least one of said relatively thick sectors having a valve aperture extending therethrough, and a series of relatively thin sectors situated intermediate said relatively heavy sectors, the configuration being such that a series of air spaces are formed between the underside of said cap and said thin sectors when said nipple and said cap are assembled together, whereby atmospheric air pressure may be vented to said air spaces when said nipple is secured to a nursing bottle to cause inward deflection of said web section away from the underside of said securing cap upon removal of fluid from said bottle, thereby permitting air to enter said bottle through said valves aperture to equalize the pressure therein.

7. An infant nursing nipple comprising a longitudinally extending fluid dispensing portion having one or more apertures therein, flange means engageable with the mouth of a nursing bottle to permit securing of the nipple thereto, and a web section extending between said flange means and said longitudinally extending portion so as to be engageable with the underside of a securing cap when said nipple is secured to a nursing bottle therewith, said web section comprising a series of relatively

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thick sectors, at least one of said relatively thick sectors having a valve aperture extending therethrough, and a series of relatively thin sectors situated intermediate said relatively heavy sectors, the configuration being such that a series of air spaces are formed between the underside of said cap and said thin sectors when said nipple and said cap are assembled together, whereby atmospheric air pressure may be vented to said air spaces when said nipple is secured to a nursing bottle to cause inward deflection of said web section away from the underside of said securing cap upon removal of fluid from said bottle, thereby permitting air to enter said bottle through said valve aperture to equalize the pressure therein, and said cap including an annular channel formed therein and positioned to overlap said flange means when said nipple is secured to a nursing bottle by means of said cap and thereby restrain flow of said flange when said cap is tightened to prevent distortion of said web section.

8. An infant nursing nipple comprising a longitudinally extending fluid dispensing portion having one or more apertures therein, flange means engageable with the mouth of a nursing bottle to permit securing of the nipple thereof, and a web section extending between said flange means and said longitudinally extending portion so as to be engageable with the underside of a securing cap when said nipple is secured to a nursing bottle therewith, said web section comprising a series of relatively thick sectors, at least one of said relatively thick sectors having a valve

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aperture extending therethrough, and a series of relatively thin sectors situated intermediate said relatively heavy sectors, the configuration being such that a series of air spaces are formed between the underside of said cap and said thin sectors when said nipple and said cap are assembled together, whereby atmospheric air pressure may be vented to said air spaces when said nipple is secured to a nursing bottle to cause inward deflection of said web section away from the underside of said securing cap upon removal of fluid from said bottle, thereby permitting air to enter said bottle through said valve aperture to equalize the pressure therein, and an annular channel formed on the upper side of said flange means, and a cooperating annular ridge formed on said cap and positioned to enter said channel when said nipple is secured to a nursing bottle by means of said cap whereby plastic flow of said flange is restrained when said cap is tightened, thereby preventing distortion of said web section.

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