March 16, 1948. R. V. LLOYD 2,438,066

NURSING BOTTLE ATTACHMENT

Filed Oct. 21, 1946

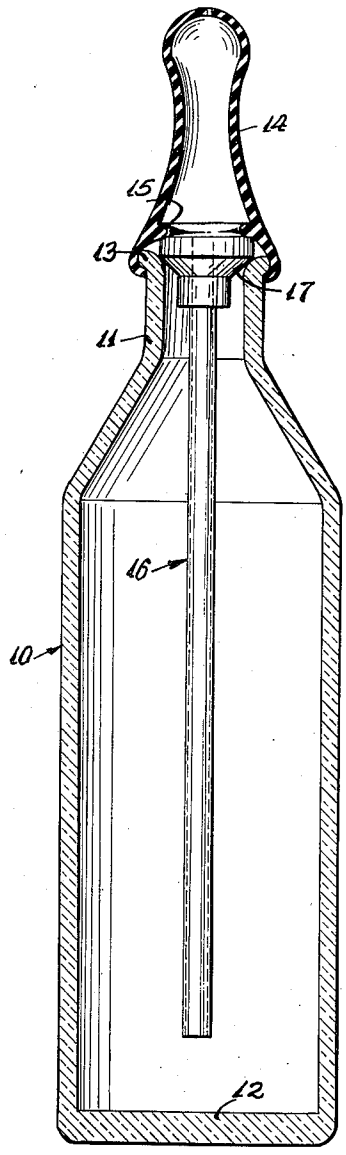


Fig. 1.

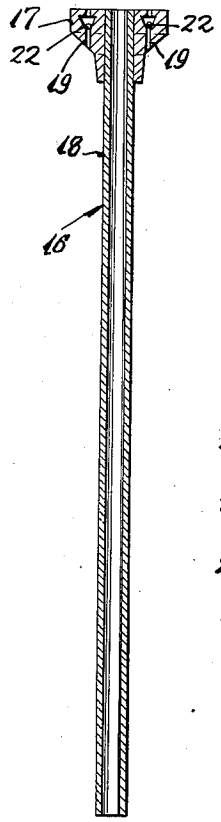


Fig. 2.

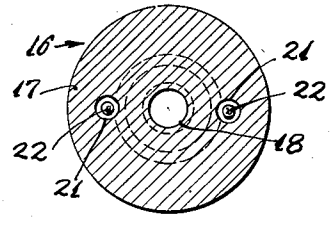


Fig. 5.

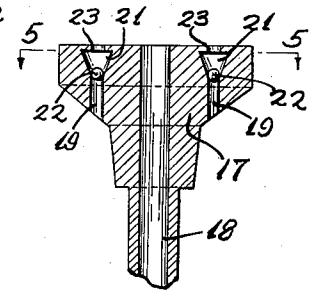


Fig. 3.

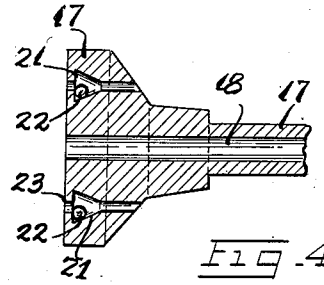


Fig. 4.

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NURSING BOTTLE ATTACHMENT

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Application October 21, 1946, Serial No. 704,638

4 Claims. (Cl. 215—11)

1

This invention relates to nipple attachments for nursing bottles.

It is an object of the present invention to provide an attachment adapted to be fitted through the neck opening of a nursing bottle which will conduct the milk being drawn from the bottle by the nursing nipple, from a point close to the bottom of the bottle whereby to make it unnecessary for the infant to turn the bottle upside down while nursing from it.

It is another object of the present invention to provide in an attachment adapted to extend through the neck of the bottle to the bottle bottom for effecting the withdrawal of the milk from the bottom of the bottle and which at the same time has means at its upper end for closing the neck opening except for the central tube, a valve arrangement such that the bottle can be used in the ordinary way by inverting the same when the contents become too little to be reached by the sipper tube or when the bottle is placed in a horizontal or tilted up position.

According to the invention, a sipper tube is extended downward through the neck opening of the bottle to a point near to the bottom thereof. On the top of the sipper tube is an enlarged head formed either integrally with the tube or slid into place thereover. This head abuts the top edge of the neck opening and is retained within the bottle by the engagement of the nipple therewith. This flanged head will contain valve controlled openings adapted to be opened automatically as the bottle is drawn to a horizontal or tilted up position. When tilted up, the sipper and its flanged head will remain rigidly in place within the bottle. No displacement is effected to permit the contents of the bottle to be extracted when the bottle is in a tilted up position. Only the valve elements with the flanged head are displaced. As long as the suction is taking place through the sipper, the valve elements in the flanged head will be drawn upon their seats.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a cross sectional view, in elevation, of a bottle and nipple showing in full the sipper and its flanged head positioned within the bottle.

Fig. 2 is a cross sectional view of the sipper removed from the bottle.

2

Fig. 3 is an enlarged cross sectional view taken through the flanged head and the valve controlled openings therewithin with the valve elements resting upon their seats.

Fig. 4 is a cross sectional view of the flanged ends when the same has been tilted to a horizontal position to release the valve elements from their seats so as to permit the withdrawal of the contents of the bottle directly through the flanged head and out of the neck portion within which the flanged head is contained.

Fig. 5 is a transverse cross sectional view taken through the flange head on line 5—5 of Fig. 3, looking in the direction of the arrows thereof.

Referring now to the figures, 10 represents a bottle having an open neck portion 11 and a bottom 12. The neck portion 11 is flanged as indicated at 13 to receive a rubber or flexible nipple 14 having a radially, inwardly extending sipper retaining flange 15. Extending down into the bottle from the neck portion is a sipper 16 having upon its upper end a flanged head 17 integral therewith. The flange head 17 is retained upon the neck portion against axial displacement by the engagement of the retaining flange 15 of the nipple 14. At no time during the operation of the bottle is the head displaced or is the portion of the sipper which extends down into the bottle to a point near the bottom thereof. Within the sipper 16 is a passage 18 through which the contents of the bottle are drawn when the nipple 14 is worked. The bottle can be used while in a vertical position and while it is too heavy for the infant to lift. Within the flange head is a pair of openings 19 tapered as indicated at 21 to provide a valve heat for a ball valve element 22. While the bottle is being used in the vertical position, these elements 22 will be drawn upon their seats 21 by the sucking operation and the contents removed from the bottle by way of the central passage 18.

When the bottle has been emptied to a point below the bottom end of the sipper, it will be light in weight and the infant can tilt the same to a horizontal or tilted up position. At this time, the ball elements 22 will roll off their seats to free the passages 19, as in the manner shown in Fig. 4. Thereafter the contents will be finally withdrawn from the bottle through the passages 19. Inwardly extending portions 23 on the top face of the flange head prevent the ball element from leaving the tapered seat portion 21.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the

precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. In combination, a nursing bottle having a neck portion with an opening therein, a sipper extending through the neck opening of the bottle and into the bottom thereof, said sipper having a flanged head adapted to be secured to the neck portion of the bottle to normally close the same except for the sipper passage extending therethrough, and said flanged head having a valve controlled passage through which the contents of the bottle can be withdrawn when the bottle is tilted up.

2. In combination, a nursing bottle having a neck portion with an opening therein, a sipper extending through the neck opening of the bottle and into the bottom thereof, said sipper having a flanged head adapted to rest on the top of the neck portion, a nipple having a radially, inwardly extending portion cooperating with the flange head when the nipple is in place on the bottle neck portion to retain the sipper and the flanged head rigidly at all times upon the bottle neck portion, and said flanged head having a valve controlled passage through which the contents of the bottle can be withdrawn when the bottle is tilted up.

3. In combination, a nursing bottle having a neck portion with an opening therein, a sipper extending through the neck opening of the bottle and into the bottom thereof, said sipper having a flanged head adapted to be secured to the neck portion of the bottle to normally close the same except for the sipper passage extending therethrough, said flanged head having a valve controlled passage through which the contents of the bottle can be withdrawn when the bottle is tilted up, said valve controlled passage having a tapered seat portion, and a ball valve element contained within the tapered seat portion and adapted to roll off the same when the bottle with the sipper is tilted up, said tapered seat portion having sufficient axial length to permit the displacement of the ball from its seat.

4. In combination, a nursing bottle having a neck portion with an opening therein, a sipper extending through the neck opening of the bottle and into the bottom thereof, said sipper having a flanged head adapted to be secured to the neck portion of the bottle to normally close the same except for the sipper passage extending therethrough, said flanged head having a valve controlled passage through which the contents of the bottle can be withdrawn when the bottle is tilted up, said valve controlled passage having a tapered seat portion, a ball valve element contained within the tapered seat portion and adapted to roll off the same when the bottle with the sipper is tilted up, said tapered seat portion having sufficient axial length to permit the displacement of the ball from its seat, said valve controlled passage having radially, inwardly extending portion to prevent the displacement of the ball element from the passage, and said tapered seat portion thereby lying beneath the top portions of the flange head.

ROBERT V. LLOYD.

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