Nov. 2, 1948. N. W. GUDEN 2,452,749

NURSING BOTTLE HOLDER

Filed May 3, 1946

Fig. 1.

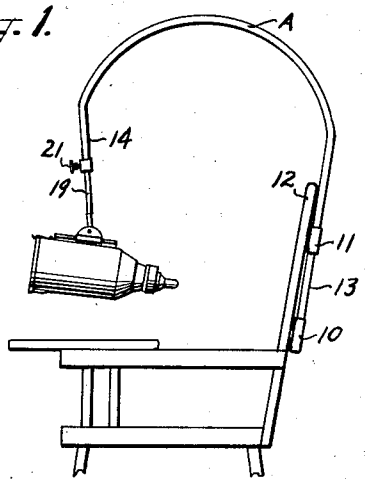


Fig. 2.

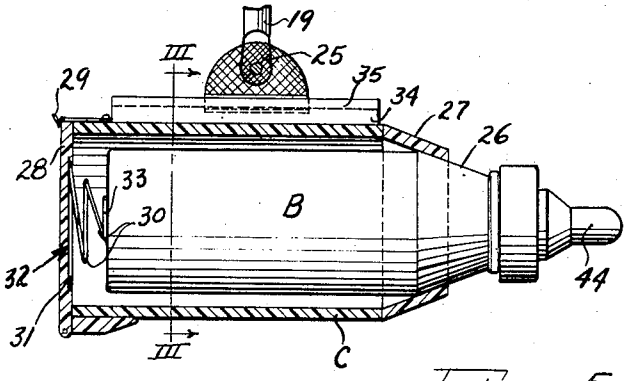


Fig. 3.

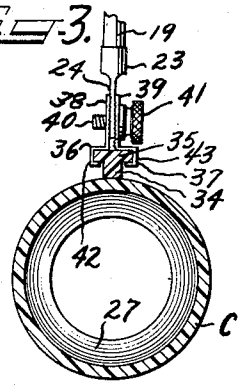


Fig. 5.

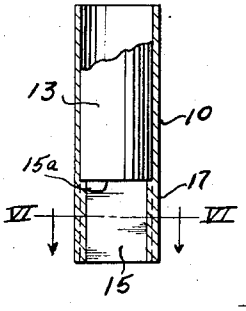


Fig. 4.

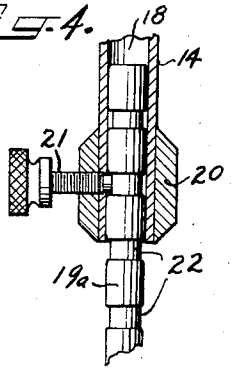
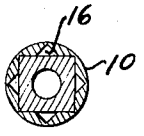


Fig. 6.



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UNITED STATES PATENT OFFICE

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NURSING BOTTLE HOLDER

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Application May 3, 1946, Serial No. 667,196

4 Claims. (Cl. 248—104)

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The present invention relates to a bottle holder and more particularly, although not exclusively, to a nursing bottle holder.

The present invention pertains to means whereby a bottle, such as a nursing bottle, filled with milk or other liquid, may be so arranged with respect to a user, such as an infant or an invalid, that the user may consume the liquid with minimum of discomfort and maximum convenience. The bottle is encased to safeguard the bottle against breakage.

An object of the present invention is to provide a holder of the character herein described wherein a nursing bottle may be properly adjusted so that an infant in a crib, gocart, carriage, chair or the like may readily suck and drink the contents of the bottle which is clamped in proper position thus eliminating the need for an attendant to hold the bottle and at the same time clamped so that antics of the infant will not disturb the adjustment of the bottle.

Another object of the present invention is to provide a bottle holder which includes a standard for suitably supporting a bottle, the standard being removably mountable in any one of a set or series of mounts which mounts may be placed on different pieces of furniture, such for example, as one mount on a highchair, another mount on a crib, and a third mount on a baby carriage, while a still further mount might be in the nature of a floor stand so that the bottle holder might be disposed for feeding an infant or invalid lying on a bed where there is no mount attached to the bed.

A further object of the present invention is to provide a bottle casing of simple construction and one which will receive bottles of different sizes, and which may be easily clamped for securing the bottle in adjusted position when an infant is nursing the same.

The invention has for an additional object the provision of a nursing bottle holder capable of adjustment in a plurality of directions, so that the bottle may be properly tilted and disposed with respect to the position of the infant about to nurse the same.

The above, other and further objects of the present invention will be apparent from the following description and accompanying drawing.

An embodiment of the present invention is illustrated in the accompanying drawing and the views thereof are as follows:

Figure 1 is a side elevational view of a portion of an infant's highchair showing the bottle holder of the present invention thereto applied;

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Figure 2 is an enlarged axial section through the bottle enclosing casing and showing the bottle in full lines as the same appears when applied to the casing;

Figure 3 is a vertical sectional view taken in the plane of line III—III of Figure 2; with the bottle omitted;

Figure 4 is a fragmental view in vertical section of the lower end of the standard showing in elevation a portion of a rod entered in the hollow end for vertical and angular adjustment in the same, showing the rod provided with a plurality of axially spaced grooves into any one of which a set screw may be projected to vertically adjust the rod in the free end of the standard;

Figure 5 is an enlarged vertical sectional view through the lower attaching bracket showing a portion of the standard in the bracket and illustrating one manner of angularly adjusting the standard in the bracket; and

Figure 6 is a horizontal sectional view taken in the plane of line VI—VI of Figure 5.

It is contemplated that when a sale of the device of the present invention is made two sets of attaching brackets will be supplied—one set with the screw lugs at the sides for attachment to a highchair, baby carriage, or the like; and another pair having end lugs for attachment to the spindles of a crib.

While the device of the present invention is adaptable for use with various and sundry articles of furniture, such as a highchair, a crib, a baby carriage, or the like, it is herein illustrated and will be explained as applied to a highchair.

Referring to Figure 1 two brackets are attached by suitable means, with the bracket 11 above the bracket 10, to the back or rear side of a chair back 12.

The lower bracket 10 is shown as in the form of an upright socket having its wall, adjacent its lower end, thickened. The upper bracket 11 has a cylindrical opening through it, and constitutes a sleeve.

The standard is substantially of inverted U shape, with legs of different lengths.

The standard is designated generally as A with 13 as the longer leg and 14 as the shorter leg.

While any of several means may be employed to secure the lower end of leg 13 in angularly adjusted relationship with the bracket 10, the form of means shown includes a polygonal end or extremity 15 at the lower end of leg 13 which interfits with its corners in four of eight notches 16 formed in the interior portion of the lower

thickened section 17 of the bracket 10. Thus the engagement of the corners of the end piece 15 with four of the several notches 16 of the bracket member 10 secures the longer leg 13 of the standard A in any of several adjusted angular positions, as may be desired. Vertical position of the leg 13 is fixed by engagement of the shoulder 15a at the junction of the polygonal end 15 with the leg.

The shorter leg 14, is herein sometimes mentioned as the free end of the standard. This end is hollow as at 18 for a purpose to be later described. The standard A may be manufactured out of a solid rod with the shorter leg 14 bored to produce the hollow 18 or the whole standard may be made of a tube.

Entered in the hollow 18 of the free end 14 of the standard A is a rod 19. A collar 20 surrounds the lower end of the free end 14 through which and a registering hole in the end 18 a set screw 21 is fitted.

The rod 19 might have a smooth exterior as shown in Figure 1, in which event the set screw 21 would be tightened against it in the usual manner, to adjust the rod 19 vertically and angularly within the free end 14 of the standard.

As an alternative a rod 19a may be employed fashioned with a plurality of annular grooves 22 formed in its exterior into any of which grooves the set screw 21 may be projected to adjust the rod in the free end 14 of the standard. Utilizing the rod 19a the inner end of the set screw 21 is entered in one of the grooves, thus regulating the vertical adjustment of the rod with respect to the end 14 by engagement of the inner end of the set screw with the margins of the rod defining the entered groove. Angular adjustment of the rod 19a would be controlled by end pressure of the set screw 21 against the rod.

Normally secured to the lower end of the rod 19 is a cap 23 having as an integral part thereof a depending flange 24 which has an aperture through it. The opposite faces of the flanges are preferably roughened or corrugated, as at 25 of Figure 2.

B designates a nursing bottle of conventional form.

For supporting the bottle B from the standard A in a position convenient for an infant to feed from the bottle, a housing C is provided. Preferably this housing is made of transparent plastic material so that the contents of the bottle may be observed as long as a bottle is enclosed within the casing. The front end of the casing is provided with an inclined conical collar 27 to constitute a restricted collar for engagement by the neck 26 of the bottle B when the bottle is inserted in the casing. The rear end of the casing is open and has hinged to it a latchable end plate 28 of such diameter as to close the rear end of the casing when the plate is latched against such end. The plate may be latched by any conventional latch, designated generally as at 29.

For holding the bottle neck 26 against the restricted collar 27 of the casing C, compression means are employed. The form of compression means herein illustrated is shown as a coil spring 30 having its end of larger diameter 31 suitably secured to the end plate 28, preferably by being entered in an undercut circular recess 32. The length of the spring is such that its outer end 33 will bear against the bottom of the bottle B and urge it away from the end plate 28, that is to say, to hold the neck 26 of the bottle against the

restricted collar 27 of the casing and thereby tends to center the bottle B in the casing.

Formed as an integral part of the casing C is an external longitudinally extending rib 34 having a head 35.

Referring to Figure 3 it will be noted that the rib 34 and its head 35 appear at T shape in section. It will be understood that the cross-sectional shape of the rib might be other than that shown, for example, it might be formed as a dovetail rib. The length of the rib 34 is substantially that of the length of the cylindrical portion of the casing C.

For cooperating with the rib 34 to secure the casing C and its contained bottle B in desired relationship with respect to the end of the short arm 14 of the standard, so that an infant may nurse the bottle, clamp means are provided.

Referring to Figures 2 and 3, the clamp means includes two jaws 36 and 37 of similar shape in end elevation. These are arranged in opposed manner when applied to the flange 24 of the cap 23, as may be observed in Figure 3. The jaws have upstanding wing portions 38 and 39 to engage the opposite faces of the flange 24. Preferably the faces of the upstanding wings 38 and 39, which contact the flange 25, are corrugated or roughened to make interlocking engagement with the flange when the wings are tightened thereagainst by means of a bolt 40 having a knurled head 41. The bolt 40 extends through registering apertures in the wings 38 and 39 and through the aperture in the flange 25.

Below the wings 38 and 39 the jaws are formed with channel-like portions 42 and 43 to engage over the margins of the head 35 of the rib, as may be observed in Figure 3.

It will be noted from Figure 2, that the axial length of the wings 38 and 39 of the jaws is much less than the length of the rib 34, and consequently the casing C may be adjusted endwise with respect to the rod 19. Also the casing may be angularly adjusted with respect to the rod 19 by tilting the casing about the axis of the bolt 40.

It will thus be observed that the casing C is endwise and axially adjustable with respect to the free end or short arm 14 of the standard A.

The jaws 36 and 37 and the bolt 40 are herein sometimes mentioned as a clamp.

The bottle B is provided with a conventional nipple 44 which the infant takes in its mouth to withdraw the bottle contents by sucking.

It is a desirable feature of a bottle holder of the character herein described, that the bottle with the liquid in it must be tilted so that at all times the nipple is filled with liquid to thereby prevent entry of any air into the nipple, hence into the stomach of the infant feeding on the bottle.

The device of the present invention makes it possible to very readily tilt the bottle in such fashion and at the same time arrange it in convenient position so that the infant may readily nurse on it without any discomfort.

The construction of the clamp for securing the casing C to the rod 19 is such as to securely hold the casing C in adjusted position, angularly as well as endwise, so that the antics of the infant will not dislodge the casing and bottle from its adjusted position.

A pair of brackets for attachment to a crib, to receive the standard A, may be placed on the crib and the standard A moved from the high-chair to the crib. If it is desired to feed the

infant in the highchair, then the standard is moved to the highchair and the casing and bottle adjusted to accommodate the bottle to the infant while at the same time maintaining the bottle tilted sufficiently to prevent entrance of air into the bottle nipple.

It will be noted that the standard may be angularly adjusted by movement about the longer leg as an axis. Thus when the standard is adjusted to present the bottle in proper angular position with respect to the user, the heighth of the bottle may be adjusted by movement of the rod 19 up or down in the shorter leg 14. If a finer angular adjustment of the bottle is needed, such may be made by angularly moving the rod 19. Tilt of the bottle may be accomplished by swinging the casing about the bolt 40 as an axis. Thus a very fine adjustment of the bottle may be had.

It will, of course, be understood that various details of construction may be varied through a wide range without departing from the principles of this invention and it is, therefore, not the purpose to limit the patent granted hereon otherwise than necessitated by the scope of the appended claims.

I claim as my invention:

1. A bottle holder comprising an upright standard mounted for swinging adjustment only, said standard having a downturned upper end with a terminal portion of said end straight and hollow, a rod telescopically entered in said hollow end and endwise adjustable in the same, a clamp on the end of said straight portion for securing said rod in adjusted position in said end, the exposed end of said rod being flattened and scored, a casing for receiving a nursing bottle, said casing comprising a substantially cylindrical member of transparent plastic material having a bottle neck restricting collar at one end and a hinged latchable end plate at the other end to prevent escape of pieces of the bottle should the bottle break while in said casing and at the same time providing full visibility of the encased bottle, a rib along the cylindrical portion of said casing and integral with it, two jaw members having portions for engaging said rib and having flattened wing portions for contacting the flattened end of said rod on each side of the same, a bolt through registering apertures in said end and said wings and threaded in one of said wings to secure the jaw members to the rod in angularly adjusted relation and also to engage the casing rib anywhere along its length whereby the encased bottle may be positioned at a height and inclination as will be most convenient for the user.

2. A bottle holder comprising an upright standard mounted for swinging adjustment only, said standard having a downturned upper end with a terminal portion of said end straight and hollow, a rod telescopically entered in said hollow end and endwise adjustable in the same, a clamp on the end of said straight portion for securing said rod in adjusted position in said end, the exposed end of said rod being flattened and scored, a casing for receiving a nursing bottle, said casing comprising a substantially cylindrical member of transparent plastic material having a bottle neck restricting collar at one end and a hinged latchable end plate at the other end to prevent escape of pieces of the bottle should the bottle break while in said casing and at the same time providing full visibility of the encased bottle, a rib along the cylindrical portion of the casing and integral with it and having a T-head, two jaw members having portions for engaging each side of the T-head of said rib and having flat wing portions for contacting the flattened end of said rod on each side of the same, a bolt through registering apertures in said end and said wings and threaded into one of said wings to secure the jaw members to the rod in angularly adjusted relation and also to engage the T-head of the casing rib anywhere along its length whereby the encased bottle may be positioned at a height and inclination as will be most convenient for the user.

3. A bottle holder comprising an upright standard mounted for swinging adjustment only, said standard having a downturned upper end with a terminal portion of said end straight and hollow, a rod telescopically entered in said hollow end and endwise adjustable in the same, clamping means carried by said terminal portion and said rod for securing the rod therein in adjustable telescopic position, the exposed end of said rod being flattened and scored, a hollow substantially cylindrical casing for receiving and retaining a nursing bottle, a rib formed integrally with said casing and extending along the length of the casing, two jaw members having portions for engaging said rib and having flattened wing portions for contacting the flattened end of said rod on each side thereof, and a bolt through registering apertures in said end and said wings and threaded in one of said wings to secure the jaw members to the rod in angularly adjusted relation and also to engage the casing rib anywhere along its length, whereby the encased bottle may be positioned at a height and inclination most convenient for the user.

4. A bottle holder comprising an upright standard mounted for swinging adjustment only, said standard having a downturned upper end with a terminal portion of said end straight and hollow, a rod telescopically entered in said hollow end and endwise adjustable in the same, a casing for receiving a nursing bottle, said casing comprising a substantially cylindrical member of transparent plastic material having a collar at one end for receiving and retaining the neck of the bottle, a hinged latchable end plate at the other end, and a spring secured to the inner surface of said plate and engaging the bottom end of the nursing bottle for maintaining the bottle within the casing seated against the collar, a rib along the cylindrical portion of said casing and integral with it, and clamping means carried by said telescoping rod and engaging said casing rib anywhere along its length for angular adjustment of the casing, whereby the engaged bottle may be positioned at a height and inclination most convenient to the user.

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