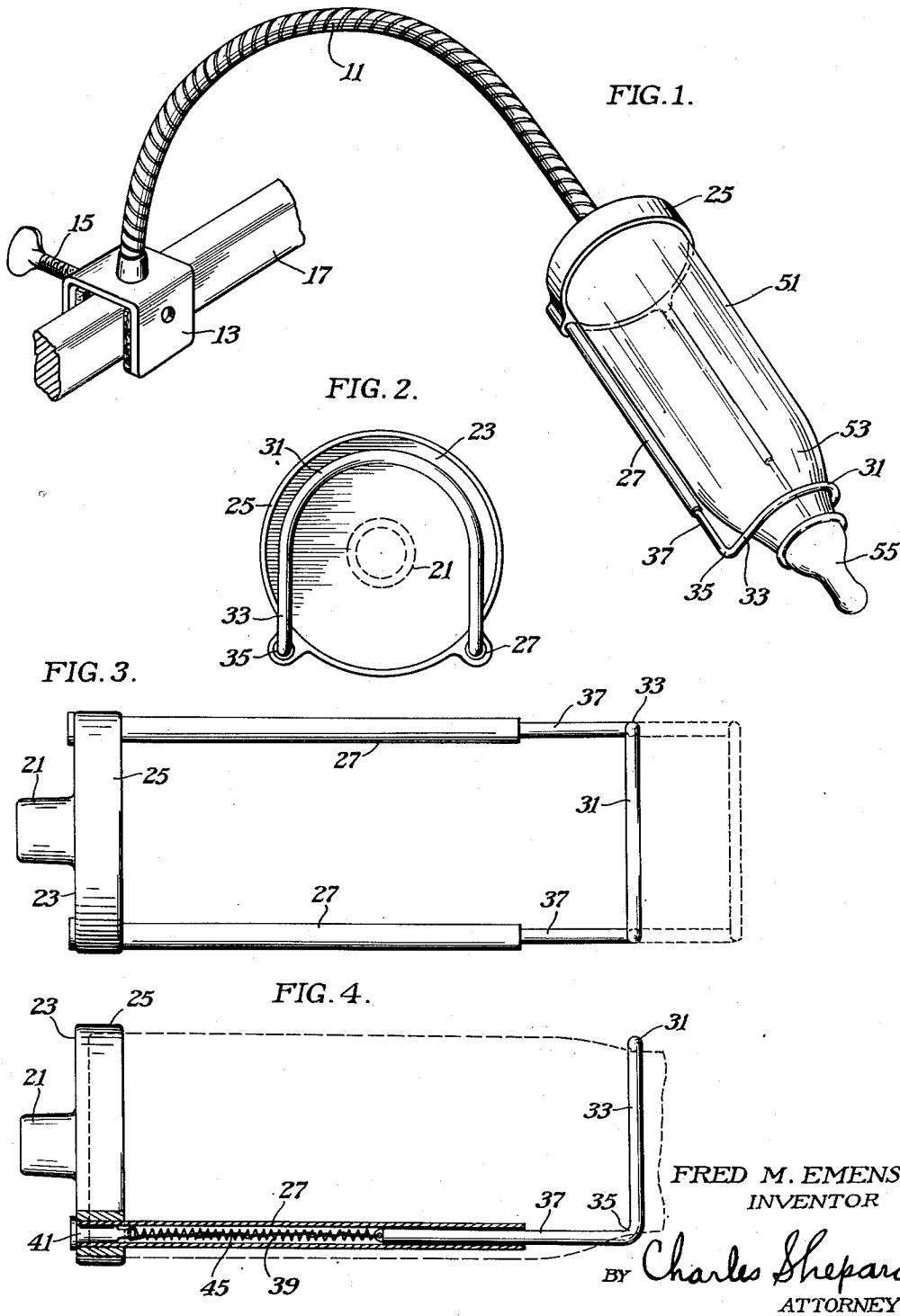


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NURSING BOTTLEHOLDER

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4 Claims. (Cl. 248-102)

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This invention relates to a holder for holding a nursing bottle in convenient position for the use of an infant. An object of the invention is the provision of a generally improved and more satisfactory nursing bottle holder.

Another object is the provision of a nursing bottle holder which can be attached quickly and easily to many different kinds of furniture, such as the side rail of a crib or bed, the tray of a highchair, the arm of a nursery chair, or any other convenient support, and which may be so adjusted as to bring the nursing bottle into proper relation to the infant's mouth, regardless of whether the infant is lying prone on his back or on his side, or is sitting upright.

Another object is the provision of simple, inexpensive, and quick-acting means for holding the nursing bottle in the device, in such manner that the nursing bottle may be quickly and easily attached or detached, and so designed and constructed as to accommodate nursing bottles of widely varying sizes and shapes.

These and other desirable objects are accomplished by the construction disclosed as an illustrative embodiment of the invention in the following description and in the accompanying drawings forming a part hereof, in which:

Fig. 1 is a perspective view of a nursing bottle holder in accordance with a preferred embodiment of the invention, showing a nursing bottle held thereby;

Fig. 2 is an end elevation of the bottle holding portion of the device;

Fig. 3 is a top plan thereof; and

Fig. 4 is a side elevation thereof, with parts in vertical section.

The same reference numerals throughout the several views indicate the same parts.

The holder comprises, in general, an elongated adjustable supporting element or member, clamping means at one end of the element for fastening it to a crib rail, chair arm, etc., and holding means at the other end of the element for holding the nursing bottle. The present invention relates mainly to the holding means for holding the nursing bottle, rather than to the details of construction of the elongated element or of the clamp, and so it will be sufficient for present purposes to describe the elongated adjustable element in general terms as comprising a suitable length of a semi-flexible member 11, preferably in the form of two spirally wound metal strips, one inside the other and frictionally engaging each other in known manner so that the strip can be deformed by hand to any desired shape

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and can be bent in any desired direction, but when the deforming pressure is removed, the member is sufficiently rigid to maintain the shape to which it has been bent. Elongated elements or members of this type are well known and have been used, for example, as the supporting elements of adjustable desk lamps and the like.

According to the present invention, one end of the supporting element or member 11 is rigidly fastened to a clamp 13 which may be tightened by means of a screw 15 so as to hold the clamp in place on any suitable support member such as indicated for example at 17, which member 17 may be one of the side members of an infant's crib, or an arm of an infant's arm chair or highchair, etc.

The other end of the supporting element or member 11 is rigidly secured in a hollow boss 21 formed on the rear side of a somewhat cup-shaped metallic or plastic plate 23, having a flange 25 projecting forwardly all around the periphery of the plate 23. The flange 25 is preferably circular and of sufficient diameter to accommodate the base of the largest size nursing bottle which is to be used with this device.

Two tubes 27 are secured to the flange 25 and project forwardly therefrom parallel to each other and perpendicular to the base plate 23. These tubes are spaced from each other at such distance that the clear space between them is slightly less than the diameter of the smallest nursing bottle which is to be used with this device. Ordinarily the tubes are fastened to the flange 25 at points roughly about 90° to 100° apart, measured angularly from the center of the flange 25. The tubes may be welded or soldered to the flange 25, or may be pressed tightly into openings formed through bosses on the flange 25, but in any event the tubes are preferably so held to the flange that the rear end of each tube, as well as the front end thereof, is open and unobstructed.

A yoke member for engaging the forward end of the nursing bottle is formed of stiff wire or the like and has an approximately semi-circular portion 31 at the ends of which are short straight portions 33 lying in the plane of the semi-circular portion 31 (which plane is perpendicular to the tubes 27 and parallel to the plate 23) and at the ends of the straight portions 33 each wire or rod is bent through 90° at 35 and thence extends straight rearwardly at 37, the portions 37 fitting loosely in and being slidable in the tubes 27. At the rear end of each rod 37 there is a small hole

into which is hooked the forward end of a small coiled tension spring 39. The rear end of each tension spring 39 is hooked into a small hole in the forward end of a headed stud 41 having its shank loosely slidable in the rear end of the tube 27 and having its head abutting against the rear end of the tube 27 so that the stud cannot be drawn further into the tube.

With this arrangement, it is seen that the two springs 39 in the tubes 27 constantly tend to pull the rods 37 and hence the curved yoke portion 31 rearwardly toward the base plate 23, but the yoke portion 31 can readily be pulled forwardly away from the base plate 23, against the tension of the springs 39. To prevent it from being pulled too far forwardly and stretching the springs 39 beyond their elastic limit, limit stops are preferably provided in the form of flexible elements 45, such as thin flexible wires, or strong threads of nylon or the like, one in each tube 27, fastened to the same holes in which the ends of the spring are hooked, each wire or thread having sufficient length so that the yoke may be drawn forward to but not beyond the desired limit of its motion.

The usual infant's nursing bottle has a main body portion 51, sometimes cylindrical and sometimes polygonal in cross section, and generally has a tapered upper or forward end 53 constituting a neck to which the nipple 55 is attached. The bottles vary to some extent in diameter, and vary considerably in length, but all of the usual diameters and lengths in common use can be easily and quickly accommodated in the holding means above described. The bottle is inserted in the holder by an oblique forward motion (obliquely from upper left to lower right when viewed as in Fig. 4) first thrusting the nipple end of the bottle through the curved yoke 31. As this forward motion progresses, the tapered portion or neck 53 of the bottle will come into contact with the yoke 31 and thereafter the continued forward motion of the bottle will carry the yoke 31 along with it, sliding the rods 37 in the tubes 27, extending the springs 39. When the bottle has been moved forwardly a sufficient distance so that the rear end of the bottle will clear the edge of the flange 25, the rear end is tipped down so that its axis coincides with the axis of the holding device and then it is gently eased rearwardly until the rear end of the bottle is seated against the front face of the plate 23, within the flange 25, which flange prevents lateral displacement of the rear end of the bottle. Meanwhile, the springs 39 draw rearwardly on the yoke 31 and hold this yoke tightly against the tapered portion 53 of the bottle. The yoke 31 prevents displacement of the forward end of the bottle in an upward direction and in sideways directions, while the tubes 27 support the bottle from beneath and prevent downward displacement thereof. The bottle may be inserted with extreme ease and rapidity, in less time than it takes to describe the insertion, and may be equally easily and quickly removed from the holder, by a reverse operation.

It is seen that any bottle having a diameter greater than the space between the tubes 27 (so that the bottle cannot drop downwardly between the tubes) may be accommodated in this holder, so long as the diameter of the rear end of the bottle does not exceed the diameter of the space within the flange 25. The length of the bottle may vary greatly, since there is a considerable range of forward and aft movement of the rods 37 within the tubes 27. The whole construction is neat and attractive in appearance, simple and

inexpensive to manufacture, and easy to keep in clean and sanitary condition.

This holder may be used also for nursing bottles of the so-called wide mouth type, which do not have a tapered forward end or neck, but which maintain the full diameter of the body right up to the forward end, and which have a nipple with a large base adapted to cover the entire forward end of the bottle. With such a bottle, the nipple alone projects through the curved yoke 31, and the yoke overlies and pushes rearwardly against the flat front end of the bottle.

In use, the clamp 13 is, of course, clamped on any convenient part of the furniture, and the adjustable support 11 is bent or adjusted to the proper position to bring the bottle nipple 55 to the mouth of the infant, whether the infant be prone or upright. The elevation and the degree of tilt of the bottle may be readily adjusted by bending the elongated member 11.

It is seen from the foregoing disclosure that the above-mentioned objects of the invention are admirably fulfilled. It is to be understood that the foregoing disclosure is given by way of illustrative example only, rather than by way of limitation, and that without departing from the invention, the details may be varied within the scope of the appended claims.

What is claimed is:

1. A nursing bottle holder comprising an adjustable support, an abutment member secured to said support for receiving the base end of a nursing bottle, a pair of tubular members rigid with and extending forwardly from said abutment member in substantially parallel relation to each other, a curved yoke member for engaging the forward end of a nursing bottle, and a pair of rod-like members secured to said curved yoke member and slidably seated in said tubular members.

2. A nursing bottle holder comprising a plate, a marginal flange extending forwardly from said plate and forming a pocket in which the rear end of a nursing bottle may be seated, a yoke spaced forwardly from said plate for engaging the forward end of a nursing bottle, guide means for guiding said yoke for movement along a predetermined path toward and away from said plate, and spring means tending to move said yoke rearwardly toward said plate.

3. A nursing bottle holder comprising a first member providing an abutment against which the rear end of a nursing bottle may be seated, a second member for engaging the nursing bottle near its forward end and guide means for guiding said second member for movement along a predetermined path toward and away from said first member including a pair of tubes secured to one of said members and arranged substantially parallel to each other and having a clear distance between them less than the diameter of a nursing bottle to be held by said holder, parts on the other of said members slidable telescopically in said tubes and spring means tending to draw said first member and said second member toward each other.

4. A nursing bottle holder comprising a first member providing an abutment against which the rear end of a nursing bottle may be seated, a second member for engaging the nursing bottle near its forward end and guide means for guiding said second member for movement along a predetermined path toward and away from said first member including a tube secured to one of said

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members and a part on the other of said members slidable telescopically in said tube, a coiled tension spring within said tube and connected to said part to tend to draw said two members toward each other, and a flexible cord also within said tube and connected to said part to limit the extent to which said spring may be extended when said two members are drawn away from each other.

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