



US 20050275229A1

(19) **United States**

(12) **Patent Application Publication**
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(10) **Pub. No.: US 2005/0275229 A1**

(43) **Pub. Date: Dec. 15, 2005**

(54) **INFANT FEEDING APPARATUS**

(52) **U.S. Cl. 294/19.1**

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(57) **ABSTRACT**

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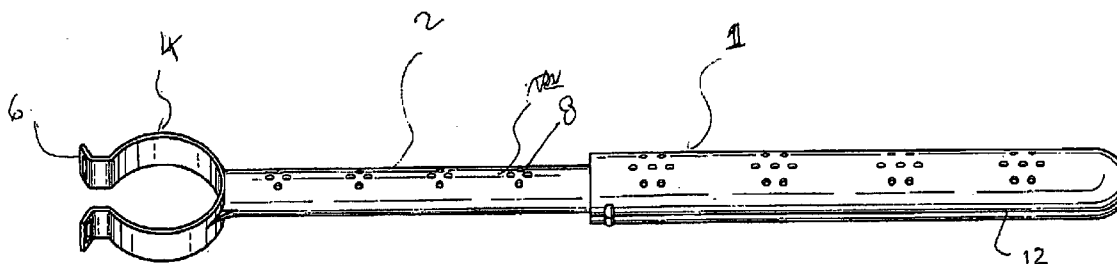
An infant feeding apparatus to be used in connection with a baby bottle during bottle feeding of an infant is disclosed. The apparatus comprises a handle section having an elongated shape and a hollow cross section and a series of apertures running along the axis of the handle. There is an extension piece adapted to fit within the handle allowing it to rotate within said handle. The extension has a pair of prongs adapted to fit around the cross section of a baby bottle, so that the baby bottle may be extended from the arm of the caregiver via the extension piece and handle.

(21) **Appl. No.: 10/837,567**

(22) **Filed: May 4, 2004**

Publication Classification

(51) **Int. Cl.⁷ B65D 1/04; A47F 13/06**



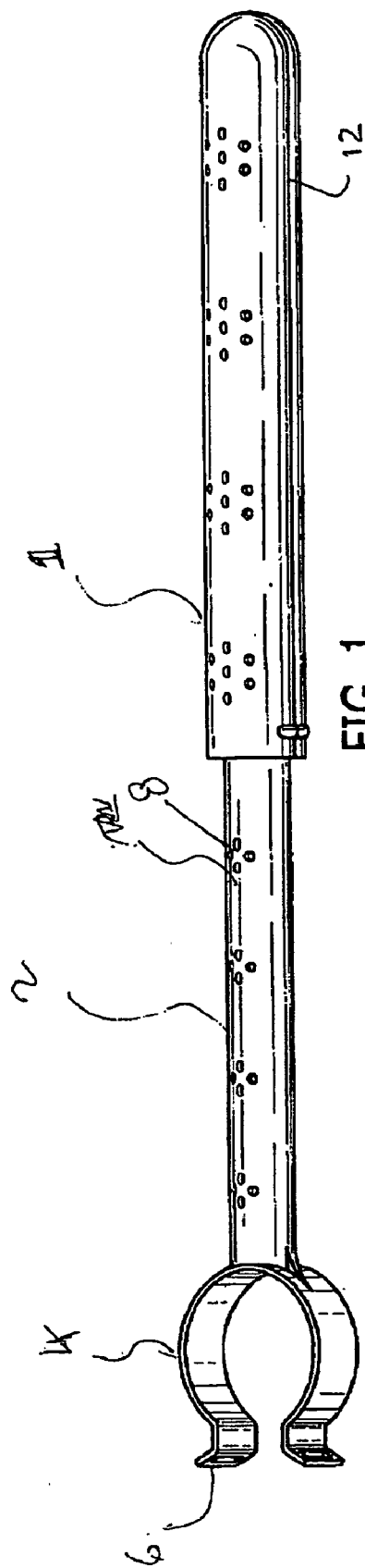


FIG. 1

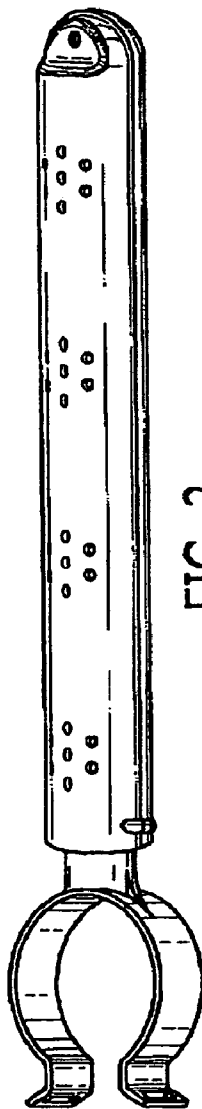


FIG. 2

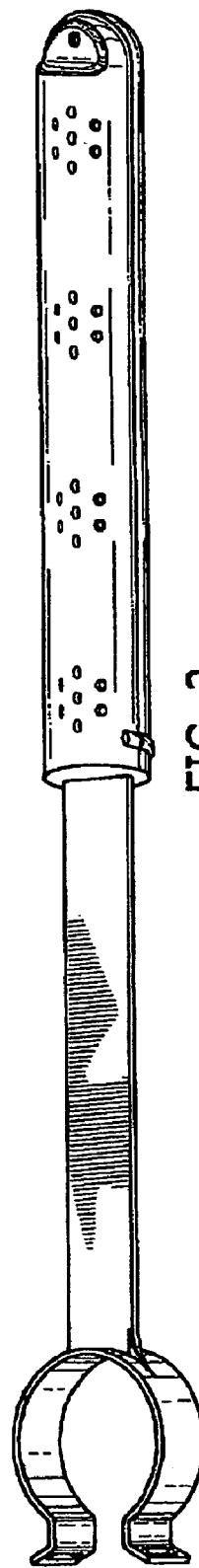


FIG. 3

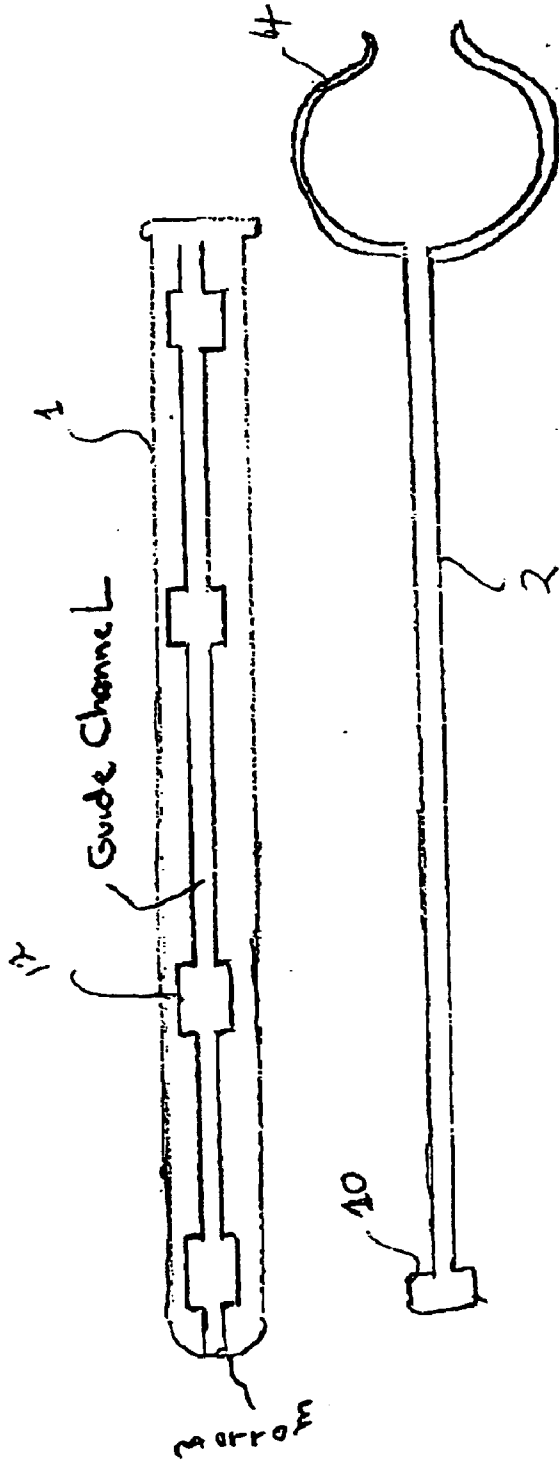


fig 4

Extrusion slides up/down guide channel
 Twisting Extension at Lock point holds
 Extension at that point.

INFANT FEEDING APPARATUS

FIELD AND BACKGROUND OF THE INVENTION

[0001] The invention relates to the field of infant care products and in particular to an apparatus for effectively extending the reach of an infant care give who is feeding the baby a bottle. The apparatus will secure a baby bottle and allow the bottle to be extended from the arm of the caregiver. Specifically the apparatus is to be used by a caregiver cradling the infant in a sitting position with one hand and arm and that same hand and arm is holding the apparatus in connection with the baby bottle. This leaves the other hand and amrm free to do other things.

[0002] It is an object of the invention to provide an apparatus for securing a baby bottle to free up one hand and arm of the caregiver while still providing (human) supervision and interaction with the feeding infant.

[0003] It is an object of the invention to provide an apparatus which enables a caregiver to cradle an infant in the sitting position with one hand and arm and bottle feed the infant allowing the other hand and arm free to perform daily tasks.

[0004] Another object is to provide such an apparatus that can be of simple and inexpensive construction.

[0005] Still another object is to provide such a device that can be quickly and easily attached to most infant bottles being manufactured nowadays.

[0006] Another object is to provide such an apparatus that will allow the caregiver a full view of the infant while he or she is feeding.

[0007] Another object is to provide such an apparatus that requires to caregiver to provide pressure on the device in order tot keep the bottle from slipping out from the infant's mouth.

[0008] Another object is to provide such an apparatus that can be of simple and inexpensive construction.

[0009] Other objects of the invention may be appreciated by those skilled idn the art once the invention is shown and described.

DESCRIPTION OF DRAWINGS

[0010] FIG. 1 shows the apparatus in extended position;

[0011] FIG. 2 apparatus in the least extended position;

[0012] FIG. 3 apparatus with a different shape of extension member,

[0013] FIG. 4 detail of the guide channel and locking means.

FIELD AND BACKGROUND OF THE INVENTION

[0014] In the past, parents of infants have resorted to a variety of measure in attempts to find a useful support apparatus in addition to their own two hands. Freeing up the hands of the caregiver will allow them to do other things naturally, but finding a safe and effective way to hold a bottle for a baby proves an elusive problem.

[0015] Some parents have resorted to pillows and rolled up towels in an effort to support the bottle as the infant is feeding. Such half measures are not safe and do not work. Leaving bottles in babies unattended is not a safe practice according to many experts and doctors. Moreover, propping up the bottle with a pillow or towel typically results in the bottle being knocked over in any event.

[0016] A study of the prior art reveals no inventions that adequately address these problems. Many such devices require the infant to feed from a lying down (horizontal) position that is not healthy or safe. Such devices typically encourage the caregiver to leave the infant unattended which is a problem that is not adequately addressed in the prior art.

[0017] None of these alternatives seen in the prior art adequately solve this problem. It is believed that a successful bottle holding device should allow the infant to suck the bottle while in a sitting or cradled position and also still requires the human caregiver to supervise the feeding. A device that encourages a caregiver not to watch the infant is not safe and not a desirable attribute of such device. With that in mind, it is desirable that such an infant feeding device require a human to attend to it, so that if the caregiver falls asleep or doesn't pay attention the bottle will merely drop harmlessly from the infant's mouth.

[0018] The device functions as an extension of the hand, more or less so that the caregiver can feed the infant a bottle with the same hand that they are cradling the infant, thus freeing up the other hand to read a book to the infant, or perhaps to massage the infant's cheeks or toes in order to encourage the infant to eat. This would be difficult to do without such a device. A breastfeeding mother uses a similar concept; i.e. the mother uses one hand to hold the breast or bottle and so her breast function as an extension of the hand.

DESCRIPTION OF PREFERRED EMBODIMENT

[0019] The overall construction of the apparatus is shown in FIGS. 1-3. The handle 1 is in connection with an extension member 2 that travels within the handle. These two pieces are sized and shaped so that the extension can both extend from the handle in a direction parallel to the longitudinal axis of the handle as well as rotate within the handle. FIG. 1 shows the device with the extension member fully extended from the handle that would provide the furthest distance that the bottle can be held away from the caregiver's hand. (FIG. 2 shows the extension in retracted position.) In this position, the apparatus can still be used but the bottle, held in the clamp 4, would b closest to the caregiver's hand that is holding the handle. Both positions can be used for feeding the infant as well as intermediate positions where the extension is deployed at any position between that of FIGS. 1 and 2.

[0020] As can be seen in the figures, both the handle and the extension section will be of circular cross section. This is seen as the most advantageous method of construction in order to allows the extension to travel w/in the handle and to rotate within the handle. The extension will rotate and thus allow a locking mechanism to engage the apertures 12 (see FIG. 4) in the handle and therefor allow the extension to be locked into place at a pre-selected distance along the axis of travel of the extension.

[0021] The apertures 12 (there would typically be about 4 apertures in the handle but this can be changed) in the handle

should be placed at regular intervals of pre-s h distance should allow the extensions pieces to extend the bottle from the arm at a distance that will feel elected space apart from one another. Such apertures should be of size and shape sufficient to allow frictional means or some other type of means to engage one of the apertures when the handle is rotated a bit. Those skilled in the art can best determine what is the best distance to separate such apertures. Such distance should allow the extension pieces to extend the bottle from the arm at a distance that will feel comfortable to the caregiver.

[0022] It is one the advantages of the invention that the caregiver will be holding the bottle at a distance from the arm that is comfortable to him or her. The ability to adjust this distance (extension piece from the handle) is one of the reasons that the device works effectively; the caregiver can choose the distance that is comfortable to him or her and this allows the apparatus and bottle to be held for long periods without being uncomfortable.

[0023] When the caregiver is ready to use the device, he or she will attach the pair of curved prongs 4 around the bottle. Such prongs are likely to be made of metal or plastic and should have some flexibility so that they can be installed around the circular shaped cross section of the bottle. The prongs are manufactured simply as extensions of the extension piece.

[0024] With the bottle in place with the prongs 4, the caregiver should then extend the extension piece so that the bottle is at a comfortable distance away from the arm. This distance will vary among the individuals based on the size of their arms and depending on what distance is comfortable to them. For this reason, the handle is equipped with a number of apertures to enable the extension piece to be adjusted to different pre-selected lengths and then locked into place.

[0025] The mechanism for locking the extension in place can be seen in FIG. 4. There is an engagement member 10 that is formed at one end of the extension member 2. This member should be shaped and sized so that it can act as a guide when the extension member moves inside the handle. The engagement member will abut the inside walls of the handle to keep the extension member in place. The engagement member is shaped so that it can be rotated within the handle so that the engagement member will come into contact with one of the apertures 12 in the handle. This shape can be somewhat flat so that most of the time it will not contact the apertures, but only when it is rotated will it come into contact with the apertures and engage one of them.

[0026] The device is locked into place when the caregiver has found an appropriate distance from the bottle to be held from the arm. The extension member is locked into place by rotating it within the handle. This will bring engagement member 10 into contact with one of the apertures and this mating will serve to lock the extension member at a distance from the handle that is chosen by the caregiver. When it is desired to retract the extension member, the engagement member can be pressed upon and disengaged from the handle and the extension member will then be free to travel once again within the handle.

[0027] Other methods of construction may be used for the locking system without varying from the spirit of the inven-

tion. For instance, a spring-loaded means could be used in place of a frictional member. Other such systems should in effect be able to "lock" the extension piece into place at some distance along the longitudinal direction of the handle. The prongs 4 may be made of lightweight plastic or lightweight metal (such as aluminum). The prongs are optional and this area of the apparatus could be made straight without changing the overall purpose of the invention. If the prongs are of bent construction various sized angles may be chosen based upon trials.

[0028] With infant cradled in one hand or arm the caregiver picks up the bottle with the device attached and places the bottle in the general direction of the infant's mouth. With the free hand, the caregiver can manipulate the bottle close to or inside of the infant's mouth. This action will usually pull the extension piece some distance out of the handle and the user will then have an idea of where the extension piece is to be set by means of the frictional locking system. The user can then set the extension piece at this distance by rotating the extension until it locks into place.

[0029] When in use, the invention will enable the caregiver to have one arm free when he or she uses the apparatus. Such daily function as answering the phone, eating, preparing meals, and helping the infant, can be enhanced when the caregiver has an extra free hand to do such things. When the device is done being used, the extension piece can be retracted by simply pushing down on the frictional member and releasing it from engagement with the aperture. The extension piece can then be drawn back into the handle and the device will be able to be stored within a minimum of space.

[0030] The very ends of the prongs 6 should be tapered or flared outward as seen in the figures. This is so that an o-ring or rubber band or the like may be placed around the tips of the prongs in order to further secure the bottle. Those apertures or slots seen in the tip of the clasp are used to allow a VELCRO piece (trademarked name for complimentary set of hook and loop materials) or similar such item to secure the bottle by being looped through the apertures of one prong and into the other one.

[0031] It is thought that the extension piece should be about 4-8" in length and it may be manufactured so that it is an inch in diameter or less. To add gripping ability to the bottle, the bottle clasp 4 should be overmolded in order to allow a rubber and/or resin type of material to be sprayed on the inside surface of the clasp so that it may have better gripping ability on the bottle. Those holes shown as 8 in the drawings are weep holes designed to allow moisture to evaporate and/or drain from the device. The clasp may be fitted with additional means in connection with the clasp in order to tighten the prongs around the bottle.

[0032] FIG. 3 shows an alternate construction where the extension member is of flat or planar construction. Such construction should work just as well as the construction shown in FIGS. 1 and 2 where the cross section of the extension member is circular. The locking means for this version could be the same or similar to that described above.

I claim:

1. An infant feeding apparatus for use in connection with a baby bottle that is of circular cross section; said apparatus comprising a handle section having an elongated shape and

having a hollow cross section of circular shape and having a longitudinal axis running perpendicular to said cross section; said handle having a series of apertures running along said longitudinal axis and being set apart from one another at predetermined intervals; an extension piece of shape adapted to fit within said handle and of shape allowing said handle to rotate within said handle and to travel along said longitudinal axis; a pair of prongs in connection with said extension piece, each of said prongs of shape adapted to fit around the cross section of the baby bottle, frictional means in connection with said extension piece, said frictional

means for engaging said apertures when said extension piece is rotated within said handle, so that said extension piece may be extended from said handle at a predetermined distance so that the baby bottle may be extended from the arm of the caregiver.

2. The apparatus of claim 1 wherein said handle is about 4" to 8" in length and said extension piece is about 4" to 8" in length.

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