

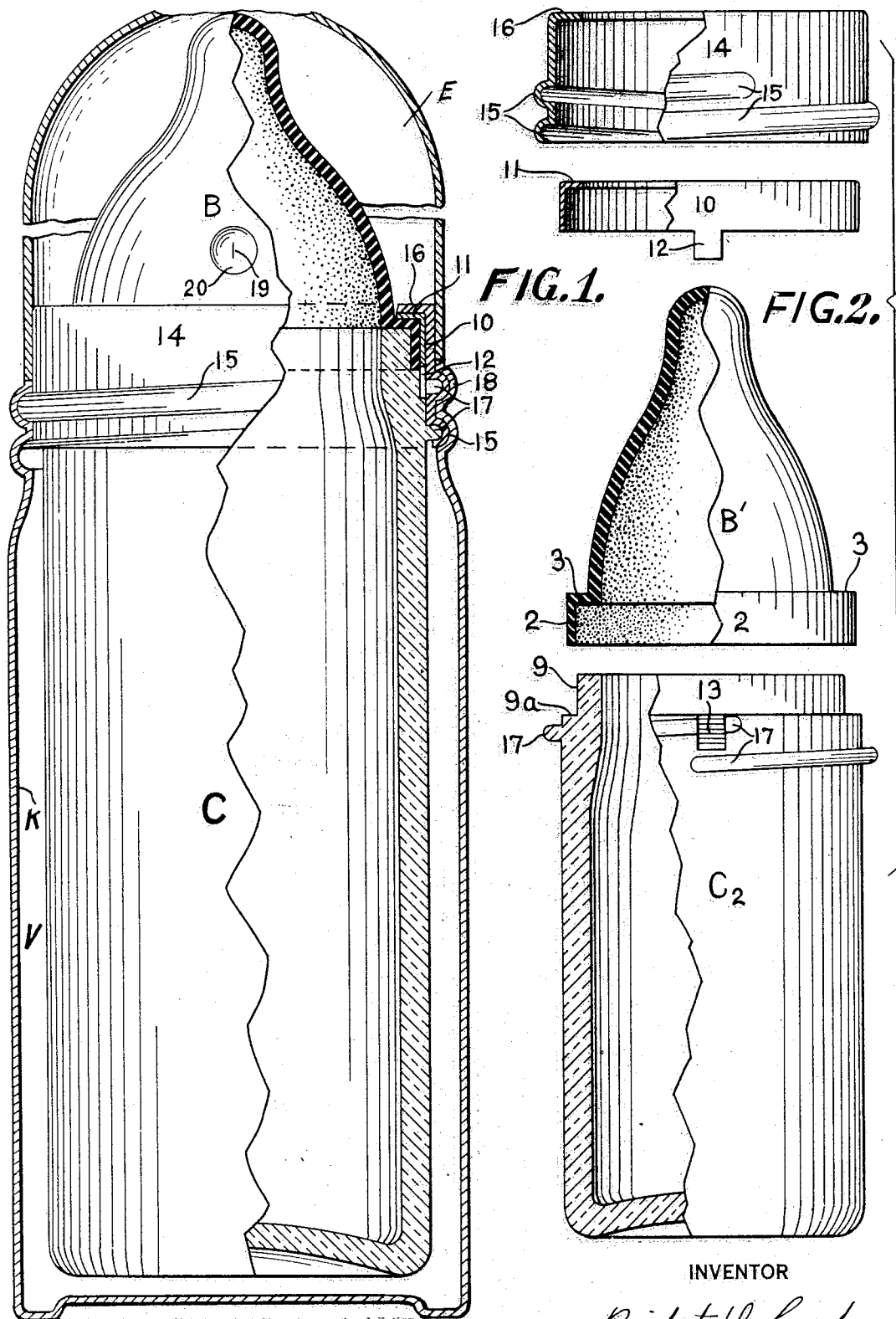
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B. D. CONDON

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INFANT FEEDING DEVICE

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INFANT FEEDING DEVICE

Bridget D. Condon, Spokane, Wash.

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The present invention relates to an improved infant feeding device comprising a container and a nipple, with means for securing the parts in assembled relation as required for use.

5 The open end of the unstretched nipple is of sufficient diameter to fit over the outer diameter of the open end of the container, whereby the nipple may with facility be assembled upon the container, stretching of the former being unnecessary.

Means is provided to maintain a leak-proof union of the nipple and container, secure from accidental dislodgement of the parts.

15 The parts may with facility be assembled or disassembled in a minimum of time with very slight effort.

The parts are devoid of inaccessible recesses, whereby they may readily be cleansed and sterilized in accordance with modern sanitation and good taste.

The invention may be adapted to various types of containers and for use with different foods of various nature.

25 The invention resides in certain novel structures and the combination and arrangement of the parts as will hereinafter be more fully set forth and distinctly claimed. It will be understood that the invention is not restricted to the exact structures herein illustrated and described, but that modifications may be made in the disclosed structures without departing from the principle of the invention and the intent of the claims. Preferred examples of the physical embodiment of the invention are illustrated in the accompanying drawing.

Figure 1 is an elevation, partly in section, showing the invention.

Figure 2, shows the disengaged parts, arranged in the order of assembly.

40 The conventional practice of stretching the nipple over the bottle or other container, is rather inconvenient and sometimes requires more strength than frail fingers possess. When the nipple fits sufficiently tight to assure firm attachment, assembly is difficult. When assembly is easy, the nipple is liable to be accidentally dislodged by the efforts of the infant, with the disadvantages consequent thereto.

The present invention provides a simple and practical means for firmly attaching the nipple to the container.

55 As seen in Figures 1 and 2, the nipple B, is provided with an annular skirt 2 of sufficient diameter to fit over the mouth 9 of the container C, when the former is unstretched, and it will be

readily apparent that these parts may be positioned with ease.

The friction collar 10 is adapted to fit snugly over the skirt 2 and can also be positioned with ease. The skirt 2 is offset leaving a narrow ledge 3, and the friction collar 10 is provided with an internal flange 11 which engages said ledge 3. The friction collar 10 is preferably of thin material, say thin sheet metal and the lower edge thereof is provided with one or more lugs as shown at 12, each lug is adapted to engage a notch 13 on the exterior of the container, whereby the friction collar 10 is held in fixed relation with the container C and the nipple B.

15 The retaining collar 14 is adapted to fit over the friction collar 10 with slight clearance, whereby the retaining collar 14 may be turned upon the friction collar 10, with ease. The retaining collar 14, is provided with engaging means 15, and the container C is provided with complementary engaging means 17, whereby a screw action is employed to secure the retaining collar 14 to the container C.

25 The retaining collar 14 is provided with an internal flange 16, adapted to seat against the flange 11 of the friction collar 10 which is held against turning as previously described. It will be readily apparent that the retaining collar 14 may be employed to securely clamp the nipple B to the container C, unaccompanied by distortion of the skirt 2 and other portions of the nipple B which are necessarily of pliable material, usually rubber. In this manner a leak-proof union of the parts is assured and it will be readily apparent that the parts can not be dislodged by the efforts of the infant, as will sometimes occur with various prior art nipples.

35 The described parts are instantly separable for the purpose of cleansing and sterilization, and can with facility be quickly assembled with minimum effort.

40 The drawing illustrates the preferred construction of the nipple and container, where it will be seen in Fig. 2, that the mouth of the container is formed by a plain cylindrical portion 9 of lessor diameter than the container, thereby forming a ledge or shoulder 9a. The thread 17 is formed immediately below the shoulder 9a and the groove or notch 13 extends downwardly from this shoulder and may interrupt the thread 17 as shown, so as to assure that the lug 12 will not escape from the notch 13. As shown in Fig. 2, the skirt 2 and the offset at 3, should be of proper dimensions to correspond with the cylindrical mouth 9, so that the lower edge of the skirt 2 will seat 55

upon the ledge 9a when the internal offset at 3 seats upon the plane portion of the cylindrical mouth as shown in Fig. 1, where it will be seen that the skirt of the nipple is confined in the restricted area between the container and the friction collar 10 which acts as a ferrule for the skirt. From this description it will be readily understood that the screw action of the collar 14 will not only bind the offset 3 to the container but will also crowd the skirt portion 2 and cause it to completely and tightly fill the space between the friction collar 10 and the container. This function assures a leak proof union and a secure assembly without extreme tightness of the screw collar 14 and eliminates the necessity of vigorous effort to cinch up the screw collar. It will be seen that the offset skirt forms an angle over the edge and the periphery of the mouth of the container and that this angular union is far more secure than would be obtained in the absence of such angular union. It will also be seen in Fig. 1, that the inside of the nipple is flush with the inside of the mouth of the container, so as not to form a ledge in either direction.

The friction collar 10 not only acts as a ferrule to confine the skirt of the nipple, but being interlocked with the container, it precludes destructive abrasion of the nipple by either the screw collar 14 or the mouth of the container, thus assuring that the contents will not be contaminated by fine granules of rubber, as is inevitable where there is frictional abrasion between the inside of the nipple and the container.

The prior art presents various devices kindred to the present invention which is designed to eliminate the inaptitudes of the prior art structures, thereby providing a commercially practical device possessed of a sanitary construction of the parts and capable of secure assembly with minimum effort.

The threaded engagement shown, is for the convenience of illustration and any other commercially practical means may be employed, and it will of course be understood that the improved holding means as described, may be interchangeably employed with various nipples of different shapes.

As seen in Figure 1, the bell cover E, frictionally engages the retaining collar 14, thereby effectively enclosing the nipple. This provision is of utmost advantage where the feeding device is carried or handled after sterilizing; as for instance, in traveling, visiting, shopping and out- ing. As seen in this figure, a casing K is provided with a threaded constriction 18 engaged with the exterior of the thread 15 of the retaining collar 14, whereby the container is excluded from external contact. The air confined in the void V affords an effective thermal insulation and materially aids in maintaining the temperature of the nurse, as is important in the case of new born, premature born and incubator infants. In any instance where the feedings are necessarily administered in an atmosphere below the normal temperature of the human body, the described thermal insulation is very advantageous. It will of course be obvious that either the bell cover E or the casing K may be employed separately or both may be employed on the same container at the same time, as occasion requires.

Where quick handling of the feedings is desired, they may be prepared in advance and closed with the nipple B, in the described manner, then covered with the bell cover E which

will effectively preclude contamination, whereby the assembly will be complete when the feeding time arrives.

In the present invention, I claim:

1. An infant feeding device, comprising a container having an unbeaded cylindrical mouth, a nipple having an offset skirt of sufficient diameter to fit over the outer diameter of said cylindrical mouth when said skirt is unstretched; a friction collar adapted to fit over the outer diameter of said skirt, an internal flange on said collar adapted to seat upon the offset shoulder of said skirt, lugs upon said collar, said lugs adapted to engage in grooves on said container; a retaining collar adapted to fit over said friction collar with slight clearance, said retaining collar having an internal flange adapted to seat against the flange of said friction collar, means upon said retaining collar engaging with means upon said container, whereby the described parts may be securely assembled as a unit in a leak proof manner.

2. In an infant feeding device, the combination with a nipple and a container, of a friction collar adapted as a ferrule for the engaging portion of said nipple, means for engaging said collar with said container secure against relative rotation, whereby screw means may be employed to secure the parts in assembled position unattended by distortion of said nipple.

3. The combination in an infant feeding device including a nipple and a container, of a cylindrical collar having an internal flange, lugs projecting in the plane of said cylindrical portion and adapted to engage with recesses in said container.

4. In an infant feeding device, the combination with a nipple, of a container having an unbeaded cylindrical mouth, an external shoulder on said cylindrical mouth, recesses in said shoulder portion, said nipple being adapted to engage said cylindrical mouth and adapted to seat against said shoulder and the plane portion of said mouth, a friction ferrule adapted to seat against an external shoulder on said nipple and engage with the recesses aforesaid, a retaining collar adapted to seat against said ferrule, threaded means upon said retaining collar and upon said container whereby the parts may be secured in assembled position, leak proof at the juncture.

5. In an infant feeding device, a container, a closure for said container, a collar threaded upon said container and securing said closure thereto, a casing threaded upon said collar and enclosing said container in a confined air chamber.

6. An infant feeding device comprising a container, a nipple fitted upon said container, a retaining collar threaded upon said container and securing said nipple thereto, a casing threaded upon said retaining collar and forming a confined air chamber about said container, and a cover cap frictionally engaged with said retaining collar, thereby enclosing said nipple.

7. In an infant feeding device, a container having a cylindrical mouth, a larger cylindrical portion therebelow with recesses therein and threaded means thereon, a nipple having an offset skirt, the plane portion of said mouth being of the same dimensions as the internal shoulder formed by the offset of said skirt, whereby the interior of the nipple is flush with the interior of the mouth of said container when assembled thereon, a friction collar adapted to fit over said skirt and having an internal flange adapted

to seat upon the external shoulder formed by the offset of said skirt, said collar having lugs adapted to engage said recesses, and a retaining collar adapted to seat upon said flange and engage said threaded means.

8. An infant feeding device comprising a threaded container, a nipple, a retaining collar having internal and external threads on the lower portion thereof and a plain cylindrical upper portion, said collar engaging said container and securing said nipple thereto, a cover cap frictionally engaged with the plain cylindrical portion of said collar, and a casing threaded upon said collar and enclosing said container in a confined air chamber.

9. An infant feeding device comprising a container having a cylindrical mouth, a nipple encompassing the outer periphery of said cylindrical mouth and seating upon the circumferential edge of said cylindrical mouth, an internally flanged ferrule fitted over the engaging portions of said nipple and interlocked with said container, a retaining collar seating upon said ferrule and engaging with said container to hold the parts in assembled relation.

10. An infant feeding device comprising a container having an open end, a closure encompassing the outer surface of said open end and seating upon the edge of said open end, an internally flanged ferrule fitted over the engaging portions of said closure and interlocked with said contain-

er, a retaining collar seating upon said ferrule and engaging with said container to hold the parts in assembled relation.

11. In an infant feeding device comprising a nipple secured to a container by a threaded collar, a friction member disposed between said nipple and threaded collar, said friction member engaging with said container in interlocked relation secure against relative rotation.

12. An infant feeding device, comprising a nipple having a peripheral skirt portion depending therefrom and connected thereto by a ledge portion, a container having a mouth portion adapted to fit within the skirt portion of said nipple, the terminal end of the walls of said mouth portion adapted to seat against the inside of the ledge portion of said nipple, the skirt portion of said nipple and the walls of the mouth portion of said container being longitudinally straight, the inner diameter of said skirt portion being the same as the outer diameter of the walls of said mouth portion, a retaining collar fitting over the skirt portion of said nipple, an internal flange on said collar and adapted to contact the exterior of the ledge portion of said nipple, cooperating means upon said collar and said container for engaging them together and compressing the ledge portion of said nipple tightly against the terminal end of the walls of said mouth portion of the container.

BRIDGET D. CONDON.