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BACKGROUND OF THE INVENTION

THE invention relates to bottle feeding devices.

The invention relates to feeding devices, having teats, normally for feeding babies but may be used also for feeding calves and other suckling animals. Conveniently such devices comprise a bottle or container
5 for milk and the like having a teat at one end which is normally attached to the bottle by a screw or snap-fitting cap. The bottle is charged with milk and then the teat is fitted by screwing the cap to one end of the bottle.

The bottles are usually made of glass or plastics material and must
10 normally be thoroughly cleaned and sterilized before each feed.

It is an object of the invention to provide an improvement for such feeding devices.

SUMMARY OF THE INVENTION

According to the invention there is provided a flexible liner for a feeding container characterised in that the liner has an integrally
15 formed nipple at one end.

The liner may have an integrally formed teat at said one end. The

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teat may provide the nipple, the liner being integrally attached to the base of the teat. The liner may surround the outer surface of the teat. The teat may be formed with shoulders arranged to grip an aperture in the container to hold the teat in position for use.

- 5 The flexible liner may be sealed or otherwise closed and precharged with feeding substances.

BRIEF DESCRIPTION OF THE DRAWINGS

A feeding bottle and liner therefore according to the invention will now be described by way of example with reference to the accompanying drawing in which:

- 10 Figure 1 is an isometric view of the bottle and liner; and
Figure 2 is a cross-section view of the bottle.

DESCRIPTION OF PREFERRED EMBODIMENTS

- Referring to the drawing, a bottle 10 is formed with a restricted aperture 11 at one end and a screw cap 12 at the other end. A plastics material flexible liner 13 extends from and is trapped by screw threads under the cap 12. The inner surface of the cap is covered by the liner 13
15 which may be joined at one side to the remainder of the liner or provided as a separate part of the liner. The liner is integrally attached to and surrounds a teat 14 providing a shoulder 15 which grips the periphery of the aperture 11.

- 20 In use, the cap 12 is removed and the liner inserted teat-first into the bottle 10. The teat 14 emerges through the aperture 11 and is pulled into position, where the shoulder 15 springs onto the periphery of the aperture 11. The liner 13 is then charged with milk; graduations (not shown) are provided on the side of the bottle 10 or on the liner

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so that the quantity of milk can be measured if desired. When feeding is over, the cap 12 is removed and the liner 13 together with the teat is withdrawn. It may be necessary to compress the shoulder 15 laterally to some extent to release the shoulder 15 from the periphery of the aperture 11.

5 The teat 14 may be integrally formed with and permanently attached to the liner as shown. In an alternative arrangement, the teat 14 is provided separately and is normally pushed into position in the liner before the liner is positioned in the bottle 10. In this case the liner 13 is formed at one end to provide a nipple so that a separate teat can be fitted into the nipple.
10 In such an arrangement, the teat 14 is held in position by nestling into the nipple shape of the end of the liner and as in the described arrangement the teat acts to hold the liner 13 in the bottle due to its seating on the periphery of the aperture 11. With such an arrangement the teat 14 may be re-usable, being then separately sterilized after each use,
15 or provided as a disposable item.

In a different embodiment the liner 13 is permanently attached to or adjacent to the base of the teat 14. In this embodiment the liner 13 does not extend, as in Figure 1, over the outer surface of the teat 14.

The liner with or without teats as described offers several advantages.
20 The liner, together with the integrally formed or permanently attached teat as appropriate, can be made of cheap disposal material and supplied in sterile condition for use for each single feed. This also means sterile feeding can be achieved without the need for washing and sterilizing procedures which may not be readily available such as on journeys or
25 in more primitive environments.

The bottle or container may be made of poorer quality materials than hitherto and especially may be provided with poorer surface finishes

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as it is no longer necessary to sterilize the bottle, or to clean the bottle to the same extent. Further, the shape of the bottle generally is no longer a restraining design feature because the liner can be fitted into virtually any cross-sectional shaped bottle.

- 5 It will be noted that a seating 15 is provided in the described arrangement. This may be replaced by a frictional fit or in some instances dispensed with altogether especially as the contents of the liner tend to keep the teat in position when the bottle is raised above the feeding baby or animal. In the case of a baby, when the baby is sufficiently
10 skilled, as will often be the case, the teat is kept and retained in position without any retaining fit being required, the teat extending naturally away from the bottle during feeding.

- Further it is within the scope of the invention to provide liners incorporating teats generally as described which are pre-packed with
15 feeding substances and sealed or otherwise closed. The liner and its contents can be warmed, as often required, if desirable by immersion into warm water, while retaining the effective sterile condition of both the liner and the feeding substances even though the warm water may not be sterile.

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CLAIMS:-

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A flexible liner for a feeding container characterised in that the liner has an integrally formed nipple at one end.

2

A flexible liner according to claim 1, characterised in that the liner has an integrally formed teat at said one end.

3

5 A flexible liner according to claim 1 or 2, characterised in that the teat provides the nipple, the liner being integrally attached to the base of the teat.

4

A flexible liner according to claim 1 or 2, characterised in that the liner surrounds the outer surface of the teat.

5

10 A flexible liner according to any one of claims 2 to 4, characterised in that the teat is formed with shoulders arranged to grip an aperture in the container to hold the teat in position for use.

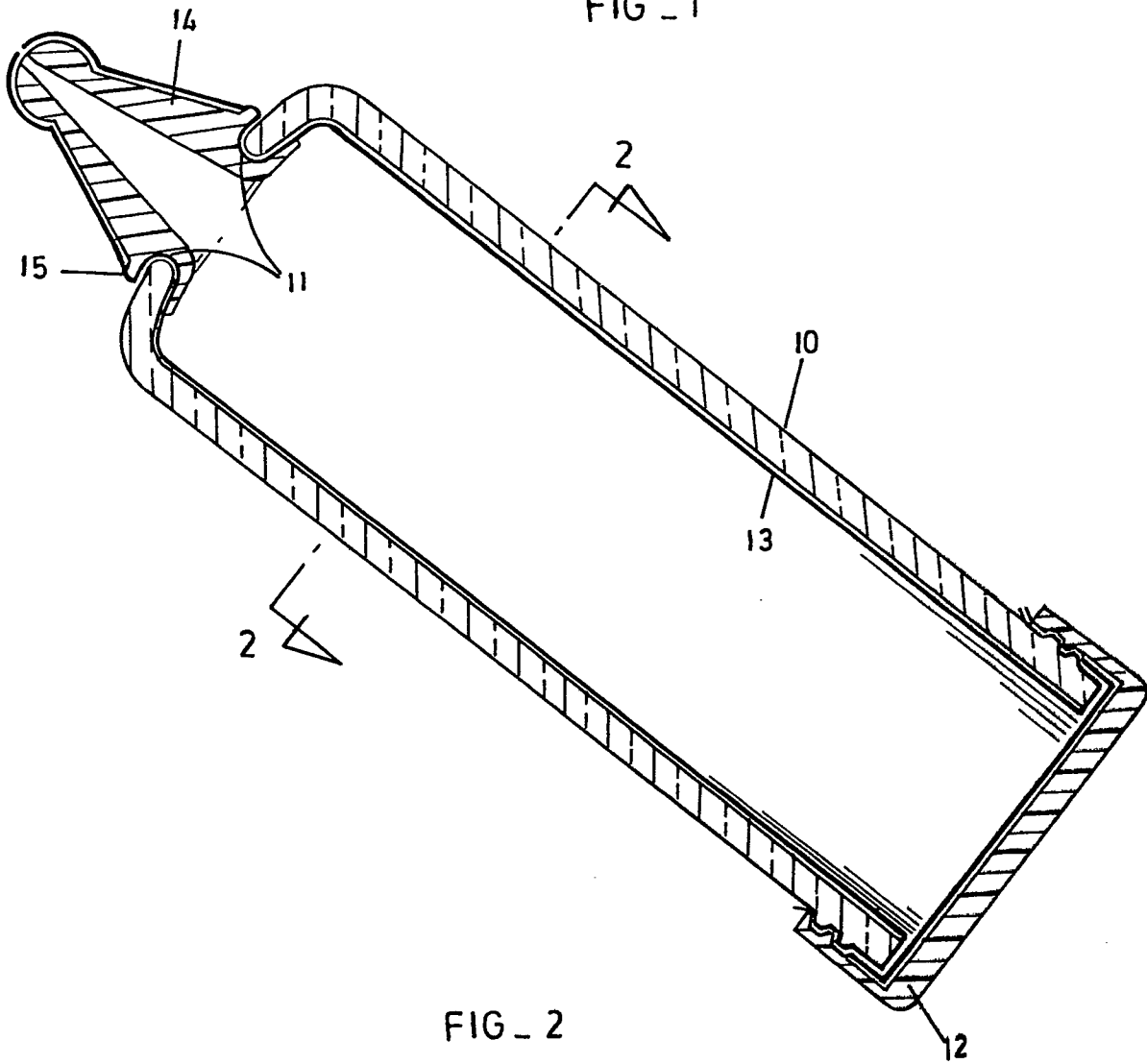
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15 A flexible liner according to any one of claims 1 to 5, characterised in that the liner is closed at its other end and precharged with feeding substances.

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FIG_1



FIG_2

