

Feb. 12 1963

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3,077,279

INFANT MEDICINE SELF-FEEDER

Original Filed Dec. 5, 1956

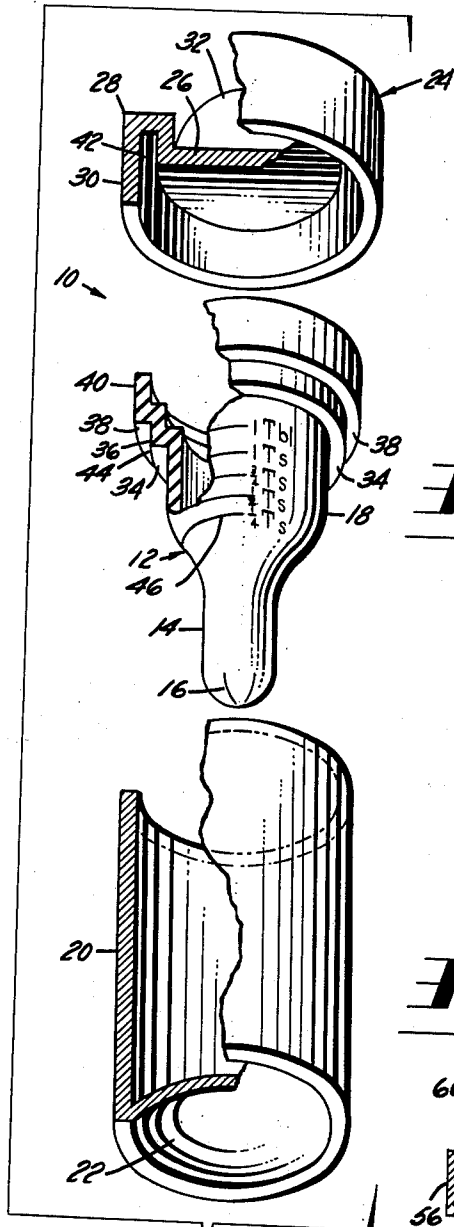


Fig 1

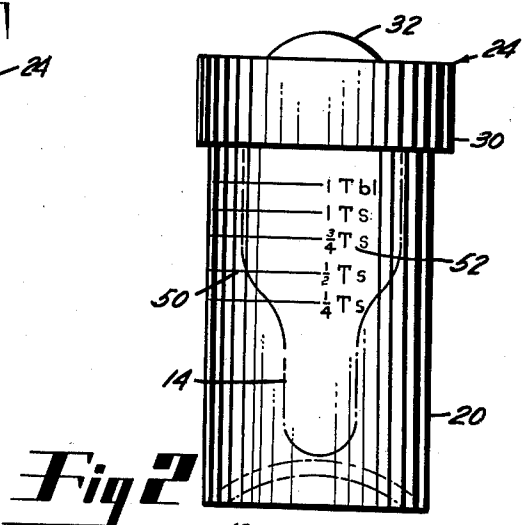


Fig 2

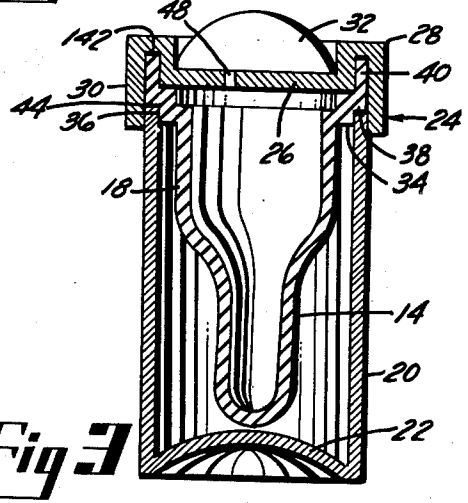


Fig 3

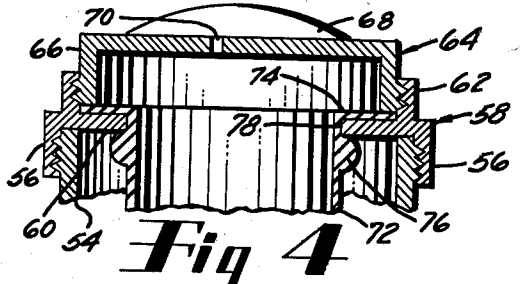


Fig 4

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INFANT MEDICINE SELF-FEEDER

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Continuation of application Ser. No. 626,435, Dec. 5, 1956. This application Oct. 19, 1959, Ser. No. 848,175
1 Claim. (Cl. 215-11)

This invention relates to a device for the giving of medicine to infants which has problems quite unique as compared with bottle feeding of milk to infants.

When medicine is fed to a baby with a spoon the baby frequently knocks the spoon away, spilling valuable medicine.

Also use of a spoon is very inaccurate because spoons are, as a rule, seldom of standard size.

It is therefore an object of my invention to provide the world's first medicine nipple having volume calibrations relating specifically to the volume of the space between the lower end opening of the nipple and the various calibrations.

A particular object is to provide an infant's medicine self-feeder which is adapted to remain in a baby's mouth during most of the sleeping movements of a tiny baby and while the baby is unattended whereby the sleeping infant can slowly drink the medicine in between naps and even substantially without awakening. This is attained through my concept of an infant's self-feeder of such a short total length from its bottom end to its upper end and particularly being sufficiently short in height and of sufficiently little weight in those parts of the feeder which are above the nipple and the feeder being otherwise so shaped and weighted as not to be excessively top heavy so that an infant can easily hold the self-feeder in its mouth for the gradual drinking of the medicine by the baby while unattended.

A particular object is to provide the world's first baby's medicine feeder having calibrations on a flexible nipple. I am aware that medicine droppers and other rigid devices have been calibrated heretofore and that one is shown in the Italian patent to Savary, Patent No. 501,932, printed Dec. 1955. However such a device is not adapted to be held by a baby in its mouth because it lacks a flexible resilient nipple as is vital because of familiarity to small children because of its similarity to the mother's breast. I am also aware that the common baby bottle has a flexible nipple and that the bottle in a sense functions as a cap. However such nipples are never calibrated as is necessary for my new concept and use, a medicine feeder specifically.

Also the common baby bottle is much too long and top heavy to serve as a self-feeder capable of being held by an infant in its mouth unattended as is one of my main concepts.

This application is a continuation of the applicant's co-pending patent application Serial 626,435, filed December 5, 1956, and now abandoned.

With these and other objects and advantages in view the invention embodies an elongated nipple having a small mouth engaging portion of soft rubber and a larger body portion of relatively heavy rubber, a container in which the nipple is positioned, and a cap for gripping a rim on the large portion of the nipple for supporting the nipple in the container and for holding the nipple in use.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:

FIG. 1 is an exploded view showing the cap, nipple and container with parts broken away and with remaining portions of the parts shown in section;

FIG. 2 is a side elevational view of a medicament ad-

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ministering nipple assembly with the nipple shown in broken lines therein;

FIG. 3 is a vertical section through the assembly with the parts as shown in FIG. 2; and

FIG. 4 is a cross section through the upper portion of a medicament administering nipple assembly, illustrating a modification wherein the container is provided with a collar that is threaded on the container and on which the cap is threaded for retaining the nipple in position as it is filled and used.

While one embodiment of the invention is illustrated in the above-referred-to drawings, it is to be understood that they are merely for the purpose of illustration, and that various changes in construction may be resorted to in the course of manufacture in order that the invention may be utilized to the best advantage according to circumstances which may arise, without in any manner departing from the spirit and intention of the device, which is to be limited only in accordance with the appended claim. And while there is stated the primary field of utility of the invention, it remains obvious that it may be employed in any other capacity wherein it may be found applicable.

In the accompanying drawings, and in the following specification, the same reference characters are used to designate the same parts and elements throughout, and in which the numeral 10 refers to the invention in its entirety, numeral 12 indicating a nipple having a small lower portion 14 of thin resilient material, such as rubber, and having radially disposed slits 16 therein, and a large upper portion 18 of relatively thick resilient material, such as rubber or plastic, numeral 20 indicating a container having a concave base 22, and numeral 24 indicating a cap having a base 26 with a rim 28, U-shaped in cross section, a peripheral flange 30 frictionally retained on the upper edge of the container and extended from the rim 28, and a handle 32 extended from the rim 28, and a handle 32 extended from the base 26.

The large upper portion 18 of the nipple is provided with an annular ring 34 that extends outwardly to engage the inner surface of the container wall, then upwardly to provide an inner cylindrical portion 36 from which an annular ring 38 extends, and which is connected by the annular ring to a cylindrical flange 40 which forms a rim at the open end of the nipple.

The flange 40 is positioned in an annular recess 42 in the rim 28 of the cap 24, as shown in FIGURE 3, and when it is desired to fill the nipple with medicament or the like the nipple is positioned in the container 20 and the cap removed. A shoulder 44 at the lower end of the flange 40 rests upon the upper edge of the container wall, and after a measured amount of medicament is deposited in the nipple, until it reaches one of the graduations 46, the cap is replaced with the flange 40 nested in the recess 42. The base 26 of the cap is provided with an opening 48 providing a vent to facilitate drawing the medicament from the nipple.

The wall of the container 20, which is also formed of transparent material, is provided with graduations 50, representing teaspoonsful or tablespoonsful, or parts thereof, as indicated by the numeral 52.

The graduations 52 (FIGURE 2) can be called calibrations and the teaspoonsful or tablespoonsful 52 can be called indicia, and both indicate the volume of the nipple in the space from the calibration to the lower end at the slits 16, and each are spaced different distances from the lower end of the nipple.

In the design shown in FIGURE 4, the upper end of the wall of a container 54 is threaded and an internally threaded flange 56 of a collar 58 is threaded thereon. The collar is provided with an inner annular flange 60 and an internally threaded cylindrical wall 62 extends up-

wardly from the flange. The device is provided with a cap 64 having an annular externally threaded flange 66 depending from the peripheral edge, and the upper portion of the cap is provided with a handle 68 and an opening 70 providing a vent.

A nipple 72 used in the container shown in FIGURE 4 is provided with an annular flange 74 and an annular bead 76 on the outer surface of the nipple and spaced from the flange 74 provides a recess 78 into which the inner edge of the flange 74 provides a recess 78 into which the inner edge of the flange 60 extends. With the inner edge of the flange 60 in the recess 78 and the peripheral edge of the flange 74 held by the flange of the cap 64 the nipple is securely held in the collar and cap so that it may readily be held by hand as it is inserted in the mouth of an infant in use, and with the cap removed the nipple is supported in an inverted position to facilitate placing medicament therein.

The nipple is made of rubber, plastic, or other suitable flexible or resilient material, and as stated heretofore, the small portion is of relatively thin material so that it is soft and the upper or larger portion is of relatively thick or stiff material whereby the rim has sufficient body or rigidity to provide holding means when positioned on the container or nested in the cap.

With the nipple substantially sealed in the container it is protected from dust, dirt, and the like, so that after being sterilized there is no possibility of the nipple being contaminated by coming in contact with other objects or devices.

The nipple should be formed integrally of a single piece of material. Nevertheless it is believed advantageous that the upper portion of the nipple including the flange 40, the cylindrical portion 36 and preferably also the annular ring portion 34 and possibly other portions with the exception of the small lower portion 14 can be more stiff than the preferably very flexibly lower portion so that the nipple tends to hold its position and not collapse at its upper end and is sufficiently flexible for comfortable use by an infant at the lower end.

Since the main object of the invention is to provide an infant's medicine self-feeder which is adapted to remain in its mouth during most of the sleep movements of the tiny baby where the baby is unattended whereby the infant can slowly drink the medicine during naps and even substantially not awakening, my infant's short feeder is of a total length from its bottom end and at the tip of its nipple to its upper end, or in other words from the bottom to the top of the feeder, as it is seen in the center view of FIG. 1. This total length or height is preferably short and the nipple itself is of sufficiently little weight in those parts of the feeder which are above the nipple and the feeder is otherwise so shaped and weighted so as not to be excessively top-heavy so that the infant can easily hold the self-feeder in its mouth for the gradual drinking of the medicine by the baby while unattended.

I prefer a total height or length of the feeder as these terms are thus described which is 3 and $\frac{5}{32}$ inches and the total width of the uppermost portion of the feeder at the flange 40 is preferably 1 and $\frac{1}{4}$ inches, the width and diameter of the larger upper portion 18 of the nipple being 1 and $\frac{1}{8}$ inches.

The lower tip of the nipple itself has an inner diameter of $\frac{11}{32}$ inch and the wall of the tip of the nipple is preferably $\frac{1}{16}$ of an inch.

As thus described, the nipple, made of natural or synthetic rubber having an upper cap formed of any suitable substance, such as a substance of substantially no greater specific weight than natural or synthetic rubber, will not be top-heavy to an excessive extent whereby an infant can hold it in its mouth unattended as above described.

It will be understood that the tiny babies referred to sleep on their backs mostly and the likelihood is that even

larger infants will drink the medicine before they are likely to turn over any way.

While the total height that is preferred is 3 and $\frac{5}{32}$ inches or approximately 3 and $\frac{1}{2}$ inches nevertheless the total height of approximately four inches or less is also workable. It will also be seen that other variations in dimensions will serve to substantially fit the intended operation of the self-feeder.

It will be seen that the essence of the invention is that my medicine feeder has a stability against tipping over when the feeder is in an infant's mouth unsupported, which is substantially that of a feeder having the following characteristics: a maximum height or length of feeder, when disposed nipple downwardly of substantially four inches, preferably substantially three and five thirty-seconds inches and a total maximum width of substantially one and one-fourth inches, and otherwise of a construction having an interior of substantially a maximum size proportional to the outside dimensions of the feeder so that the feeder is substantially without unnecessary weight, the nipple and cap portions all being formed of substances of substantially no greater specific weight than natural rubber for avoidance of excessive weight.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Changes in shape, size, and rearrangement of details and parts, such as come within the purview of the invention claimed may be resorted to in actual practice, if desired.

I claim:

A medicament feeder comprising a tapered flexible, resilient transparent nipple having a smaller lower end and a larger upwardly opening upper end, and a cap removably attached to and substantially sealing said open upper end of said nipple, said self-feeder being of such a short length from its bottom end to its upper end and being so shaped and weighted as not to be excessively top-heavy so that an infant can easily hold it in its mouth with the small end of the nipple downward whereby the infant can gradually drink the medicine while asleep and unattended without disturbing the infant's rest and thereby avoiding awakening the child and the possibility of the child's knocking the self-feeder away, said nipple being hollow with a substantially open interior for receiving and permitting the free flow of medicine therethrough, said nipple having a lower end opening for delivery of medicine, means for venting said self-feeder above the major part of said nipple to permit sucking of medicine by the infant, the nipple and cap portions of said feeder both being formed of material which is of a specific gravity not substantially greater than natural rubber, said feeder having an interior of substantially a maximum size proportional to its outside dimensions so as to be substantially without unnecessary weight, and at least one calibration spaced from the said lower end and indicating the volume of medicine in the nipple between said lower end and said calibration whereby accuracy can be attained, the total height of said feeder when disposed nipple downward being substantially four inches or less and the total maximum width being substantially one and one-fourth inches, whereby said feeder has stability against tipping over when the feeder is in an infant's mouth.

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