

Description

This invention relates to the nursing of infants.

For the first six months of a baby's life, its sole source of nourishment is milk. This can be:

- breast milk exclusively;
- breast milk complimented with an artificial formula; or
- an artificial formula exclusively;

After six months, other foods may be introduced, but milk still forms a major part of a child's diet for at least a further year.

The incidence of breastfeeding of infants in the State of Victoria, Australia, showed a dramatic drop between 1950 to 1970 but since then has been climbing steadily due to:

- the active encouragement of breast feeding in hospitals;
- literature supplied to mothers promoting breastfeeding; and
- the efforts of such organisations as the Nursing Mothers' Association of Australia.

Where an infant in the sub-six months of age group is not completely breastfed, it is generally considered to be essential that it be fed on an appropriate commercial infant formula. These formulae are scientifically designed to resemble human milk as closely as technology will permit, and stringent standards have been prescribed for their manufacture.

Such formulae are dispensed to infants in nursing bottles. Conventional nursing bottles have a glass or plastic body portion, and a closure in the form of a screw-threaded cap into which a teat is fitted.

All literature on infant feeding stresses the need for sterility in the ingredients and equipment used for making up an artificial feed, whether it be a proprietary formula or ordinary milk.

Two methods are normally used to sterilise bottles and teats. The equipment can either be immersed in a chemical sterilising solution for one hour, or may alternatively be placed in a suitable container, covered with water, brought to the boil and allowed to boil continuously in the water for ten minutes and then cooled. Great care must then be taken to ensure that all sterilised objects remain sterile.

Instructions supplied with all dried or concentrated infant formulae require the water which is to be added to reconstitute the formula to be boiled for at least ten minutes. The water will then take an hour or so to cool to body temperature. The powder or concentrate itself is kept in a sterile container which is usually fitted with a plastic lid which must itself be kept sterile. The contents are removed with a scoop which should also be sterilised and dried before use.

Since milk is a perfect medium for the growth of bacteria, prepared feeds are required to be kept under refrigeration.

Before being fed to the baby the feed needs to be heated to bring it to at least room temperature and, if preferred, to body temperature. This can take several minutes during which time the parent is usually listening to a crying baby.

Thus, conventional artificial formulae feeding arrangements have disadvantages compared to breastfeeding. Breast milk is sterile, it requires no preparation, it has no storage problems, it does not need to be warmed before feeding is able to commence, it contains all vitamins, minerals and nutritional value required, and it is readily available.

Despite the foregoing problems artificial feeding does have distinct advantages

(a) Feeding duties can be shared

- the mother does not have to wake up for each night feed;
- the mother does not have to take the baby with her to work, to a social function or elsewhere where breast feeding may not be practicable;
- the child can be left with a baby sitter to give the mother more freedom.

(b) The mother knows precisely how much the baby takes in each feed.

(c) Some mothers choose not to breastfeed

- some women find it distasteful or messy;
- some women are unable to breastfeed or have difficulty breastfeeding because of some physical problem.

Thus, a feeding system which can eliminate or minimize the problems of artificial feeding will obviously benefit a great many people. Some efforts have been made to provide improved feeding arrangements, but these have not been successful.

In addition, most babies suffer from colic. In the case of bottle-fed babies this is occasionally caused or contributed to by the baby sucking against the vacuum in the feeding bottle.

To cope with this problem manufacturers recommend that the plastic closure on a nursing bottle that holds the teat should be left slightly untightened so as to admit air into the bottle as the baby sucks. In practice, however this system does not always work well and milk often leaks from the cap of the bottle during feeding.

A number of manufacturers have produced bottles specifically designed to overcome this problem but they are expensive and inconvenient to use. For example, AU-A-65873/65 to McKenna relates to a method and means for dispensing baby formula, in which a special flexible bag containing formula, is locatable in a casing. A special skirt on the package is adapted to locate over the neck of the casing. AU-A-77971/75 to Hammer also proposes

the use of flexible bags for containing nursing liquids, to be used within a particular outer structure, but such an arrangement is costly, in that all the elements of the arrangement must be purchased to replace existing bottles.

US-A-3,762,542 to Grimes discloses the use of presterilised bags for insertion into a conventional 'nursur'. However, with such a system there is still scope for contamination of the formula dispensed into the bag.

EP-A-0 068 653 to Klittich relates to attachment means for securing a flexible bag in a specialized reusable housing, which may then be filled with fluid.

It is an object of this invention to provide an improved system for feeding infants with artificial feeding formula.

The invention provides an infants' feeding system comprising an elongated bag containing a feeding formula, said bag having been filled with said formula under sterile conditions, and a rigid container having an opening spannable by dispensing apparatus for said formula, said bag having a first portion adjacent one end thereof occupied by said formula when said bag is in a first orientation, and said bag having a second portion adjacent the other end thereof, characterised in that said second portion is collapsed due to the withdrawal of air therefrom when said bag is in said first orientation, in that said bag is adapted to be inserted into said container through said opening with said second portion located in the interior of said container, said second portion being collapsed to a size that permits it to enter said opening, in that said bag being adapted to inverted from said first orientation to a second orientation so that the formula is caused to flow from said first portion into said second portion when the latter is located within said container a part of said first portion being removed when said bag is in said second orientation to provide an outlet for the formula in said bag, said bag being formed such that said first portion and said second portion are continually in fluid communication with each other, and in that dispensing apparatus is adapted to be secured to said container across said opening for dispensing the formula contained in the bag to an infant.

The invention also provides a method of producing a flexible container containing infants' formula (20) and suitable for use with a conventional nursing bottle having a dispensing apparatus spanning a neck opening of said bottle, said method being comprising the steps of:

providing an elongated, flexible container open at one end;

partially filling a first portion of said container with sterile infants' formula ;

characterised by the steps of: evacuating air

from the remainder of said container to provide a collapsed portion thereof smaller in cross sectional area than said first portion and sufficiently small in size as to be insertable into said container through said opening for the dispensing apparatus; and thereafter sealing said open of said flexible container.

The invention further provides a sealed, sterile bag as defined in Claim 7.

An embodiment of the invention will be described in detail hereinafter, with reference to the accompanying drawings, in which:-

Fig. 1 is a perspective view of a bag filled with infant feeding formula;

Fig. 2 is an elevation of a nursing bottle into which one end of the bag of Fig. 1 is being located;

Fig. 3 is an elevation of the nursing bottle of Fig. 2 showing the liquid in the bag being transferred to the portion of the bag located in the bottle;

Fig. 4 is an elevation of the bottle and bag of Fig. 3, showing the bag about to be cut; and

Fig. 5 is an elevation of a nursing bottle ready for use.

In the embodiment of the invention an artificial infants' feeding formula is prepared in sterile conditions and is packed in a disposable bag (10) (Fig. 1) which preferably has the dimensions 180mm (circumference) by 330mm (length).

It is considered that as most plastics materials are highly permeable to oxygen they would be unsuitable for use in forming a bag 10 because over the anticipated shelf life of the formula contained therein, the vitamin content, particularly of vitamin C and folic acid, would drop dramatically.

In order to compensate for this loss by boosting the vitamin content before manufacture so as to arrive at an acceptable vitamin content at the end of the contemplated shelf life, the result would be an unacceptably high vitamin level at the start of the shelf life period. The solution is to use a plastic material with a minimum permeability. Special plastic laminates are manufactured for this purpose and are used with the Intasept (referred to hereinafter) and other systems. It is also possible for such a laminate to be produced in a tubular form by an extrusion or other process.

Referring to Figure 1, a single feed, that is, a predetermined volume of liquid formula, is packed into each bag 10 in sterile conditions using a UHT (ultra high temperature) process which is used to produce dairy products having long shelf life at ambient temperatures.

The manufacturing process involves -

1. Mixing the formula;
2. Sterilising the mixed formula;
3. Packing the mixed formula into bags 10;

4. Packing the bags 10 into boxes

Steps 1 and 4 will require a relatively simple plant. Step 2 will require the use of a UHT sterilising machine adjusted to the requirements of the product.

The greatest risk of contamination arises when the product leaves the UHT sterilising machine and enters the plastic bag 10. At this stage, assuming that the machine has been correctly adjusted and operated, the product should be sterile. The critical component is therefore the packing machine.

Because the product is intended for babies a high degree of reliability in the manufacturing process is essential. A one-in-five thousand failure rate, although possibly acceptable for UHT household milk, is not good enough. Either an aseptic packaging machine will be required for this particular application or alternatively, an existing machine with a high degree of reliability will need to be adapted.

The "Intasept" aseptic 2-30 litre filler manufactured by Wrightcel Limited is claimed to have a high degree of reliability and can be very easily adapted to this application with a minimum of cost.

The feed only occupies bottom section 12 of bag 10 when the bag is oriented as shown in Figure 1, and the remainder 14 of the bag has the air evacuated therefrom. Immediately after filling, the bag is sealed by conventional means to prevent any contamination.

The size of the feed packaged in this way would depend upon the age of the baby. It is suggested that the feeds would be marketed in a 150 millilitre size and a 250 millilitre size. The size of the bag 10, however, would preferably remain the same.

The filled bags are then packed in cardboard boxes or the like, containing a given number of feeds to each box.

Being sterile, these boxes of infant feeds could be sold "off the supermarket shelf" and would not require refrigeration. The anticipated shelf life is three months.

Figures 2 to 5 inclusive demonstrate the manner in which a feed is prepared after a filled bag 10 has been purchased by a parent.

The parent would obtain a filled bag 10 from a cupboard or other storage area.

As shown in Figure 1, the parent would then insert the collapsed end 14 of bag 10 into the open end 18 of a conventional nursing bottle 16. The parent then raises filled end 12 of the bag 10 (Figure 3) so that the orientation of the bag is inverted with respect to that of Figure 1 and so that the infants' formula 20 flows in the direction of the arrows to end 14, which is located in bottle 16. The formula 20 is then within the bottle 16, but is separated therefrom by the material from which

bag 10 is formed.

The former bottom portion 12 of the bag 10 which now protrudes above the neck 18 of the bottle 16 is now substantially devoid of milk, and the outer portion of this is cut off with scissors or the like 22 to form an open-ended bag leaving, preferably at least sixty millimetres of the bag 10 protruding above the neck of the bottle (Figure 3).

The sides 24 of this open bag are now pulled down over the outside of the neck 18 of the bottle 16 (Figure 4) and a cap 26 holding a test 28 is screwed onto the neck 18 of bottle 16, clamping the sides 24 between it and the neck 18. Thus, the bottle 16 is now ready for the formula to be dispensed to the infant.

It will be observed that the system of this invention has the following advantages:-

(a) The bottle does not require sterilisation, because no part of the milk touches it.

(b) The feed does not need to be heated since it is already at room temperature. If it is desired to bring the feed to blood temperature, only minimal heating is required.

(c) An unlimited number of feeds can be taken in the car, camping, on picnics or elsewhere where sterile facilities for the preparation of feeds are not available. All that is required is a jar or other small container of sterilising solution for the teat and screw on cap.

(d) The mother can be certain that the feed is completely sterile because there is no possibility of contamination.

(e) The system fits all commonly used feeding bottles without any modification required.

(f) If a hole is made in the feeding bottle, the bag 10 will collapse like the inside of a wine cask as the baby feeds. Since the baby does not have to suck against a vacuum, the chances of colic are diminished.

It is considered that the formula packed in bags 10 will need to be initially boosted with vitamins, particularly vitamins A, C and folic acid, which will be lost:

- due to the heat of the UHT process;
- due to oxygen contamination during storage; or
- due to the effect of light.

Losses due to light can be minimised by packing the bags into an appropriate box. Oxygen contamination can be minimised by using an appropriate plastic laminate for the bags, as discussed hereinbefore.

The claims form part of the disclosure of this specification.



Claims

1. An infants' feeding system comprising an elongated bag (10) containing a feeding formula (20), said bag (10) having been filled with said formula (20) under sterile conditions, and a rigid container (16) having an opening (18) spannable by dispensing apparatus (28) for said formula (20), said bag (10) having a first portion (12) adjacent one end thereof occupied by said formula (20) when said bag (10) is in a first orientation, and said bag (10) having a second portion (14) adjacent the other end thereof, characterised in that said second portion (14) is collapsed due to the withdrawal of air therefrom when said bag (10) is in said first orientation, in that said bag (10) is adapted to be inserted into said container (16) through said opening (18) with said second portion (14) located in the interior of said container (16), said second portion (14) being collapsed to a size that permits it to enter said opening (18), in that said bag being adapted to be inverted from said first orientation to a second orientation so that the formula (20) is caused to flow from said first portion (12) into said second portion (14) when the latter is located within said container (16) a part of said first portion (12) being removed when said bag (10) is in said second orientation to provide an outlet for the formula (20) in said bag (10), said bag (10) being formed such that said first portion (12) and said second portion (14) are continually in fluid communication with each other, and in that dispensing apparatus (28) is adapted to be secured to said container (16) across said opening (18) for dispensing the formula (20) contained in the bag (10) to an infant.
2. An infants' feeding system according to claim 1, characterized in that said container (16) comprises a nursing bottle (16).
3. An infants' feeding system according to claim 1 or 2, characterized in that said rigid container (16) has a neck to which said dispensing apparatus (28) is secured, and wherein the portion of said first portion (12) of said bag (10) adjacent the removed part thereof may be trapped between the neck of said container (16) and said dispensing apparatus (28) for securing said bag (10) in said container (16).
4. An infants' feeding system according to any preceding claim, characterized in that said dispensing apparatus (28) includes a teat.
5. A method of producing a flexible container (10) containing infants' formula (20) and suitable for use with a conventional nursing bottle (16) having a dispensing apparatus (28) spanning a neck opening (18) of said bottle, said method comprising the steps of:
 - providing an elongated, flexible container (10) open at one end;
 - partially filling a first portion (12) of said container (10) with sterile infants' formula (20);
 - characterised by the steps of: evacuating air from the remainder of said container (10) to provide a collapsed portion (14) thereof smaller in cross sectional area than said first portion (12), said collapsed portion being intended for insertion into said container (16) through said opening (18) for the dispensing apparatus (28); and
 - thereafter sealing said open end of said flexible container (10).
6. A method according to claim 5, characterized in that the step of providing the container (10) is further defined as providing a substantially tubular member having one open end and being formed of minimal oxygen permeability plastics laminate material, in order to minimise oxygen contamination of the formula.
7. A sealed, sterile bag (10) containing infants' formula (20) and suitable for use with a nursing bottle (16) having an opening spannable by dispensing apparatus (28) for the formula (20), said bag (10) being elongated and generally tubular in shape and formed of a flexible material, and having a first portion (12) adjacent one end thereof occupied by said formula (20) and a second portion (14) adjacent the other end thereof, characterised in that said second portion (14) is collapsed due to the withdrawal of air from the bag (10), said first and second portions being in continuous fluid communication with each other; said second portion (14) having, as a result of being in the collapsed state, a cross sectional area less than that of said first portion (12) and being intended for insertion in said nursing bottle (16) through said opening (18) with said first end portion (12) above said second end portion (14) so that said formula flows from said first end portion to said second end portion to place the formula in said second portion within the bottle and to remove same from said first end portion.



Patentansprüche

1. Säuglingsfütterungssystem mit einem langgestreckten Beutel (10), der eine Speisemischung (20) enthält, wobei der Beutel (10) mit der Mischung (20) unter sterilen Bedingungen gefüllt worden ist, und einem starren Behälter (16), der eine Öffnung (18) hat, die durch eine Abgabevorrichtung (28) für die Mischung (20) überspannbar ist, wobei der Beutel (10) einen ersten Teil (12) an seinem einen Ende hat, der durch die Mischung (20) eingenommen wird, wenn der Beutel (10) in einer ersten Orientierung ist, und wobei der Beutel (10) einen zweiten Teil (14) an seinem anderen Ende hat, dadurch gekennzeichnet, daß der zweite Teil (14) aufgrund des Absaugens von Luft aus demselben kollabiert ist, wenn der Beutel (10) in der ersten Orientierung ist, daß der Beutel (10) dafür ausgebildet ist, in den Behälter (16) durch die Öffnung (18) eingeführt zu werden, wobei der zweite Teil (14) in dem Inneren des Behälters (16) angeordnet wird und wobei der zweite Teil (14) auf eine Größe kollabiert ist, die ihm gestattet, in die Öffnung (18) einzutreten, daß der Beutel dafür ausgebildet ist, aus der ersten Orientierung eine zweite Orientierung umgedreht zu werden, so daß die Mischung (20) veranlaßt wird, aus dem ersten Teil (12) in den zweiten Teil (14) zu fließen, wenn letzterer innerhalb des Behälters (16) angeordnet ist, wobei ein Teil des ersten Teils (12) entfernt wird, wenn der Beutel (10) in der zweiten Orientierung ist, um einen Auslaß für die Mischung (20) in dem Beutel (10) zu schaffen, wobei der Beutel (10) so ausgebildet ist, daß der erste Teil (12) und der zweite Teil (14) ständig in Fluidverbindung miteinander sind, und daß die Abgabevorrichtung (28) dafür ausgebildet ist, an dem Behälter (16) über der Öffnung (18) befestigt zu werden zum Abgeben der in dem Beutel (10) enthaltenen Mischung (20) an einen Säugling.
2. Säuglingsfütterungssystem nach Anspruch 1, dadurch gekennzeichnet, daß der Behälter (16) eine Säuglingsflasche (16) ist.
3. Säuglingsfütterungssystem nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß der starre Behälter (16) einen Hals hat, an dem die Abgabevorrichtung (28) befestigt ist, und wobei derjenige Teil der ersten Teils (12) des Beutels (10), der dem entfernten Teil desselben benachbart ist, zwischen dem Hals des Behälters (16) und der Abgabevorrichtung (28) zum Befestigen des Beutels (10) in dem Behälter (16) eingespannt werden kann.
4. Säuglingsfütterungssystem nach irgendeinem vorhergehenden Anspruch, dadurch gekennzeichnet, daß die Abgabevorrichtung (28) ein Schnuller ist.
5. Verfahren zum Herstellen eines flexiblen Behälters (10), der eine Säuglingsspeisemischung (20) enthält und zur Verwendung mit einer herkömmlichen Säuglingsflasche (16) geeignet ist, die eine Abgabevorrichtung (28) hat, welche eine Halsöffnung (18) der Flasche überspannt, wobei das Verfahren die Schritte beinhaltet:
Bereitstellen eines langgestreckten, flexiblen Behälters (10), der an einem Ende offen ist;
teilweises Füllen eines ersten Teils (12) des Behälters (10) mit einer sterilen Säuglingsspeisemischung (20);
gekennzeichnet durch die Schritte:
Evakuieren von Luft aus dem übrigen Teil des Behälters (10), um einen kollabierten Teil (14) desselben zu schaffen, der in der Querschnittsfläche kleiner als der erste Teil (12) ist, wobei der kollabierte Teil zum Einführen in den Behälter (16) durch die Öffnung (18) für die Abgabevorrichtung (28) vorgesehen ist; und
anschließendes Verschließen des offenen Endes des flexiblen Behälters (10).
6. Verfahren nach Anspruch 5, dadurch gekennzeichnet, daß der Schritt des Bereitstellens des Behälters (10) weiter darin besteht, ein im wesentlichen rohrförmiges Teil bereitzustellen, das ein offenes Ende hat und aus einem Kunststofflaminatmaterial mit minimaler Sauerstoffdurchlässigkeit hergestellt ist, um die Sauerstoffverunreinigung der Mischung zu minimieren.
7. Verschlossener, steriler Beutel (10), der eine Säuglingsspeisemischung (20) enthält und zur Verwendung bei einer Säuglingsflasche (16) geeignet ist, die eine Öffnung hat, welche durch eine Abgabevorrichtung (28) für die Mischung (20) überspannbar ist, wobei der Beutel (10) langgestreckt und insgesamt rohrförmig ist und aus einem flexiblen Material gebildet ist sowie einen ersten Teil (12) an seinem einen Ende hat, der durch die Mischung (20) eingenommen wird, und einen zweiten Teil (14) an seinem anderen Ende, dadurch gekennzeichnet, daß der zweite Teil (14) aufgrund des Absaugens von Luft aus dem Beutel (10) kollabiert ist, wobei der erste und zweite Teil in ständiger Fluidverbindung miteinander sind; wobei der zweite Teil (14), weil er in dem kollabierten Zustand ist, eine Querschnittsfläche hat, die kleiner als die des ersten Teils



(12) ist und zur Einführung in die Säuglingsflasche (16) durch die Öffnung (18) mit dem ersten Endteil (12) oberhalb des zweiten Endteils (14) vorgesehen ist, so daß die Speise aus dem ersten Endteil in den zweiten Endteil fließt, um die Speise in den zweiten Teil innerhalb der Flasche zu bringen und aus dem ersten Endteil zu entfernen.

Revendications

1. Système d'alimentation d'un enfant comprenant un sac allongé (10) contenant un produit alimentaire (20), ce sac (10) ayant été rempli avec le produit alimentaire (20) dans des conditions stériles, et un conteneur rigide (16) ayant une ouverture (18) obturable par un appareil (28) de distribution du produit alimentaire (20), ce sac (10) comportant une première portion (12) adjacente à une première extrémité du sac, laquelle est occupée par le produit alimentaire (20) lorsque le sac (10) a une première orientation, le sac (10) ayant une seconde portion (14) adjacente à son autre extrémité, caractérisé en ce que la seconde portion (14) du sac est écrasée ou aplatie par suite de l'évacuation de l'air à partir d'elle lorsque le sac (10) se trouve dans sa première orientation, en ce que le sac (10) est adapté de manière à être inséré dans le conteneur (16) à travers l'ouverture (18), la seconde portion (14) étant alors logée à l'intérieur du conteneur (16), cette seconde portion (14) étant aplatie de manière à avoir une dimension lui permettant de passer à travers l'ouverture (18), en ce que le sac est adapté de manière à être inversé de sa première orientation à sa seconde orientation de telle façon que le produit alimentaire (20) soit amené à s'écouler de la première portion (12) vers et dans la seconde portion (14), lorsque cette dernière se trouve logée dans le conteneur (16), une partie de la première portion (12) étant enlevée, lorsque le sac (10) a une seconde orientation, afin de créer un orifice de sortie pour le produit alimentaire (20) se trouvant dans le sac (10), ce sac (10) étant formé de telle façon que la première portion (12) et la seconde portion (14) soient continuellement en communication l'une avec l'autre, et en ce que l'appareil de distribution (28) est adapté de manière à être fixé au conteneur (16), en travers de l'ouverture (18), afin de distribuer le produit alimentaire (20) contenu dans le sac (10) à un enfant.
2. Système d'alimentation d'un enfant suivant la revendication 1 caractérisé en ce que le conteneur (16) est constitué par un biberon.

3. Système d'alimentation d'un enfant suivant l'une quelconque des revendications 1 ou 2 caractérisé en ce que le conteneur rigide (16) a un goulot auquel l'appareil de distribution (28) est fixé, et en ce que la partie de la première portion (12) du sac (10) qui est adjacente à la partie enlevée de cette première portion, peut être coincée entre le goulot du conteneur (16) et l'appareil de distribution (28), afin de fixer le sac (10) dans le conteneur (16).
4. Système d'alimentation d'un enfant suivant l'une quelconque des revendications précédentes caractérisé en ce que l'appareil de distribution (28) comporte une tétine.
5. Procédé de fabrication d'un conteneur flexible (10) contenant un produit alimentaire (20) pour un enfant et convenant pour être utilisé avec un biberon traditionnel (16) ayant un appareil de distribution (28) s'étendant en travers de l'ouverture (18) du goulot du biberon, ce procédé comprenant les étapes consistant à prévoir un conteneur flexible et allongé, ouvert à l'une de ses extrémités, et à remplir partiellement une première portion (12) du conteneur (10) avec un produit alimentaire stérile (20) pour un enfant, caractérisé en ce qu'il comprend les étapes consistant à évacuer l'air du reste du conteneur (10), afin de créer une partie écrasée ou aplatie (14) de ce conteneur plus petite, en section transversale, que la première portion (12), cette partie aplatie étant destinée à être insérée dans le biberon (16), à travers l'ouverture (18) pour l'appareil de distribution (28), et à sceller ensuite l'extrémité ouverte du conteneur flexible (10).
6. Procédé suivant la revendication 5 caractérisé en ce que l'étape de prévision du conteneur flexible (10) est en outre définie comme produisant un élément sensiblement tubulaire ayant une extrémité ouverte et formé d'une matière plastique stratifiée, à perméabilité minimale vis-à-vis de l'oxygène, afin de réduire au minimum la contamination du produit alimentaire par l'oxygène.
7. Sac stérile scellé (10) contenant un produit alimentaire (20) pour un enfant et convenant à une utilisation avec un biberon (16) ayant une ouverture obturable par un appareil de distribution (28) du produit alimentaire (20), ce sac étant allongé, ayant une forme générale tubulaire et étant formé d'une matière flexible, comportant une première portion (12) adjacente à l'une de ses extrémités et occupée par le produit alimentaire (20) et une seconde portion



(14) adjacente à l'autre extrémité du sac, caractérisé en ce que la seconde portion (14) est aplatie par suite de l'évacuation de l'air à partir du sac (10), les première et seconde portions du sac étant en communication continue l'une avec l'autre, la seconde portion (14) ayant, du fait qu'elle se trouve à l'état aplati, une aire de section transversale inférieure à celle de la première portion (12) et étant destinée à être insérée dans le biberon (16), à travers l'ouverture (18), avec la première portion extrême (12) située au-dessus de la seconde portion extrême (14), de telle façon que le produit alimentaire s'écoule à partir de la première portion extrême vers la seconde portion extrême, afin de placer le produit alimentaire dans la seconde portion extrême se trouvant dans le biberon et de l'enlever de la première portion extrême.

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