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(54) **Drinking container**

Trinkbehälter

Réceptient pour boire

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(73) Proprietor: **Glozer, Vered**  
**Nottingham NG8 1BB (GB)**

(72) Inventor: **Glozer, Vered**  
**Nottingham NG8 1BB (GB)**

(74) Representative: **Lucking, David John et al**  
**FORRESTER & BOEHMERT**  
**Pettenkoferstrasse 20-22**  
**80336 München (DE)**

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**EP-A- 0 276 102** **FR-A- 2 653 749**  
**US-A- 4 640 424** **US-A- 5 292 021**

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## Description

**[0001]** This invention relates to a drinking container and more particularly to a disposable drinking container.

**[0002]** All age groups in society use drinking containers, which are pre-filled with liquid to be drunk, and which contain different facilities for ease of use. For examples, drinks are sold in cans and boxes which may be opened for use in different ways.

**[0003]** However certain groups, such as babies, in exceptional or unexceptional environments, where time and/or facilities are limited, have difficulty using such existing containers without preparation beforehand and are therefore denied use.

**[0004]** According to the invention I provide a pre-filled disposable drinking container according to claim 1.

**[0005]** A container according to the preamble of claim 1 is disclosed in US-A-4, 640, 424.

**[0006]** In one embodiment thereof, the container comprises a teat mounting part and a locking ring.

**[0007]** Thus prior to use, the reservoir of liquid is sealed from the teat or drinking spout, and may be covered with a cover to protect the teat or drinking spout from environmental contamination. For use, the cover is removed and the seal is broken, to permit the pre-filled contents of the container to be drunk through the teat or drinking spout.

**[0008]** Such pre-filled drinking container where provided with a teat, is suitable for use by even very small babies, and where provided with a drinking spout, the container may readily be used by older babies and small children who otherwise would be unable to use the drinking container.

**[0009]** It will be appreciated that the container may be pre-filled with milk, juice, water or any other drink as desired, and that because the teat or drinking spout is integrated, the contents may be maintained sterile.

**[0010]** The cover may, prior to use of the container, be secured relative to the body by securing means, to cover the teat or drinking spout to protect the teat or drinking spout from micro-organisms and the environment. Preferably the securing means is readily releasable when required to allow the container to be used. For example, the securing means may include a rupturable connection between the cover and the body.

**[0011]** The attachment portion may in use, provide the opening through which liquid to be drunk may pass from the reservoir of the container body into the teat or drinking spout when the seal is penetrated. Preferably the means which are provided to break the seal, enable the seal to be broken remotely without a user having to gain access to the seal.

**[0012]** The invention is particularly but not exclusively applicable to a drinking container in which the body has a flexible reservoir wall, e.g. of cardboard, and the outlet member where provided is integral with the reservoir wall of the body. The body may optionally have one or more handles attached thereto.

**[0013]** Specific embodiments of the invention will now be described by way of example with reference to the accompanying drawings in which:-

FIGURE 1 diametrically shows a pre-filled container with a teat;

FIGURE 2 shows the pre-filled container of figure 1 but with a modified teat;

FIGURE 3 shows a pre-filled container with a drinking spout;

FIGURE 4 shows illustratively, a pre-filled container with a screw down teat;

FIGURE 5 is an exploded illustrative perspective view of an embodiment of the invention;

FIGURE 6 is a illustrative view of an assembled drinking container of figure 5 but indicating more detail.

Referring first to figures 1 and 2 there is shown a container which includes a body 10 loaded with liquid 11. One or more handles 12 are optionally attached to the body 10. A teat 20 is attached to the body 10 and is protected from micro-organisms and the environment by a cover 14. In use, the cover 14 is removed and a user gains access to the liquid via the teat 20.

**[0014]** In figure 2, there is shown a variation in which the teat 20 is inverted into the body 10. The teat is protected by a tab 15 which seals the body 10. In use the tab 15 is removed and the teat 20 can then be inverted for access to the liquid. In figure 3, there is shown a drinking container similar to that shown in figure 1 but having a drinking spout instead of a teat.

**[0015]** In figure 4, another variation has a teat 20 with a screw base 17. In use attached teat 20 is screwed down until it ruptures an internal seal 18, which protects the teat 20 from the liquid 11.

**[0016]** Referring now to figures 5 and 6, a detailed illustration of the screw down type teat 20 of the invention is shown. Similar parts to those described with reference to the previous figures are indicated by the same reference numerals.

**[0017]** The container body 10 includes a reservoir for liquid defined by a reservoir wall 25 which is preferably made from a flexible material, e.g. plastics or cardboard. In figures 5 and 6 only part of the reservoir wall 25 is illustrated. As with the previous embodiments described, the container body 10 may be provided with one or more handles to facilitate a small child holding the container body 10.

**[0018]** Integral with the reservoir wall 25, that is permanently attached and sealed relative to the reservoir wall 25, there is an attachment portion 26. In this present example this is a plastics moulding having a generally cylindrical part 27 with an annular outwardly extending flange 28 at an end which is secured to and sealed relative to the reservoir wall 25. Within the attachment portion 26, the reservoir wall 25 has an outlet opening 29, but as illustrated this is closed by a sealing tab 18 which

is of the rupturable kind, e.g. thin aluminium foil or plasticised foil or the like.

**[0019]** The cylindrical part 27 of the attachment portion 26 has an external screw thread as indicated at 31, and an internal screw thread 32 too.

**[0020]** A teat 20 is made of a soft and flexible material such as latex rubber, silicone or the like, and has an internal hollow 33 which opens at a base end 35 where in use, the teat is connected to the body 10 of the pre-filled container. The teat 20 includes one or more pin-hole sized openings 36 in a tip thereof, so that in use, a baby can suck liquid through the teat 20.

**[0021]** At the base end 35, the teat 20 has a sealing flange 37, which is best seen in figure 6. The teat 20 is attached to the attachment portion 26 by a mounting part 38 which may be provided by a plastic moulding. The mounting part 38 is of annular generally cylindrical configuration having an external screw thread 39 corresponding to the internal screw thread 32 of the attachment portion 26. The mounting part 38 further has an outwardly extending flange 40 at one end.

**[0022]** As can be seen from figure 6, when the components are assembled, the teat 20 is received over the flange 40 of the mounting part 38 and the mounting part 38 is in screw threaded engagement with the attachment portion 26. The mounting part 38 includes a seal breaking formation 41 provided at the opposite end of the cylindrical mounting part 38 to the flange 40. Preferably the seal breaking formation 41 is provided by the circular edge 41 of the mounting part 38 which is suitably thinned to be sufficiently sharp to rupture and break the sealing tab 18, as the mounting part 38 is screwed further into the attachment portion 26.

**[0023]** The container is provided pre-filled with liquid, with the teat 20 or drinking spout attached, but with the mounting part 38 only partially screwed into the attachment portion 26, so that the sealing tab 18 is intact to seal the reservoir and maintain the sterility of the contents of the container. However prior to use, the mounting part 38 is screwed further into the attachment portion 26 as hereinafter described, to move the seal breaking formation 41 to the position shown in figure 6 in which the formation 41 has ruptured and penetrated the sealing tab 18 so that the pre-filled contents of the container can be drunk via the teat 20.

**[0024]** The container includes a locking ring 45 which is annular and internally threaded with a thread corresponding to the external thread 31 of the attachment portion 26. The locking ring 45 is screwed onto the attachment portion 26 to trap the sealing flange 37 of the teat 20 between the ring 45 and the mounting part 38 to seal the teat 20 relative to the mounting part 38. Thus the teat 20 is integrated with the body 10 of the container.

**[0025]** A cover 14 is secured to the attachment portion 26 of the container by a securing means 46. The securing means 46 is a frangible or otherwise rupturable annular connection which may extend continuously or in-

termittently around the cover 14 and attachment portion 26. The cover 14 protects the teat 20 from environmental contamination.

**[0026]** Thus prior to use, the container is pre-filled with liquid, the cover 14 is in place as indicated in figure 6, and the sealing tab 18 is intact, sealing the reservoir and preventing liquid passing out of the container.

**[0027]** When it is desired to use the container, first the cover 14 is removed by rupturing the securing means 46 which exposes the teat 20. Next, by further screwing down of the locking ring 45, the mounting part 38 will be rotated to move the seal breaking formation 41 from a position in which it is clear of the seal linearly into engagement with the sealing tab 18, thus puncturing and breaking the seal 18 by remote action without a user having to access the seal 18. The action of screwing down further the locking ring 45 will move the mounting part 38 because of friction between the teat 20 and each of the locking ring 45 and mounting part 38. Such further screwing down of the sealing ring 45 may also improve the seal between the mounting part 38 and the flange 37 of the teat 20, as the flange 37 becomes compressed between the ring 45 and the mounting part 38.

**[0028]** The container may then be presented to a baby or infant who may drink the contents of the container. Subsequently, the container may be disposed of.

**[0029]** Various modifications may be made without departing from the scope of the invention.

**[0030]** For example, in the figures 5 and 6 embodiment, instead of a teat 20, a drinking spout may be provided. The cover 14 need not be secured to the attachment portion 26 by a frangible connection 46, but may otherwise be secured, but alternatively instead of the cover 14, the whole container could be contained within a sterile outer wrapping such as a bag, to protect the teat 20 or drinking spout from environmental contamination.

**[0031]** In all of the embodiments described, the teat 20 or drinking spout is integrated with the body by being provided with the body which is pre-filled with liquid ready for use. Thus liquid for drinking by a baby or infant is made readily available, whereas prior to the present invention, disposable drinking containers have not readily been usable by babies or small infants.

**[0032]** Whereas the teat 20 or drinking spout may be permanently affixed relative to the body 10 of the container as in the figures 1 and 3 embodiments, preferably the contents of the container are sealed from the environment prior to use to maintain freshness and prevent environmental contamination, as with the embodiments of figures 4 to 6.

**[0033]** In the figure 2 embodiment, the teat 20 is integrated with the body of the container 10 in as much as the pre-filled and sealed container and the teat 20 are provided together, although the other embodiments described minimise or avoid handling of the teat 20 or drinking spout and are preferred.

## Claims

1. A pre-filled disposable drinking container including a body (10) with a reservoir in which liquid to be drunk is contained, and a teat (20) or drinking spout, the container including an attachment portion (26) integral with or permanently attached to the body (10), **characterised in that** the attachment portion (26) includes an internal thread (32) and an external thread (31), the container further including a mounting part (38) with an external thread (39), a locking ring (45) with an internal thread, and an opening (29) from the reservoir through the body (10) which is closed by a seal (18) at the attachment portion (26), the seal (18) being penetrable by the mounting part (38) when screwed into the attachment portion (26), and, when the locking ring (45) is screwed onto the attachment part (26), the locking ring (45) and mounting part (38) providing a seal with a flange (37) of the teat (20) or drinking spout between the locking ring (45) and the mounting part (38). 5 10 15 20
2. A container according to claim 1 **characterised in that** the container includes a cover (14) which prior to use of the container, is secured relative to the body (10) by securing means (46) to cover the teat (20) or drinking spout to protect the teat (20) or drinking spout from micro-organisms and the environment. 25 30
3. A container according to claim 2 **characterised in that** the securing means (46) securing the cover (14) is readily releasable when required to allow the container to be used, the securing means (46) including a rupturable connection between the cover (14) and the body (10). 35 40
4. A container according to any one of the preceding claims **characterised in that** the drinking container body (10) has a flexible reservoir wall (25) and one or more handles are attached to the body (10). 45
5. A container according to any preceding claim **characterised in that** the mounting part (38) is of annular, generally cylindrical configuration and has an outwardly extending flange (40) at one end, the teat (20) or drinking spout being received over the flange (40) of the mounting part (38). 50
6. A container according to claim 5 **characterised in that** the mounting part (38) includes a seal breaking formation (41) provided by a thinned circular edge of the mounting part (38) at an opposite end to the flange (40). 55
7. A container according to any preceding claim **characterised in that** the seal (18) comprises a foil tab.

## Patentansprüche

1. Vorgefüllter, wegwerfbarer Trinkbehälter, einschließlich einen Körper (10) mit einem Reservoir, in welchem zu trinkende Flüssigkeit enthalten ist, und einen Sauger (20) oder einen Trinkausguß, wobei der Behälter einen Halterungsabschnitt (26), integral mit oder permanent an dem Körper (10) angefügt, einschließt, **dadurch gekennzeichnet, daß** der Halterungsabschnitt (26) ein Innengewinde (32) und ein Außengewinde (31) einschließt, wobei der Behälter ferner ein Befestigungsteil (38) mit einem Außengewinde (39), einen Verschlußring (45) mit einem Innengewinde und eine Öffnung (29) aus dem Reservoir durch den Körper (10), welche durch eine Dichtung (18) an dem Halterungsabschnitt (26) verschlossen ist, einschließt, wobei die Dichtung (18) durch das Befestigungsteil (38) durchdringbar ist, wenn es in den Halterungsabschnitt (26) eingeschraubt ist; und, wenn der Verschlußring (45) auf das Halterungsteil (26) aufgeschraubt ist, der Verschlußring (45) und das Befestigungsteil (38) eine Dichtung mit einem Flansch (37) des Saugers (20) oder des Trinkausgusses zwischen dem Verschlußring (45) und dem Befestigungsteil (38) bereitstellen.
2. Behälter nach Anspruch 1, **dadurch gekennzeichnet, daß** der Behälter eine Abdeckung (14) einschließt, welche vor Verwendung des Behälters relativ zum Körper (10) durch ein Befestigungsmittel (46) gesichert ist, um den Sauger (20) oder den Trinkausguß abzudecken, um den Sauger (20) oder den Trinkausguß vor Mikroorganismen und der Umgebung zu schützen.
3. Behälter nach Anspruch 2, **dadurch gekennzeichnet, daß** das Befestigungsmittel (46), das die Abdeckung (14) sichert, leicht freigebbar ist, wenn es erforderlich ist, daß der Behälter verwendet werden kann, wobei das Befestigungsmittel (46) eine zerbrechbare Verbindung zwischen der Abdeckung (14) und dem Körper (10) einschließt.
4. Behälter nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, daß** der Trinkbehälterkörper (10) eine flexible Reservoirwand (25) aufweist und ein oder mehrere Griff(e) an dem Körper (10) angefügt ist bzw. sind.
5. Behälter nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, daß** das Befestigungsteil (38) von einer ringförmigen, im allgemeinen zylindrischen Konfiguration ist und einen sich nach außen erstreckenden Flansch (40) an einem Ende aufweist, wobei der Sauger (20) oder der Trinkausguß über dem Flansch (40) des Befestigungsteils (38) aufgenommen ist.

6. Behälter nach Anspruch 5, **dadurch gekennzeichnet daß** das Befestigungsteil (38) ein Dichtungsaufbrechgebilde (41) einschließt, das durch einen verdünnten kreisförmigen Rand des Befestigungsteils (38) an dem gegenüberliegenden Ende zum Flansch (40) bereitgestellt ist. 5
7. Behälter nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, daß** die Dichtung (18) einen Folienstreifen umfaßt. 10

## Revendications

1. Conteneur jetable pré-rempli pour boisson comportant un corps (10) muni d'un réservoir dans lequel le liquide qui doit être bu est contenu, et d'une tétine (20) ou d'un bec verseur permettant de boire, le conteneur comportant une partie d'attache (26) formant une seule pièce avec, ou étant fixée de manière permanente sur le corps (10), **caractérisé en ce que** la partie d'attache (26) comporte un filetage interne (32) et un filetage externe (31), le conteneur comportant en outre une partie d'assemblage (38) munie d'un filetage externe (39), une bague de serrage (45) munie d'un filetage interne, et une ouverture (29) commençant au réservoir et traversant le corps (10), qui est fermée par un joint étanche (18) au niveau de la partie d'attache (26), le joint étanche (18) pouvant être pénétré par la partie d'assemblage (38), lorsque celle-ci est vissée sur la partie d'attache (26) et, lorsque la bague de serrage (45) est vissée sur la partie d'attache (26), la bague de serrage (45) et la partie d'assemblage (38) fournissant un joint étanche avec une bride (37) de la tétine (20) ou du bec verseur permettant de boire entre la bague de serrage (45) et la partie d'assemblage (38). 15 20 25 30 35
2. Conteneur selon la revendication 1, **caractérisé en ce que** le conteneur comporte un couvercle (14) qui, avant l'utilisation du conteneur, est fixé par rapport au corps (10) grâce à un moyen de fixation (46) afin de recouvrir la tétine (20) ou le bec verseur permettant de boire, afin de protéger la tétine (20) ou le bec verseur permettant de boire contre les micro-organismes et l'environnement. 40 45
3. Conteneur selon la revendication 2, **caractérisé en ce que** le moyen de fixation (46) fixant le couvercle (14) peut être facilement dégagé, lorsque cela est nécessaire pour permettre d'utiliser le conteneur, le moyen de fixation (46) comportant un raccordement cassable entre le couvercle (14) et le corps (10). 50
4. Conteneur selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le corps du conteneur pour boisson (10) présente une paroi souple de réservoir (25) et **en ce que** une ou plu-

sieurs poignée(s) est (sont) fixée(s) sur le corps (10).

5. Conteneur selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la partie d'assemblage (38) a une configuration annulaire, généralement cylindrique, et présente une bride qui s'étend vers l'extérieur (40) au niveau d'une extrémité, la tétine (20) ou le bec verseur permettant de boire étant reçu(e) par dessus la bride (40) de la partie d'assemblage (38).
6. Conteneur selon la revendication 5, **caractérisé en ce que** la partie d'assemblage (38) comporte une formation de cassure de joint étanche (41) fournie par un bord circulaire aminci de la partie d'assemblage (38) au niveau d'une extrémité opposée à la bride (40).
7. Conteneur selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le joint étanche (18) comprend une languette en feuille d'aluminium. 55

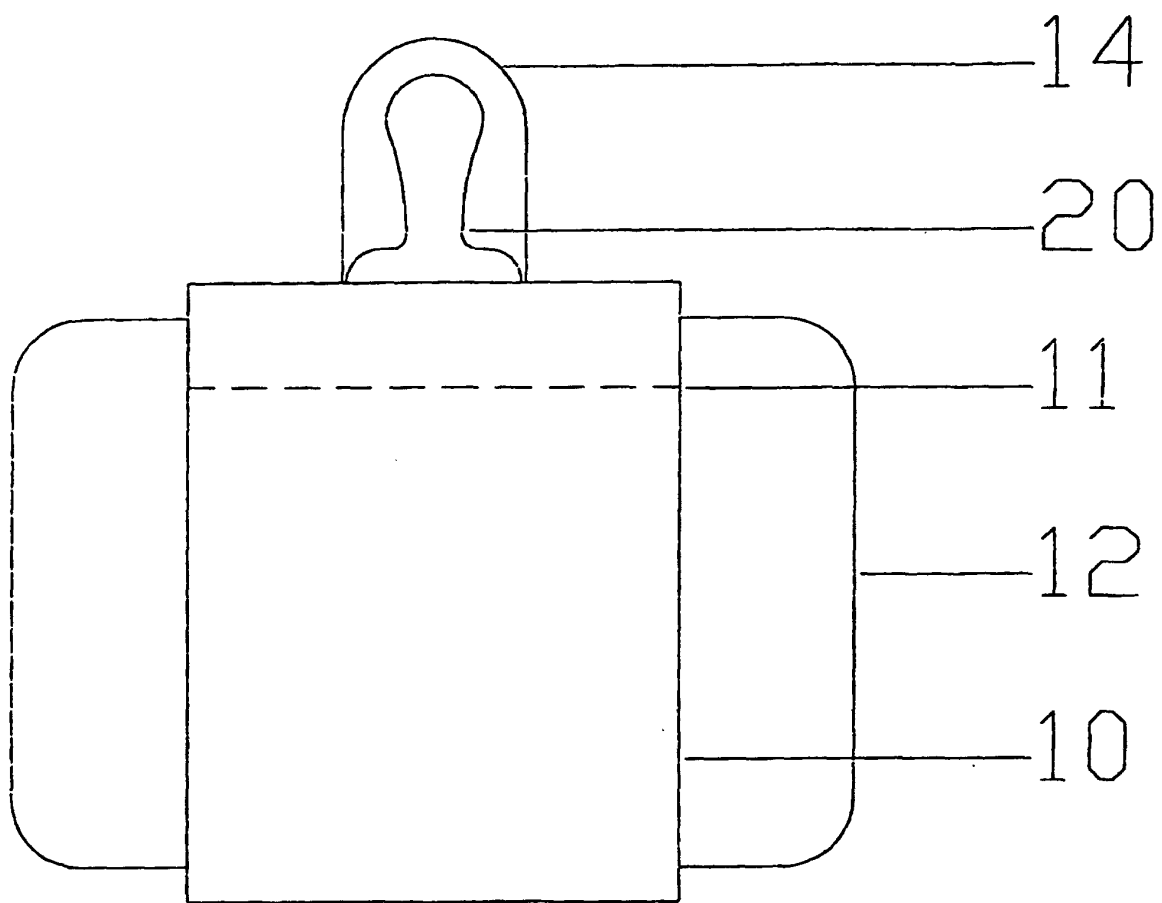


FIG.1

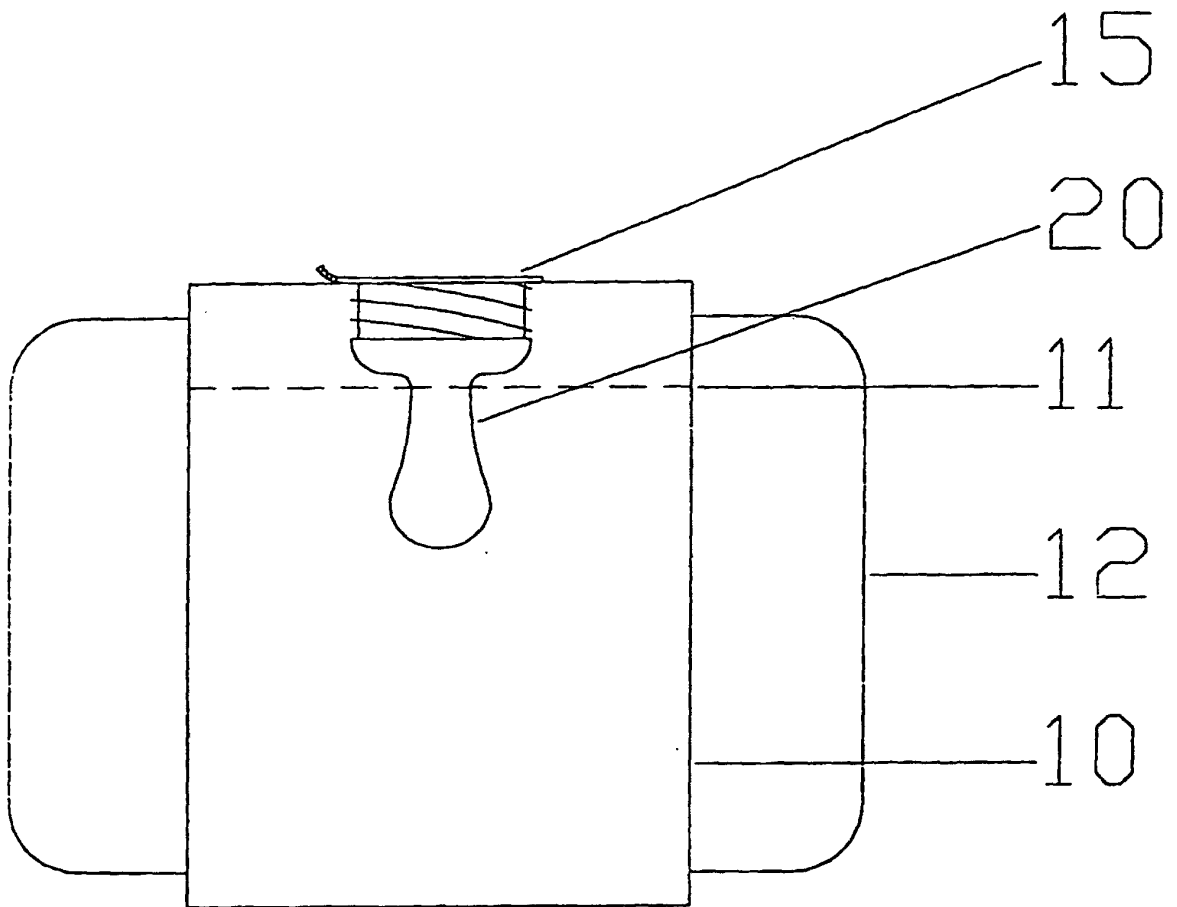


FIG. 2

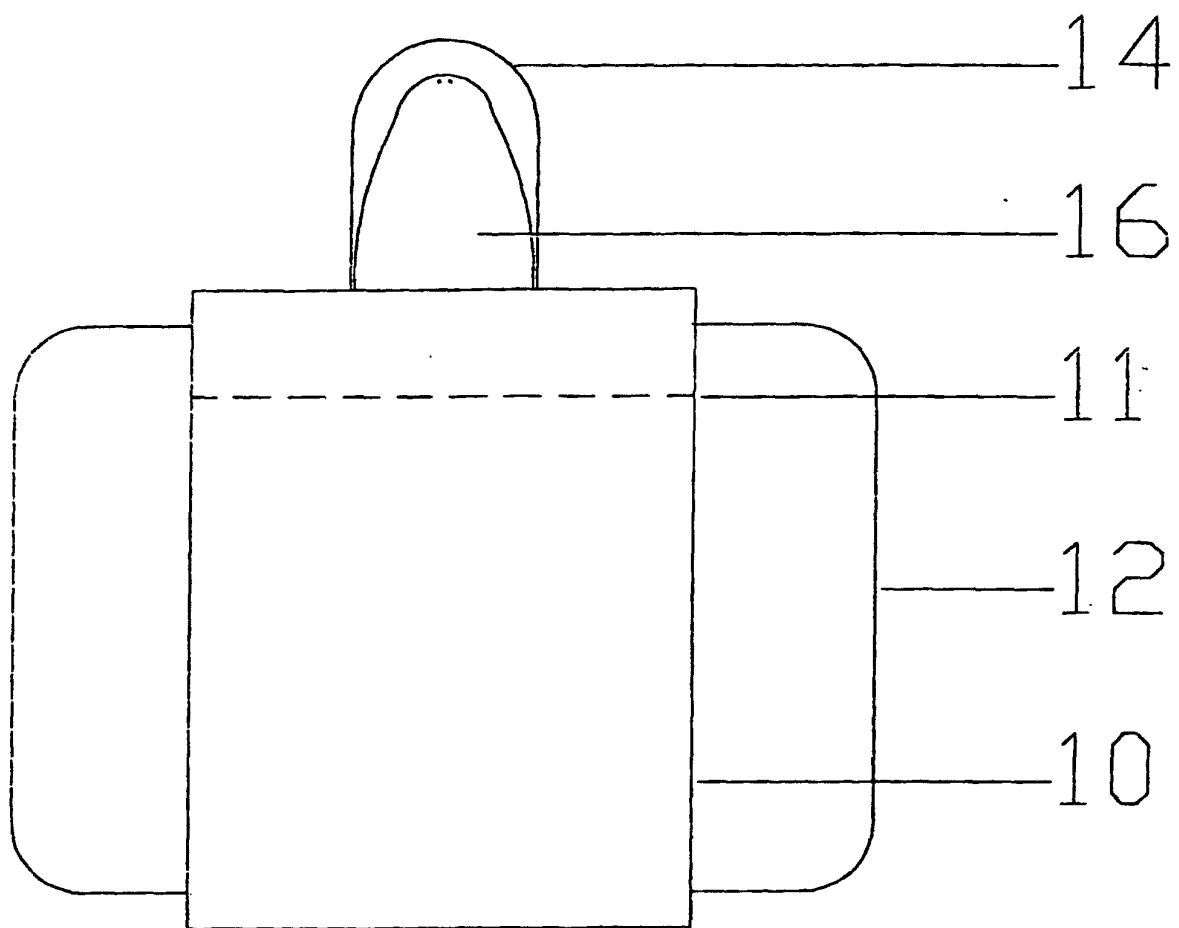


FIG. 3

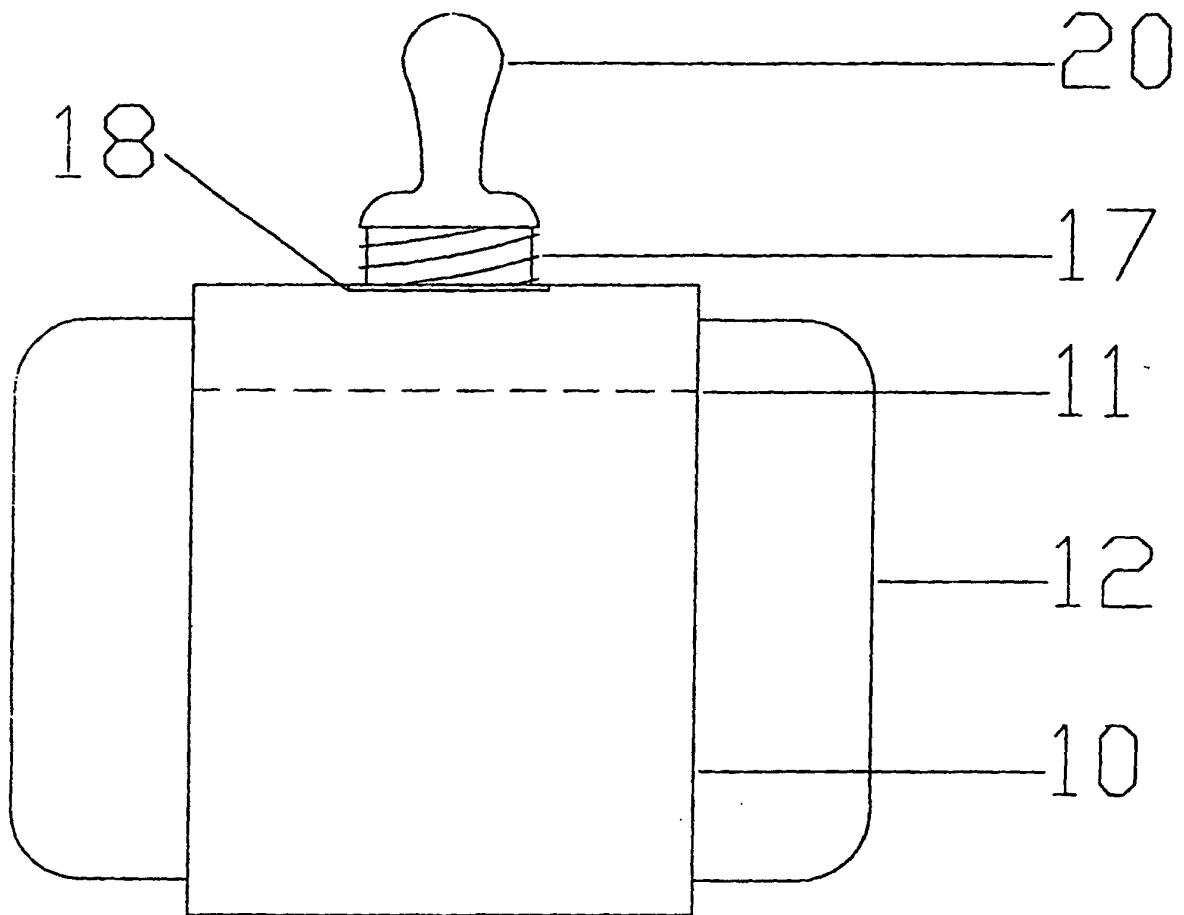


FIG. 4

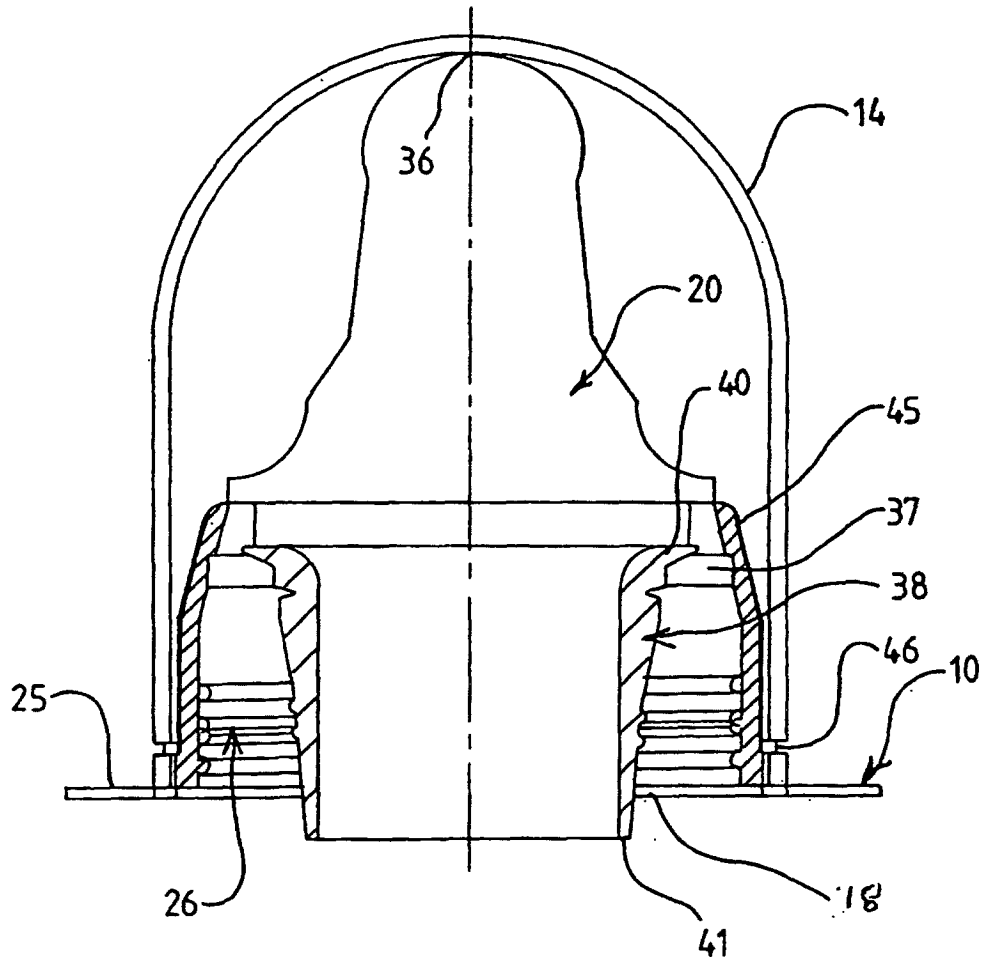


FIG 6

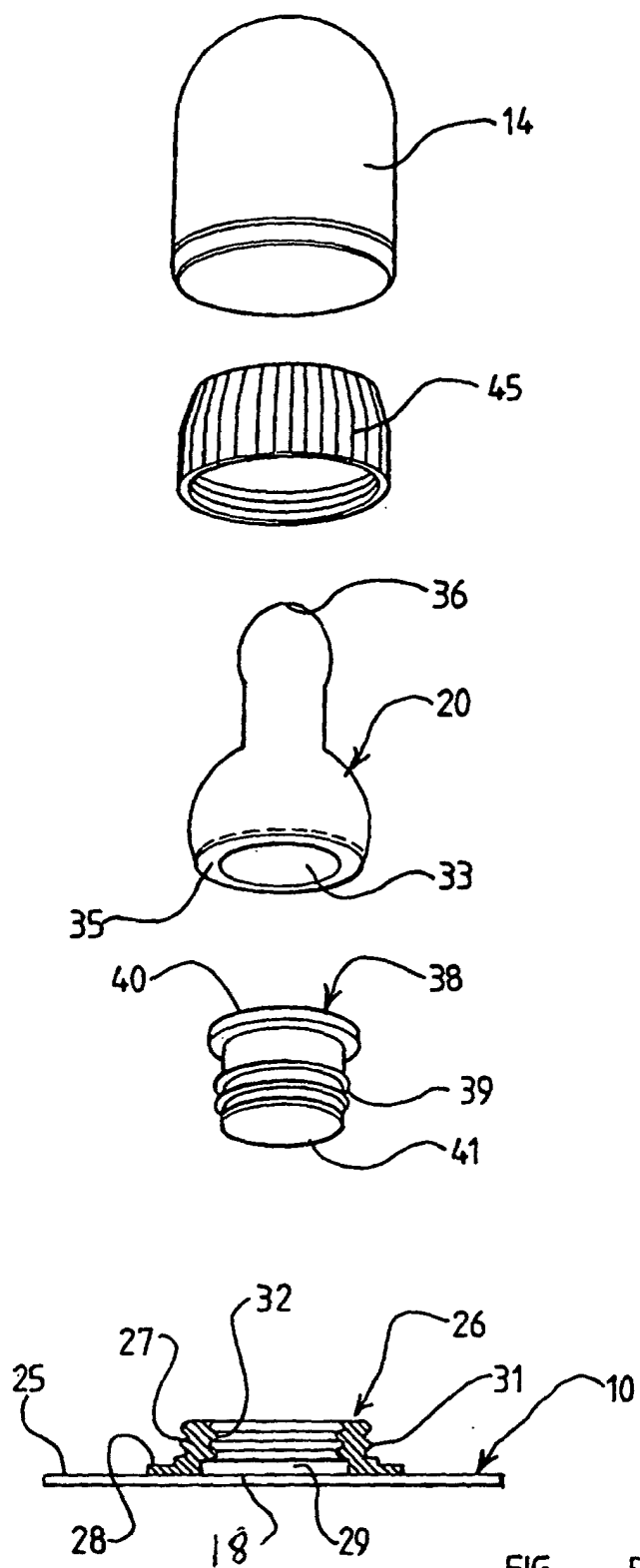


FIG 5