



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 145 983 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
17.10.2001 Bulletin 2001/42

(51) Int Cl.7: **B65D 75/58**

(21) Application number: **01109171.7**

(22) Date of filing: **12.04.2001**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**
Designated Extension States:
AL LT LV MK RO SI

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

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

(30) Priority: **14.04.2000 GB 0009186**

(71) Applicant: **Glozer, Vered**
Nottingham NG8 1BB (GB)

(54) **Drinking container**

(57) A pre-filled disposable drinking container in-

cludes an integrated teat (20) or drinking spout to facilitate ease of use by a baby or infant.

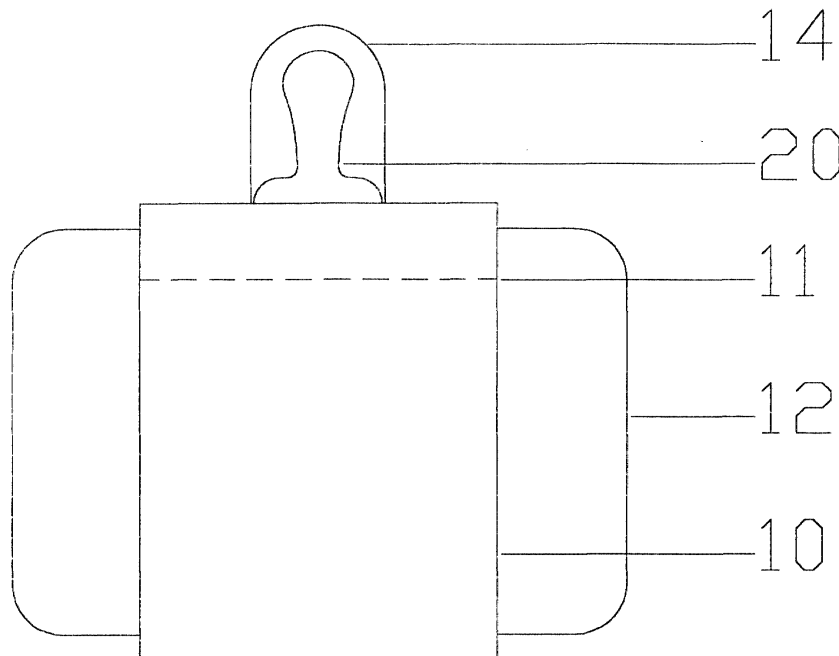


FIG. 1

EP 1 145 983 A2

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 one aspect of the invention I provide a pre-filled disposable drinking container including an integrated teat or drinking spout.

[0005] Thus 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.

[0006] 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.

[0007] The container may include a body providing a reservoir in which the liquid to be drunk is contained. Preferably, the container includes a cover which prior to use of the container, is 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.

[0008] The teat or drinking spout may be integrated with the body by being attached to the body via an attachment portion of the body. The attachment portion may in use, provide an opening through which liquid to be drunk may pass from the reservoir of the container body into the teat or drinking spout. However preferably there is provided a seal which prevents the passage of liquid from the reservoir through the attachment portion prior to use. Means may be provided to break the seal to prepare the container for use. 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.

[0009] For example, the seal may be provided at an opening from the reservoir to the attachment portion, and a teat mounting part may be provided to mount the teat on the attachment portions. The mounting part may be provided with a seal breaking formation, the mounting part being moveable relative to the attachment portion from a first position in which the seal breaking mem-

ber is clear of the seal, to a second position in which the seal breaking formation engages with and breaks the seal. For example, the mounting part may be in threaded engagement with a correspondingly threaded attachment portion of the container, such that as the mounting part is rotated relative to the attachment portion, the seal breaking formation moves linearly into engagement with the seal to break the seal.

[0010] 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.

[0011] According to a second aspect of the invention I provide a method of providing a disposable drinking container which has a reservoir which is pre-filled with liquid to be drunk, the method including providing the container with an integrated teat or drinking spout, and prior to use, sealing the reservoir of liquid from the teat or drinking spout with a seal, and covering the teat or drinking spout with a cover to protect the teat or drinking spout from environmental contamination, and for use, removing the cover, and operating a seal breaking means to break the seal sealing the reservoir, to permit the pre-filled contents of the container to be drunk through the teat or drinking spout.

[0012] Specific embodiments of the invention will now be described by way of example with reference to the accompanying drawings in which:-

FIGURE 1 shows a pre-filled container with a teat, in accordance with the invention;

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 in accordance with the invention;

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

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

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

[0013] 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 more detailed illustration of a screw down type teat 20 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 fur-

ther 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 intermittently 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.

[0034] The features disclosed in the foregoing description, or the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, as appropriate, may, separately, or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

Claims

1. A pre-filled disposable drinking container including an integrated teat (20) or drinking spout.
2. A container according to claim 1 **characterised in that** the container includes a body (10) providing a reservoir in which the liquid to be drunk is contained.
3. A container according to claim 1 or claim 2 **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.
4. A container according to claim 3 **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).
5. A container according to any one of the preceding claims **characterised in that** the teat (20) or drinking spout is integrated with the body (10) by being attached to the body (10) via an attachment portion (26) of the body (10).
6. A container according to claim 5 **characterised in that** the attachment portion (26) in use, provides an opening (29) through which liquid to be drunk may pass from the reservoir of the container body (10) into the teat (20) or drinking spout, there being provided a seal (18) which prevents the passage of liquid from the reservoir through the attachment portion (26) prior to use, means (41) being provided to break the seal (18) to prepare the container for use.
7. A container according to claim 6 **characterised in that** the means (41) which are provided to break the seal (18) enable the seal (18) to be broken remotely without a user having to gain access to the seal (18), the seal (18) being provided at an opening (29) from the reservoir to the attachment portion (26), and there being a teat mounting part (38) to mount the teat (20) on the attachment portion, the mounting part (38) being provided with a seal breaking formation (41), the mounting part (38) being moveable relative to the attachment portion (26) from a first position in which the seal breaking formation (41) is clear of the seal (18), to a second position in which the seal breaking formation (41) engages with and breaks the seal (18).
8. A container according to claim 7 **characterised in that** the mounting part (38) is in threaded engagement with a correspondingly threaded attachment portion (26) of the container, such that as the mounting part (38) is rotated relative to the attachment portion (26), the seal breaking formation (41) moves linearly into engagement with the seal (18) to break the seal (18).
9. 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 the attachment portion (26) where provided, is integral with the reservoir wall (25) of the body (10), and optionally one or more handles are attached to the body (10).
10. A method of providing a disposable drinking container which has a reservoir which is pre-filled with liquid to be drunk, the method including providing the container with an integrated teat (20) or drinking spout, and prior to use, sealing the reservoir of liquid from the teat (20) or drinking spout with a seal (18), and covering the teat (20) or drinking spout with a cover (14) to protect the teat (20) or drinking spout from environmental contamination, and for use, re-

moving the cover (14), and operating a seal breaking means to break the seal (18) sealing the reservoir, to permit the pre-filled contents of the container to be drunk through the teat (20) or drinking spout.

5

10

15

20

25

30

35

40

45

50

55

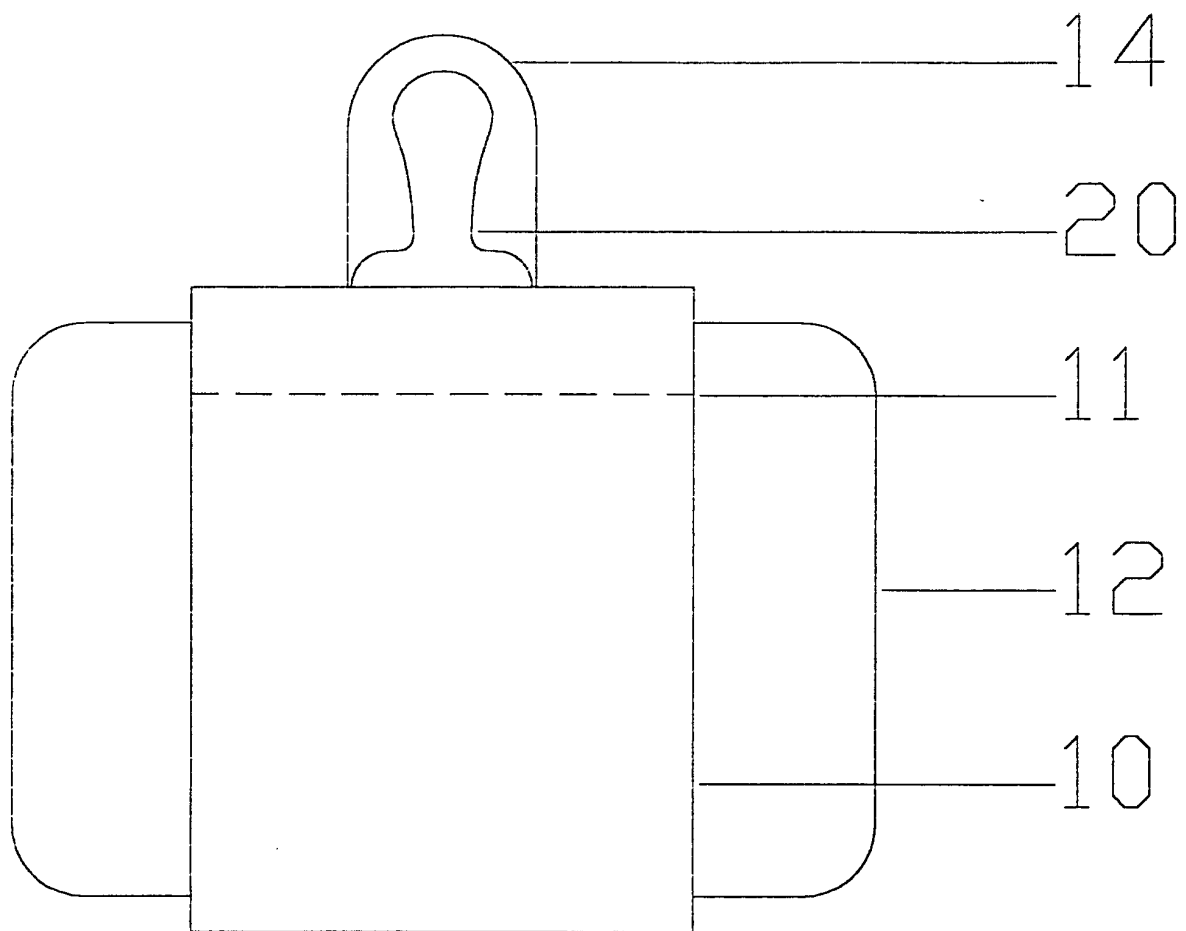


FIG. 1

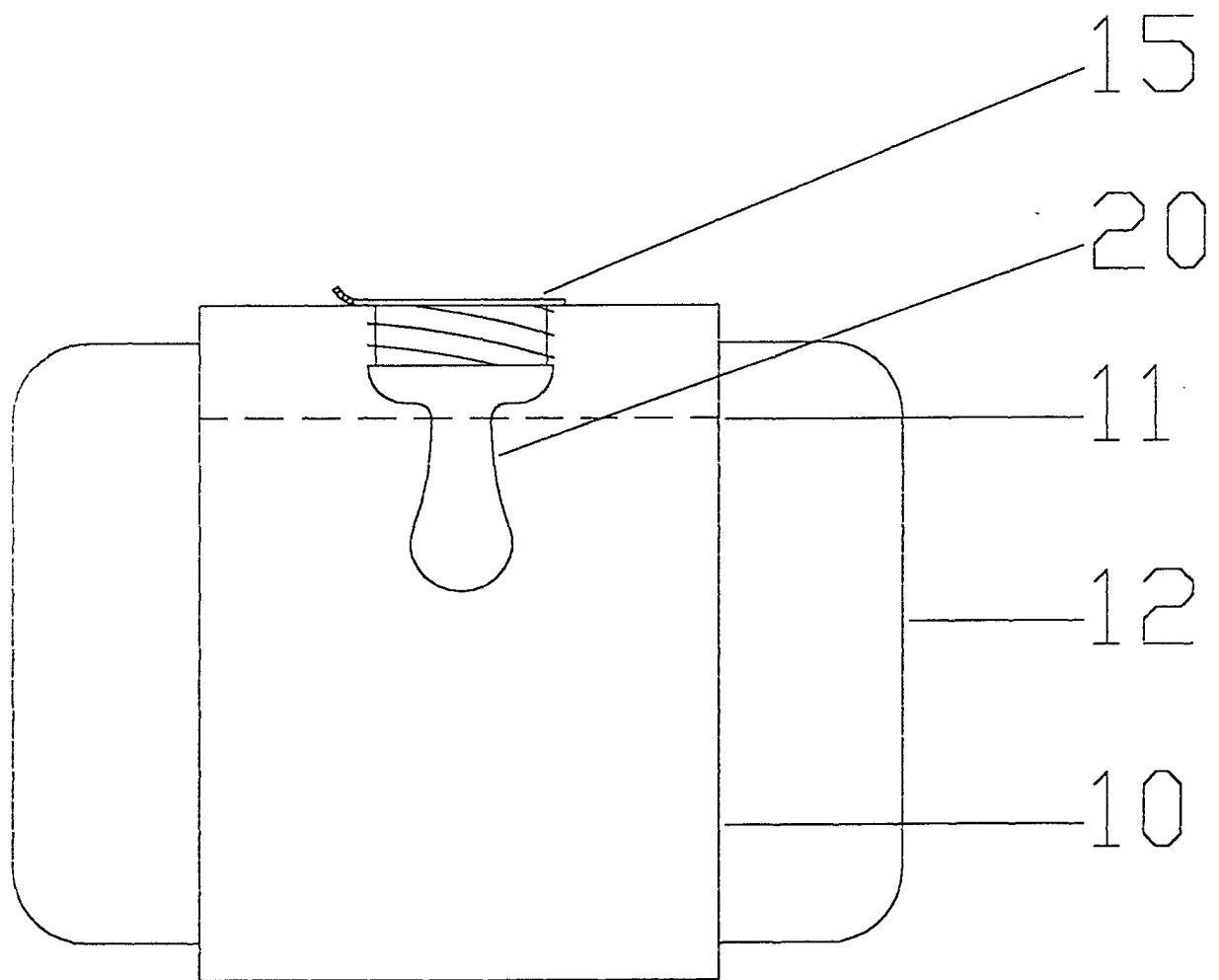


FIG. 2

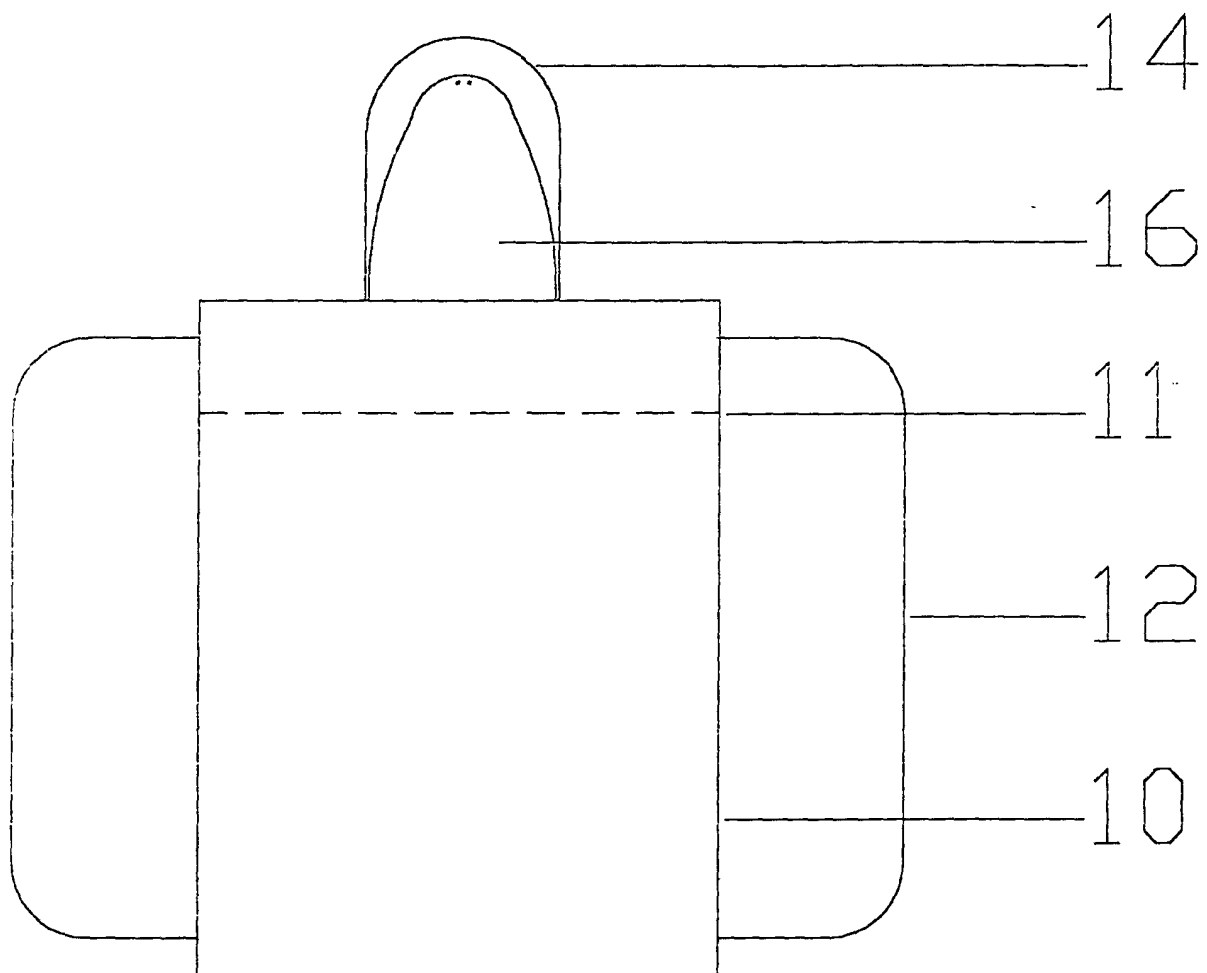


FIG. 3

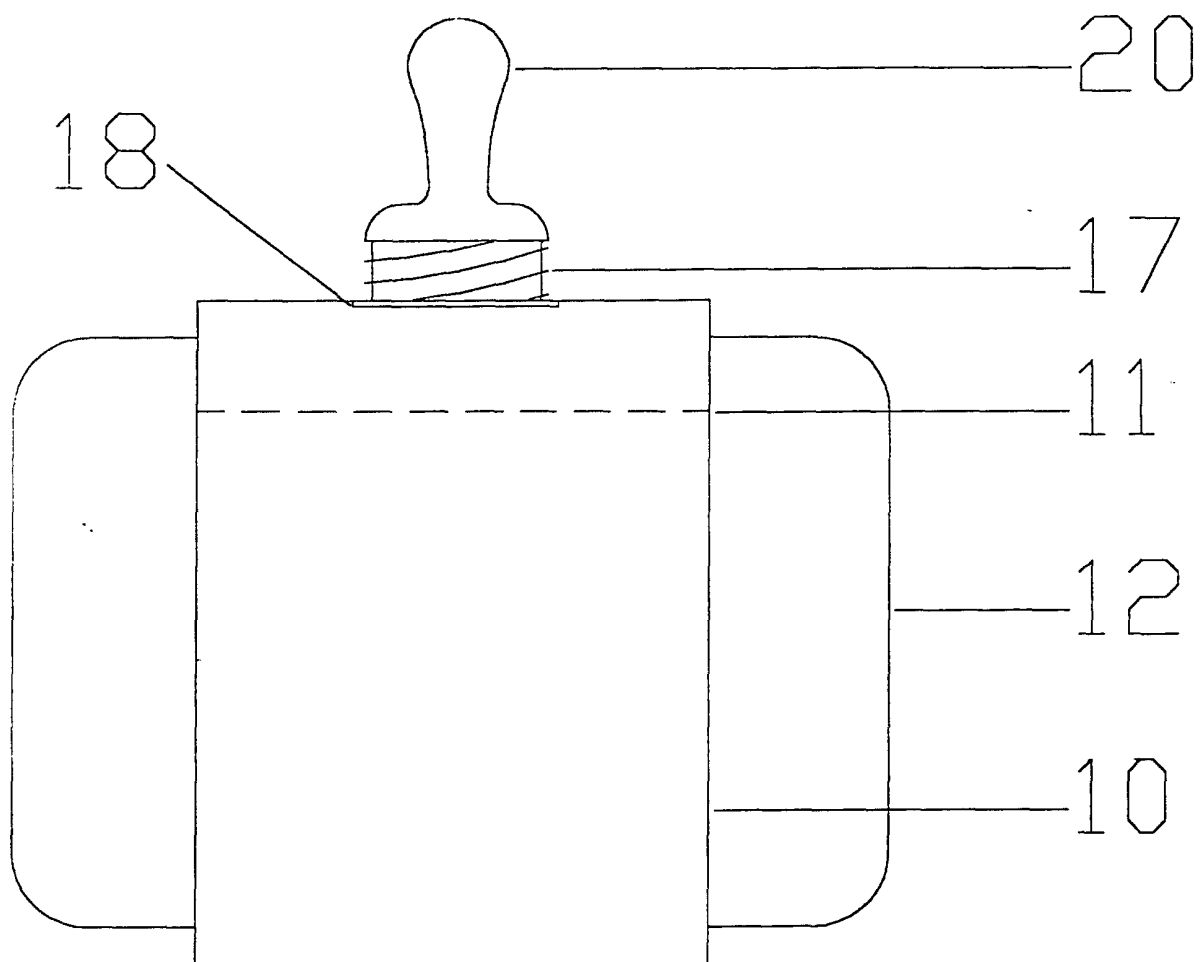


FIG. 4

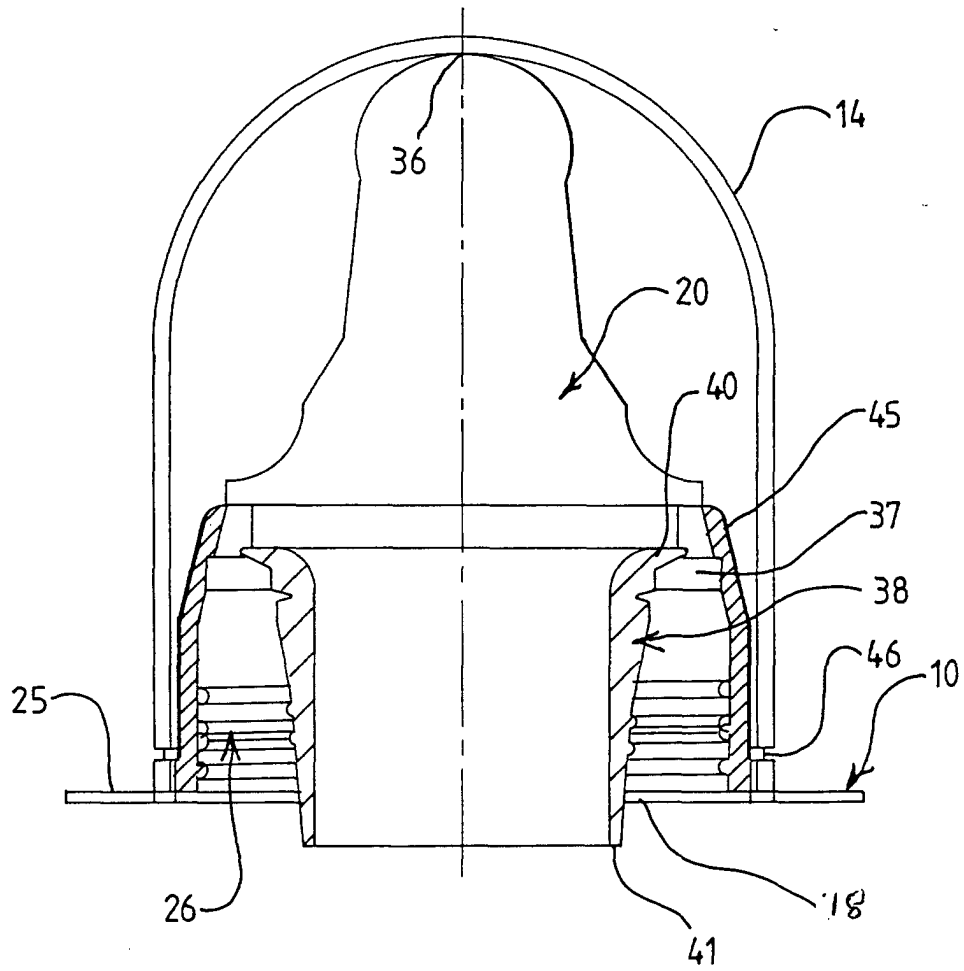


FIG 6

