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(54) **An inertia driven device which returns in its original position so that a baby's pacifier stays upwards.**

(57) This invention comes under the field of child-care articles made specially so that babies can place it in their mouths themselves. In particular, it is an extremely practical, simple device which, in any one of its various forms, if dropped, will automatically return to the position that guarantees the maximum hygiene without ever touching the ground in any way. An auto-stabilising baby's pacifier that is characterised by a flat base (2) that functions as a counter weight and is attached on its upper edge to a baby's pacifier teat (1) and which has a semicircular (4) rotating element connected to its upper lateral border, which in turn is connected to a string and a clip for attaching the pacifier to the baby's clothing.

The aforesaid base (2) is, or contains, a counter weight, while on its upper border the pivot ends (3) of a rotating semicircular element (4). The rotating axis realised by the pivot of the ends (3) of the semicircular element (4) is situated above the total barycentre of the device + pacifier teat, so that any rotation that occurs around this axis tends to incline the pacifier teat into its original vertical position, that is, with the teat (1) facing upward, and also by the fact that the base with its counter weight (2) sets off a coupled reaction that returns the pacifier teat to its original position

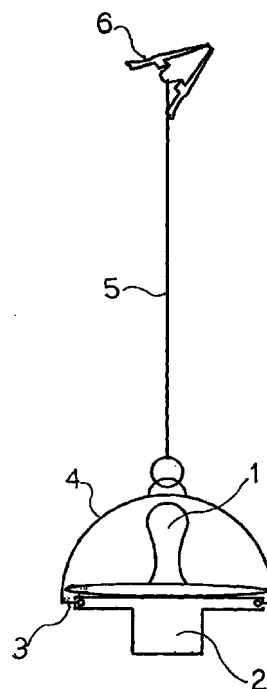


FIG.1

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Description

Technical field

[0001] This invention comes under the field of child-care articles made specially so that babies can place it in their mouths themselves. In particular, it is an extremely practical, simple device which, in any one of its various forms, if dropped, will automatically return to the position that guarantees the maximum hygiene without ever touching the ground in any way.

Technical status

[0002] Simple suspending devices for hanging around babies' necks are commonly used, usually consisting of a string or chain. Given, however, that small children never stand still for long, they bend over or sit down by bending forwards, a pacifier attached to a string or chain around a baby's neck often touches the ground, seriously compromising hygiene and thus placing the child's health at risk.

[0003] It is clear that mothers would welcome a system that would stop this risk, or at least make it less possible.

[0004] A preceding request for an Italian patent, SA97U000016, made in the name of the same person requesting this patent, proposed to fulfil this need. That invention consisted of a flexible rod-shaped element, which, thanks to a counter-weight fixed to one end and a ring at the other, allowed the pacifier to remain in a pre-set position or run up or down through another ring fixed to a hook attached to the child's clothing.

Aims and advantages of this invention

[0005] The objective of this invention is to realise a pacifier for babies that returns to a pre-determined position if dropped, without ever touching the ground.

[0006] Another aim of this invention is to realise a pacifier supplied with a suspending string to hang around a baby's neck, or which can be attached in any other way to a baby's clothing, in such a way as to permit it to remain in the position requested of it according to this invention in such a way that the baby can easily and at any time put the pacifier in its mouth and then allow it to fall without fear of the pacifier touching the ground, even if the child is in a very inclined position.

[0007] Another aim of this invention is to provide any pacifier with an automatically stabilising device that can be used in the position that best guarantees the maximum hygiene in regard to eventual contact with the ground.

[0008] Another aim of this invention is to realise a new type of pacifier that babies will find easy to handle and that is shaped in such a way that it would be simple to fit with a cover.

[0009] Yet another aim of this invention, compatibly

with the aims listed above, is to realise a device that, shaped as described above, would be capable of containing a pleasant tasting, nutritious or medicated liquid and feeding it through the teat by natural aspiration into the baby's mouth.

[0010] The aims and advantages listed above, together with others that will be explained in detail in the following paragraphs are fulfilled by a device that repositions a baby's pacifier in an upward position, returning it to this position through inertia. The invention is composed of a cylindrical body with a flat base that acts as a counter-weight, the lower part of which can be screwed, locked or clipped onto a baby's pacifier, and with it, forms a single body to the sides of which a half ring is attached in such a way that the device spins around inside it, and which in turn is attached to a string or chain with a clip at the other end for attaching the device to the baby's clothing.

A description of the drawings and the various ways in which the invention can be realised.

[0011] Further characteristics and advantages of the invention will be shown more clearly in the descriptions of the various forms in which the invention can be realised and also in the drawings that are attached to this document for purely indicative and in no way limiting reasons.

Figure 1 shows a schematic drawing of the complete invention.

Figure 2 A) and B) show the device in a form that can be applied to any ordinary pacifier.

Figure 3 A) and B) show the pacifier as described in this invention while being used.

Figure 4 A) and B) show this invention with the pacifier cover both raised and lowered.

[0012] The invention shown in the drawings, in its most simple form of realisation, is composed of: the pacifier teat (1), of a type easily found on the market, which is attached using any one of the various systems in common use today, for example, locking, screwing or clipping to a base (2) made of polymeric material or any other material compatible with the use for which this invention is designed; this base (2) is preferably of a cylindrical shape with a flat base that contains a counterweight, while the ends (3) of a semicircular shaped element (4) are hinged onto the upper, lateral edge of the base (2). The device is contrived in such a way that the rotation axis of the ends (3) of the semicircular (4) element are above the total barycenter of the device + pacifier assembly, so that any rotation that occurs around this axis tends to incline the pacifier from its original vertical position, that is, with the teat (1) facing upwards, and causes the barycenter and the counterweight inside the cylindrical body to create a coupled reaction that will make the pacifier head return automat-

ically to its original, upward facing, position.

[0013] In another form of realisation of this invention, the pacifier and the device for automatically repositioning the pacifier in an upward facing position through inertia would be made as a single body.

[0014] The base (2) could also contain a hollow cavity for holding liquids and supplied with an entrance valve to the teat from which the baby could suck the liquid into its mouth through natural inspiration.

[0015] The assembly (2) and (4) is constructed in such a way as to sustain any type of cover for the pacifier when it is not in use, in one form of its realisation a cylindrical element (7), supplied with introduction holes (8) that can be connected to the semicircular element (4) in such a way that it can be lowered by hand or raised through the tension exercised on it by the string (5).

[0016] The invention can be connected to any type of hooking or pinning device, shown in the drawing as a string (5) and a clip (6) that can be attached to the baby's clothing at chest height, but it can be of any type adapted to the objective of this invention.

[0017] As can be seen from the drawings proposed the invention allows the pacifier to remain in the desired position once the clip is attached to the baby's clothing. It is plain that the baby can easily carry the pacifier to its mouth and then let it drop at any time. The base (2) ensures that the pacifier teat (1) will remain in an upward facing position, and that if dropped it is almost impossible for it to touch the ground, even if the baby is leaning right over, because the base (2), in respect to the rotation axis formed by the pivot of the ends (3) of the semicircular element (4) is only in stable balance if it is in a lower position in respect to the pacifier teat (1), that is, nearer the ground, and therefore it is the base (2) that is more likely to touch the ground.

[0018] This forms a very efficacious and yet simple auto-stabilisation system using the force of inertia to position the pacifier, which also guarantees, as much as is possible, the maximum hygiene.

[0019] The device, described in its various forms, according to the present invention, is simple and yet efficacious, gives sure results and can also be made at very low cost.

[0020] Several different variations, both formal and structural can be made to the original device, in the sense that all the details, and in particular the hook or clip elements used to attach the device to the baby's clothing (6), the counter weight base (2), the pacifier teat cover (7) and the connecting system of the pacifier can all be substituted by other technically equivalent elements. That is, the materials, the dimensions and the contingent forms can be any, according to necessity, without diverging from the dominion of the device that is summarised in the following claims.

Claims

1. An auto-stabilising device for the upward facing positioning and return in position for pacifiers (1), using the force of inertia, and in particular of a baby's pacifier that is characterised by a flat base (2) that functions as a counter weight and is attached on its upper edge to a baby's pacifier teat (1) through any type of connecting system such as, for example, a screw, a locking device or a clip, and which has a semicircular (4) rotating element connected to its upper lateral border, which in turn is connected to a string and a clip for attaching the pacifier to the baby's clothing.
2. A device as in claim 1), characterised by the fact that the aforesaid base (2) is, or contains, a counter weight, while on its upper border the pivot ends (3) of a rotating semicircular element (4).
3. A device as in claims 1) and 2) characterised by the fact that it is devised in such a way that the rotating axis realised by the pivot of the ends (3) of the semicircular element (4) is situated above the total barycenter of the device + pacifier teat, so that any rotation that occurs around this axis tends to incline the pacifier teat into its original vertical position, that is, with the teat (1) facing upward, and also by the fact that the base with its counter weight (2) sets off a coupled reaction that returns the pacifier teat to its original position.
4. A device as described in claim 1) and preceding ones, characterised by the fact that the pacifier is constructed directly as a single body with the base (2), which may be slightly elliptical and the elements (3) and (4) for positioning the teat in an upward facing position and returning it to its original position using the force of inertia.
5. A device as described in claim 1), characterised by the fact that the invention can be connected to any type of hooking or clipping system, for example, a string (5) and a clip (6) that is then clipped onto the baby's clothing at chest height.
6. A device as described in claim 1), characterised by the fact that the base (2) can also contain a hollow cavity for holding liquids that is supplied with an entrance valve leading to the pacifier, from which the baby can suck liquids into its mouth through natural aspiration.
7. A device as described in claim 1), characterised by the fact that the assembly (2) + (4) is realised in such a way as to sustain any type of pacifier cover when it is not in use, for example, a cylindrical shaped element (7) supplied with introduction holes

(8) that can be connected to the semicircular element (4) in such a way that it can be lowered by hand or lifted by the tension exercised on it by the string (5).

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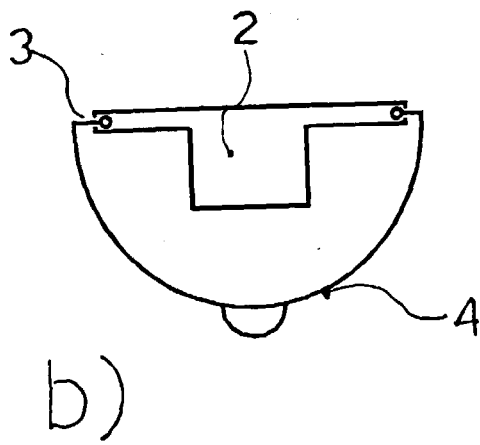
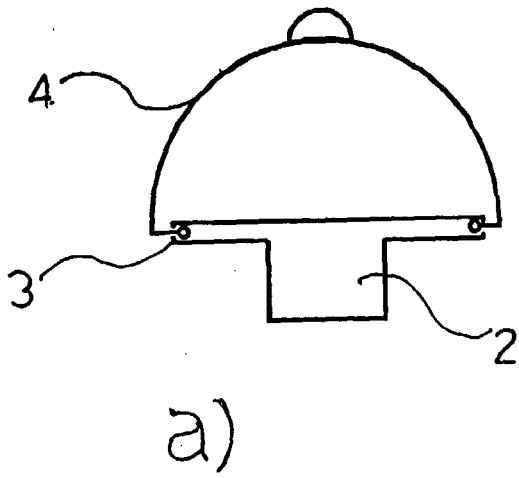
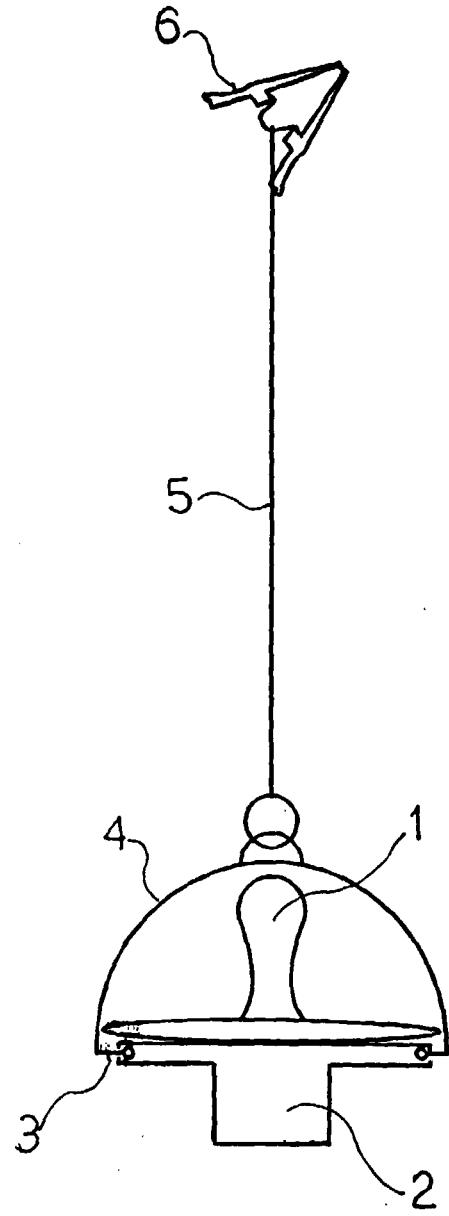
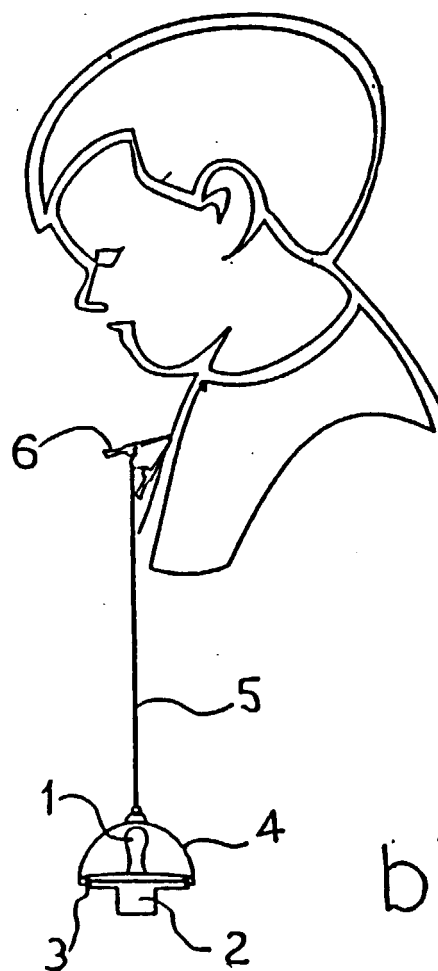


FIG.2



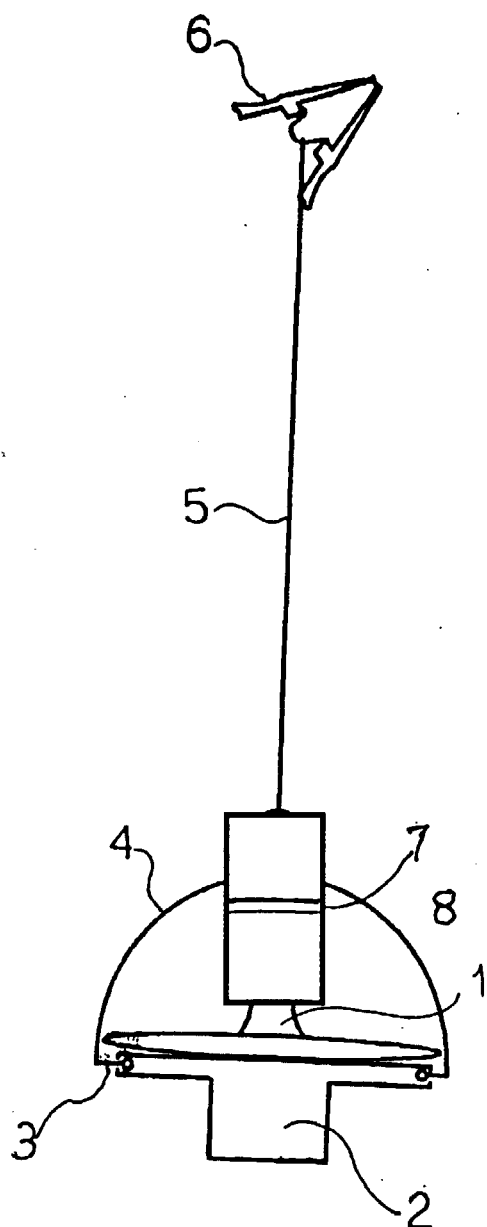


a)

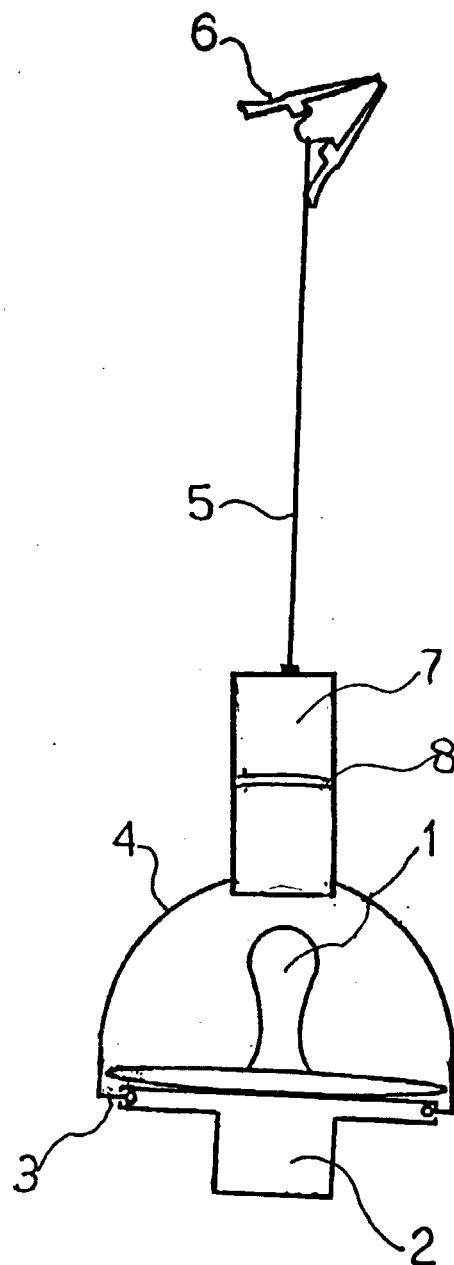


b)

FIG.3



a)



b)

FIG.4