

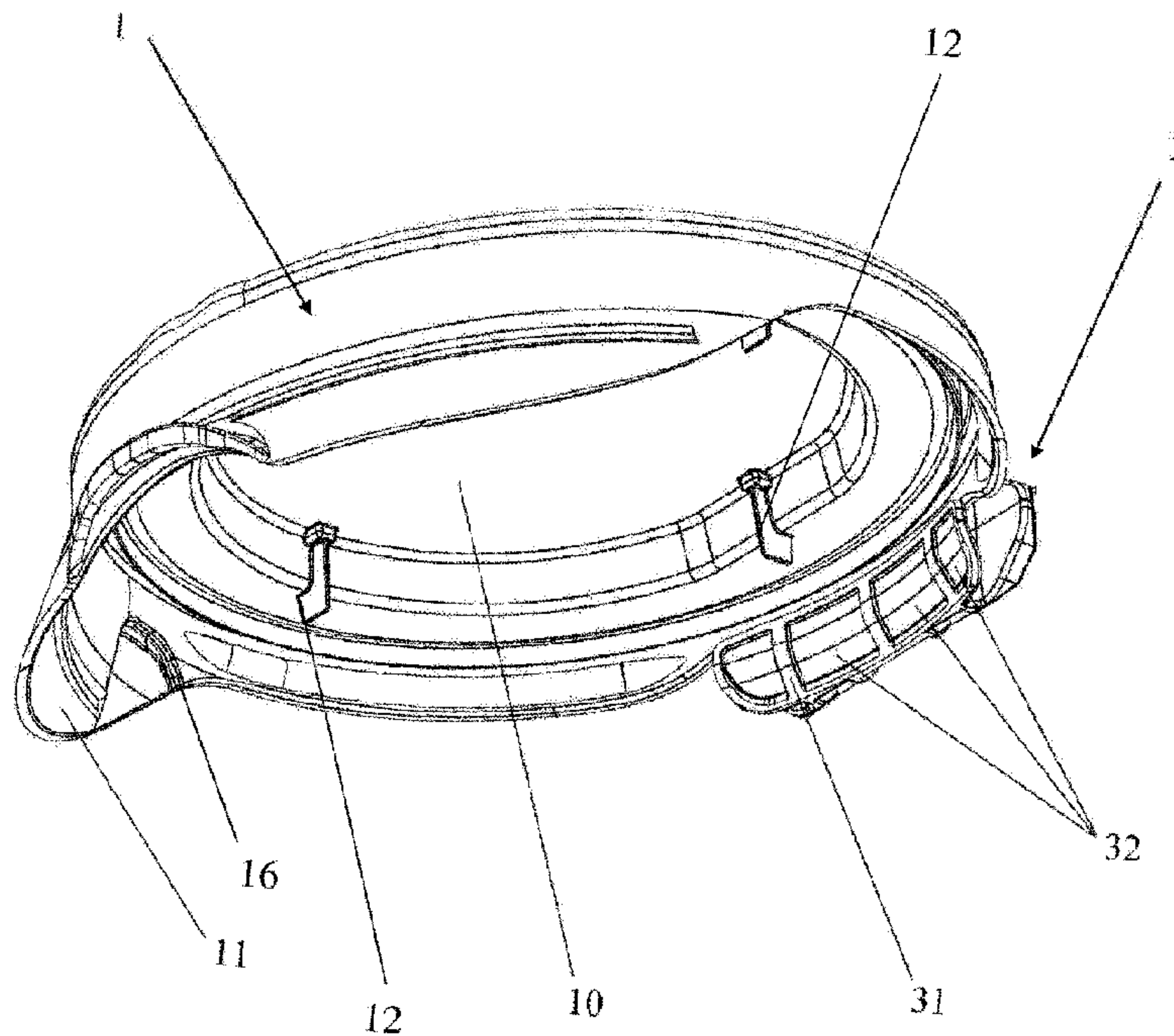


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 (54) Title: PROTECTIVE LID FOR CONTAINERS

FIG. 1



(57) **Abrégé/Abstract:**

The invention relates to a protective lid for containers, comprising an upper lid (1) provided for covering the upper part of the container (2), and a hinge section (3) provided for exerting an angular movement of the upper lid (1) in relation to the upper face of the container (2), said hinge section (3) having at least one connecting portion with a contact surface (31) provided for being adhered by means of an adhesive material to the lateral wall (20) of the container (2). The contact surface has an arched trajectory with a radius that is substantially equal to the bend radius of the lateral wall (20) of the container (2), and with a length that is less than the circumferential length of the lateral wall of the container (2). In this way, the protective lid is not provided with a lower ring for securing same to the container, thereby simplifying the production and assembly process.

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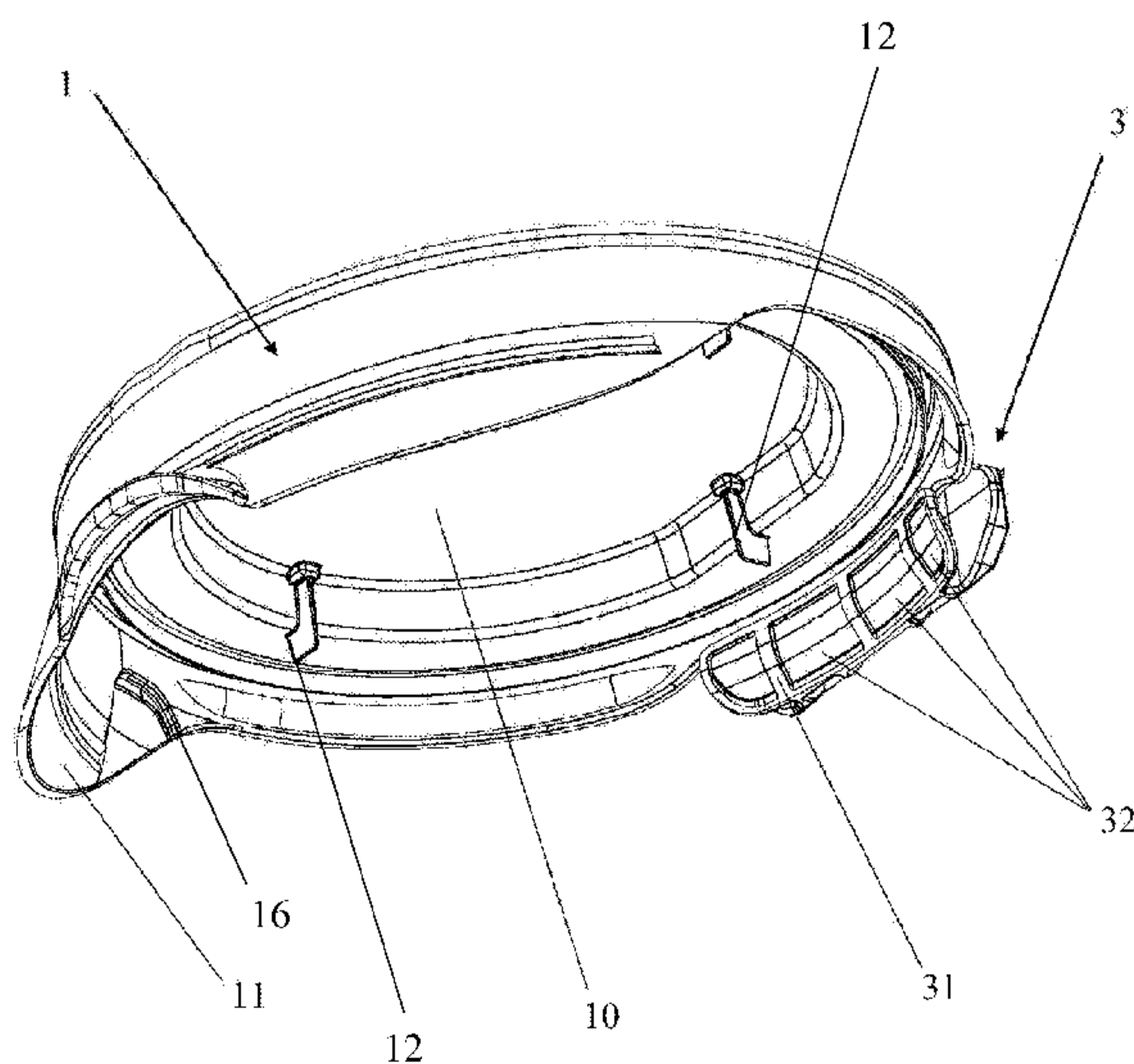
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(54) Title: PROTECTIVE LID FOR CONTAINERS

(54) Título : TAPA PROTECTORA PARA ENVASES

FIG. 1



(57) Abstract: The invention relates to a protective lid for containers, comprising an upper lid (1) provided for covering the upper part of the container (2), and a hinge section (3) provided for exerting an angular movement of the upper lid (1) in relation to the upper face of the container (2), said hinge section (3) having at least one connecting portion with a contact surface (31) provided for being adhered by means of an adhesive material to the lateral wall (20) of the container (2). The contact surface has an arched trajectory with a radius that is substantially equal to the bend radius of the lateral wall (20) of the container (2), and with a length that is less than the circumferential length of the lateral wall of the container (2). In this way, the protective lid is not provided with a lower ring for securing same to the container, thereby simplifying the production and assembly process.

(57) Resumen: Tapa protectora para envases, que comprende una tapa superior (1) prevista para cubrir la parte superior del envase (2) y un tramo de bisagra (3) previsto para ejercer un movimiento angular de la tapa superior (1) con respecto a la cara superior del envase (2), comprendiendo el tramo de bisagra (3) al menos una porción de enganche con una superficie de contacto (31) prevista para ser adherida mediante un material adhesivo en la pared lateral

[Continúa en la página siguiente]

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(20) del envase (2). Dicha superficie de contacto presenta una trayectoria arqueada con un radio sensiblemente igual al radio de curvatura de la pared lateral (20) del envase (2), y con una longitud inferior a la longitud circunferencial de la pared lateral del envase (2). De este modo, la tapa protectora está desprovista de un anillo inferior para fijarse al envase, por lo que se simplifica el proceso de fabricación y montaje.

## **PROTECTIVE LID FOR CONTAINERS**

### **DESCRIPTION**

#### **OBJECT OF THE INVENTION**

5           The object of the present application is to register a protective lid for containers that incorporates notable innovations and advantages.

          More specifically, the invention proposes the development of a protective lid for containers comprising an upper lid provided for covering the upper part of the container and a hinge section that simplifies the assembly and reduces the  
10       number of components.

#### **BACKGROUND OF THE INVENTION**

          At present, the existence of protective means for containers is known, for example, provided for the consumption of beverages. The applicant is the  
15       holder of various inventions relating to a protection system for containers comprising an upper protective lid and a lower ring, which is diametrically fixed on the upper part of the body of the container, the lid and the lower ring being joined to each other by means of a hinge section.

          Although this previously described protective system is effective from a  
20       hygienic point of view and ease of use for the user or consumer, the assembly process thereof on the containers is laborious, consequently the placement time for each protector on the corresponding container thereof involves a significant amount of time.

          Furthermore, the applicant does not know of any invention at present that  
25       is provided with all the characteristics described in this specification.

#### **DESCRIPTION OF THE INVENTION**

          The present invention has been developed with the aim of providing a protective lid that is configured as a novelty within the field of application and  
30       resolves the drawbacks previously mentioned, also providing other additional advantages which will be evident from the description included below.

          It is therefore an object of the present invention to provide a protective lid for containers comprising an upper lid provided for covering the upper part of the container and a hinge section provided for executing an angular movement  
35       of the upper lid with respect to the upper face of the container and is essentially

characterised in that the hinge section comprises at least one hooking portion with a contact surface provided for being adhered by means of an adhesive material on the lateral wall of the container, said contact surface having an arched course with a radius significantly equal to the radius of curvature of the lateral wall of the container and with a length less than the circumferential length of the lateral wall of the container.

It should be mentioned that the adhesive can be applied directly on the contact surface of the hinge section or on the area of the lateral wall of the container where the contact surface is subsequently adhered.

Thanks to these characteristics, the process of placing the protective lid on a container, for example a container in the form of a tin, is facilitated given that it can be joined by the surface with an adhesive on the lateral wall of the container in question, consequently the productivity rates in the process of assembling the protective lids on containers can be increased. Furthermore, when an annular body is not used, the quantity of material required for obtaining the protective lid is reduced and the injection moulding used is simplified, consequently the manufacturing costs are reduced.

Another advantageous aspect, but no less important, is the fact that it can also facilitate and reduce the stacking volume during the storage thereof, for example, prior to assembling the protective lids on the corresponding containers.

According to another aspect of the invention, the contact surface has a plurality of cavities arranged along the length of the contact surface.

In a particularly preferred embodiment, the upper lid and the hinge section are made of a single piece.

Advantageously, the length of the contact surface of the hooking portion is less than one quarter of the circumferential length of the lateral wall of the container.

The hooking portion also preferably has a transversal cross-section in the form of a rectangular trapezoid.

It is another object of the invention to provide a container comprising a body with a noticeably cylindrical form that includes a protective lid like the one described previously.

Advantageously, there is the possibility of the upper lid including positioning means. In a preferred embodiment, such positioning means consist

of a plurality of partitions arranged radially projecting from the inner face of the upper lid, on which said partitions can fit into a plurality of housings in a complementary manner with respect to the partitions and arranged on the outer face of the upper lid. In this way, the stacking of protective lids on top of each other is facilitated during the manufacturing process and storage thereof, said partitions preventing the protective lid from rotating in an undesired manner and ensuring the stacking.

Additionally, the upper lid has watertight means that ensure the upper lid is sealed with respect to the container. These watertight means may preferably comprise a double lip that projects downwards and circumferentially from the flange of the upper lid.

According to another characteristic of the protective lid of the invention, the hinge section also has clipping means that connect the two articulated halves or portions constituting the hinge section in a closed state of the upper lid, which facilitates manufacturing by means of an injection process of the protective lid assembly in an open state, that is to say, the two articulated halves or portions of the hinge being noticeably axially aligned and, consequently, facilitate the manufacturing process thereof. Thus, it also enables the hinge to be maintained in a static position during the adhesion process of the hinge section to the container.

Also advantageously, the upper lid may include at least one safety seal. In a preferred embodiment, said safety seal is defined by at least one weakened region that has a thinner segment than the rest of the material of the upper lid, which extends from the outer flange of the circumferential contour of the upper lid and laterally with respect to the position of a projecting tab. In this way, the user can be guaranteed that the lid, and consequently, the container, has not been manipulated prior to the consumption thereof. Thus the arrangement of this thinner segment is broken when the user attempts to press on or bend the upper lid in an ascending direction by means of placing a finger in the area of the projecting tab.

Other characteristics and advantages of the protective lid object of the present invention will be evident from the description of a preferred, but not exclusive, embodiment, illustrated by way of non-limiting example in the accompanying drawing, in which:

**BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 is a perspective view of an embodiment of the protective lid according to the present invention;

5 Figure 2 is a perspective view from another point of view of the protective lid represented in figure 1;

Figure 3 is a partial perspective view of a container provided with the protective lid according to the present invention;

Figure 4 is a partial perspective view of the container shown in the previous figure from another point of view;

10 Figure 5A and 5B are upper plan views of a container with two embodiments of the protective lid of the invention, in which in figure 5A the hinge section is laterally extended while in figure 5B the hinge section is shorter in length with respect to figure 5A;

15 Figure 6 is an upper perspective view of the protective lid of the invention;

Figure 7 is a perspective view of the container with the upper lid in an open state;

Figure 8 is a partial cross-sectional perspective view of a container with the protective lid in a closed state, which includes a view with greater detail; and

20 Figure 9 is a perspective view and a detailed view of the clipping means present on the protective lid.

**DESCRIPTION OF A PREFERRED EMBODIMENT**

25 In light of the aforementioned figures and according to the adopted numeration, a preferred exemplary embodiment of the invention may be seen in said figures, which comprises the parts and elements that are indicated and described in detail below.

30 Thus, as can be seen in the attached figures, the protective lid for containers essentially comprises an upper lid (1) provided for covering the upper part of the container (2) and a hinge section (3) provided for executing an angular movement of the upper lid with respect to the upper face of the container, which has a pair of regions by way of a shaft (30).

35 As may be seen with greater clarity in figures 1 and 2, the hinge section (3) comprises a hooking portion with a contact surface (31) provided for being adhered by means of an adhesive material on the lateral wall (20) of the

container (2), said contact surface (31) having a slightly arched course, the radius thereof being noticeably equal to the radius of curvature of the lateral wall of the container (2), having a length less than the circumferential length of the lateral wall of the container. More preferably, the length of the contact surface of the hooking portion is less than one quarter of the circumferential length of the lateral wall (20) of the container (2).

It should be mentioned that the hooking portion has a transversal cross-section in the form of a rectangular trapezoid in which the contact surface (31) has a plurality of cavities or recesses (32) separated equidistantly from each other and being arranged along the length of the contact surface (31). This rectangular trapezoid shape is suitable for conventional metal tin-type containers that have a low cylindrical section (21) (see figure 6) in the upper part of the lateral wall (20) from which a frustoconical shaped portion extends downwards such that the hooking portion is perfectly fixed and adapted to the cylindrical section (21) and the frustoconical shaped portion.

Going into greater detail regarding the upper lid (1), it comprises a body made of injection mouldable plastic material with a circumferential form which has a circumferential flange and a central elevation part (10) with respect to the annular section that enables the stacking of another container on the protective lid (1), consequently it facilitates the storage of containers during the transport thereof and during marketing of the containers in establishments as well as also enabling and facilitating the stacking of the protective lids for the storage, transport and supply in assembly machines for container lids. Additionally, it includes a projecting tab (11) on the front part which facilitates the operation of raising the upper lid (1) when the user wishes to use the container to consume the beverage contained therein.

Returning again to the hinge section (3), it can include an arched projection (33) (see figures 3 to 5) that is used as a locking mechanism for enabling the upper lid (1) to be maintained in a completely open position during the dispensing process of the beverage or liquid present inside the container (2), corresponding to the position represented in figure 6.

Both the upper lid (1) and the hinge section (3) can be made of a single piece and of a biodegradable material.

As can be seen in figures 1, 2, 6 and 7, the upper lid (1) includes positioning means for the purpose of an anti-rotation system that consist of a

plurality of partitions (12) arranged radially projecting from the inner face of the upper lid (1), said partitions (12) being capable of fitting into a plurality of housings (13) (see figure 6) that adopt a complementary shape with respect to the partitions (12) and arranged on the outer face of the upper lid (1).

5 In order to simply and practically ensure that the protective lid has not been manipulated prior to the opening of the container, the upper lid (1) includes a safety seal that is essentially defined by a pair of weakened regions or break lines, each one of which having a thinner segment (16) than the rest of the material of the upper lid (1) (see figures 1 and 2) that extends from the outer  
10 flange of the circumferential contour of the upper lid (1) and laterally with respect to the position of a projecting tab (11).

Making particular reference now to figures 5A and 5B, the upper part of a container with two embodiments of the protective lid of the invention has been represented, in which in figure 5A the hinge section extends laterally, such that  
15 it facilitates the placement of a grouping of protective lids stacked in a supply channel provided with a longitudinal recess in an assembly line for container lids. Additionally, there is also the possibility, as shown in figure 5B, that the hinge section is shorter in length with respect to figure 5A.

In an embodiment represented in figure 8, the upper lid (1) has watertight  
20 means comprising a relatively flexible double lip (14) that projects downwards and circumferentially from the flange of the upper lid (1) which can be coupled to the circumferential projecting flange of the container (2) in the form of a tin.

Furthermore, in order to facilitate the industrialisation process of the protective lid previously described, the hinge section (3) can have clipping  
25 means which connect the two halves of the hinge section (3) in a closed state of the upper lid (1). These clipping means essentially consists of a pair of hooks (14) distanced from each other and situated in one of the halves or portions articulated relative to each other that can be inserted when the upper lid (1) is pushed into corresponding cavities (15) present on the other articulated half or  
30 portion as is shown in greater detail in figure 9.

The details, shapes, dimensions and other accessory elements used in the manufacturing of the protective lid of the invention may be conveniently substituted for others that do not diverge from the scope defined by the claims included below.

**CLAIMS**

1. A protective lid for containers comprising an upper lid (1) provided for covering the upper part of the container (2) and a hinge section (3) provided for executing an angular movement of the upper lid (1) with respect to the upper face of the container characterised in that the hinge section (3) comprises at least one hooking portion with a contact surface (31) provided for being adhered by means of an adhesive material on the lateral wall (20) of the container (2), said contact surface having an arched course with a radius significantly equal to the radius of curvature of the lateral wall (20) of the container (2) and with a length less than the circumferential length of the lateral wall of the container (2), the contact surface (31) having a plurality of cavities (32) arranged along the length of the aforementioned contact surface (31).
2. The protective lid for containers according to claim 1, characterised in that the upper lid (1) and the hinge section (3) are made of one single piece.
3. The protective lid for containers according to claim 1, characterised in that the length of the contact surface of the hooking portion is less than one quarter of the circumferential length of the lateral wall of the container (2).
4. The protective lid for containers according to claim 1, characterised in that the hooking portion has a transversal cross-section in the form of a rectangular trapezoid.
5. The protective lid for containers according to claim 1, characterised in that the upper lid (1) includes positioning means.
6. The protective lid for containers according to claim 1, characterised in that the positioning means consist of a plurality of partitions (12) arranged radially projecting from the inner face of the upper lid (1), said partitions (12) being capable of fitting into a plurality of housings (13) in a complementary manner with respect to the partitions and arranged on the outer face of the upper lid (1).

7. The protective lid for containers according to claim 1, characterised in that the upper lid (1) has watertight means.
8. The protective lid for containers according to claim 7, characterised in that the watertight means comprise a double lip (14) that projects downwards and circumferentially from the flange of the upper lid (1).
9. The protective lid for containers according to claim 1, characterised in that the hinge section has clipping means that connect the two halves of the hinge section (3) in a closed state of the upper lid (1).
10. The protective lid for containers according to claim 1, characterised in that the upper lid (1) includes at least one safety seal.
11. The protective lid for containers according to claim 10, characterised in that the safety seal is defined by at least one weakened region which has a thinner segment than the rest of the material of the upper lid (1), extending from the outer flange of the circumferential contour of the upper lid (1) and laterally with respect to the position of a projecting tab (11).
12. A container (2) comprising a body with a significantly cylindrical form, characterised in that it includes a protective lid according to any of the claims 1 to 11.

FIG. 1

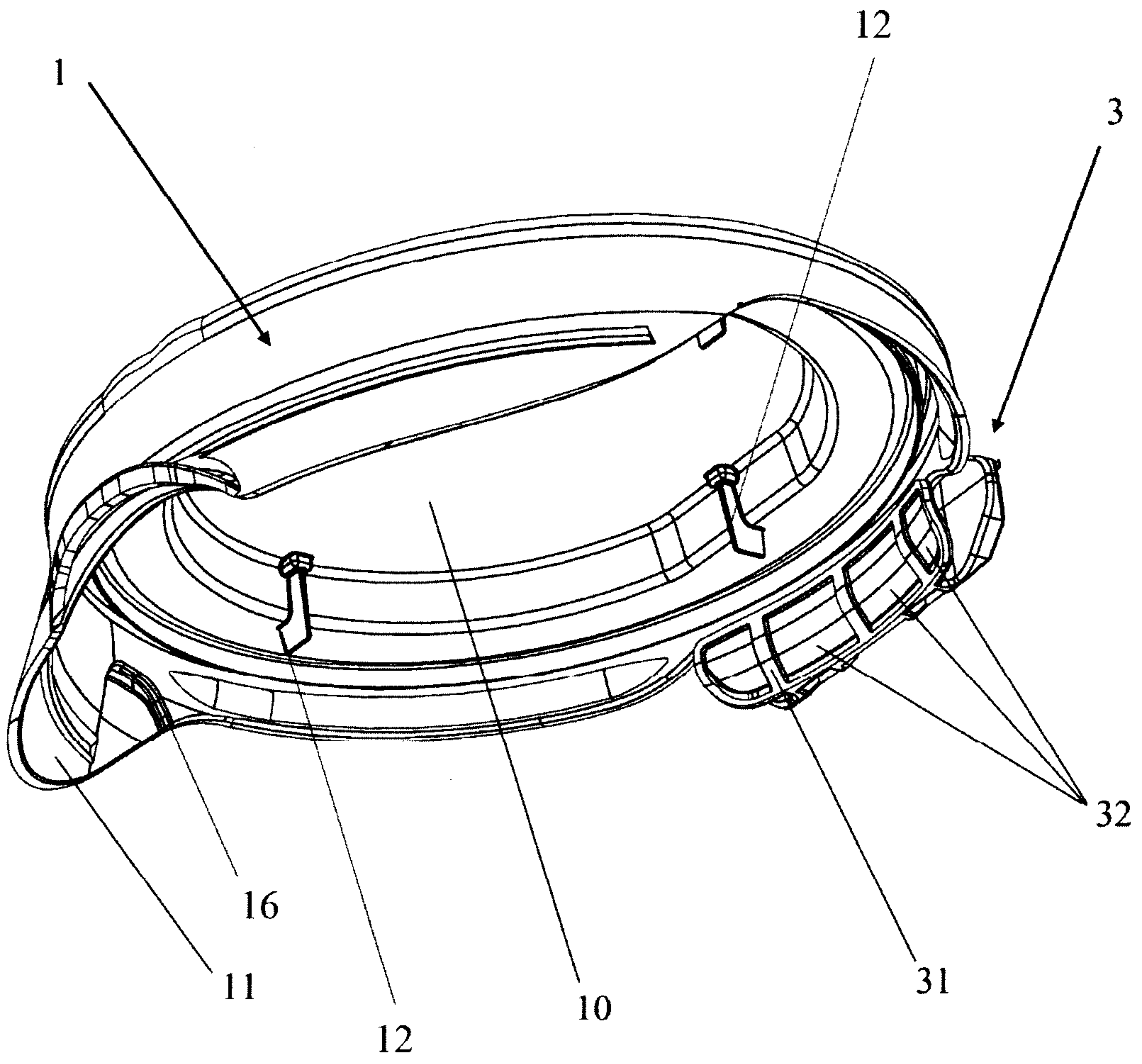


FIG. 2

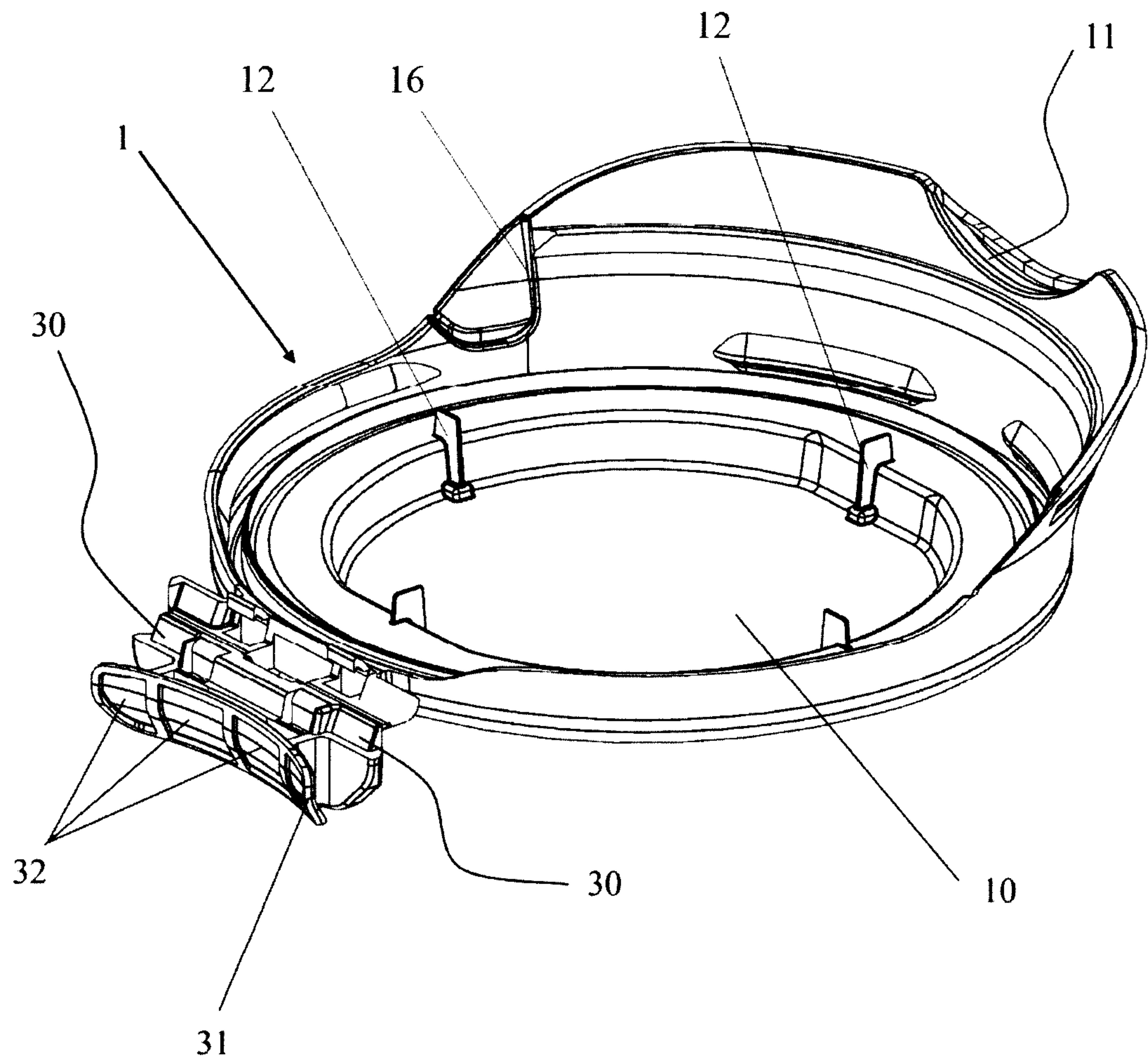
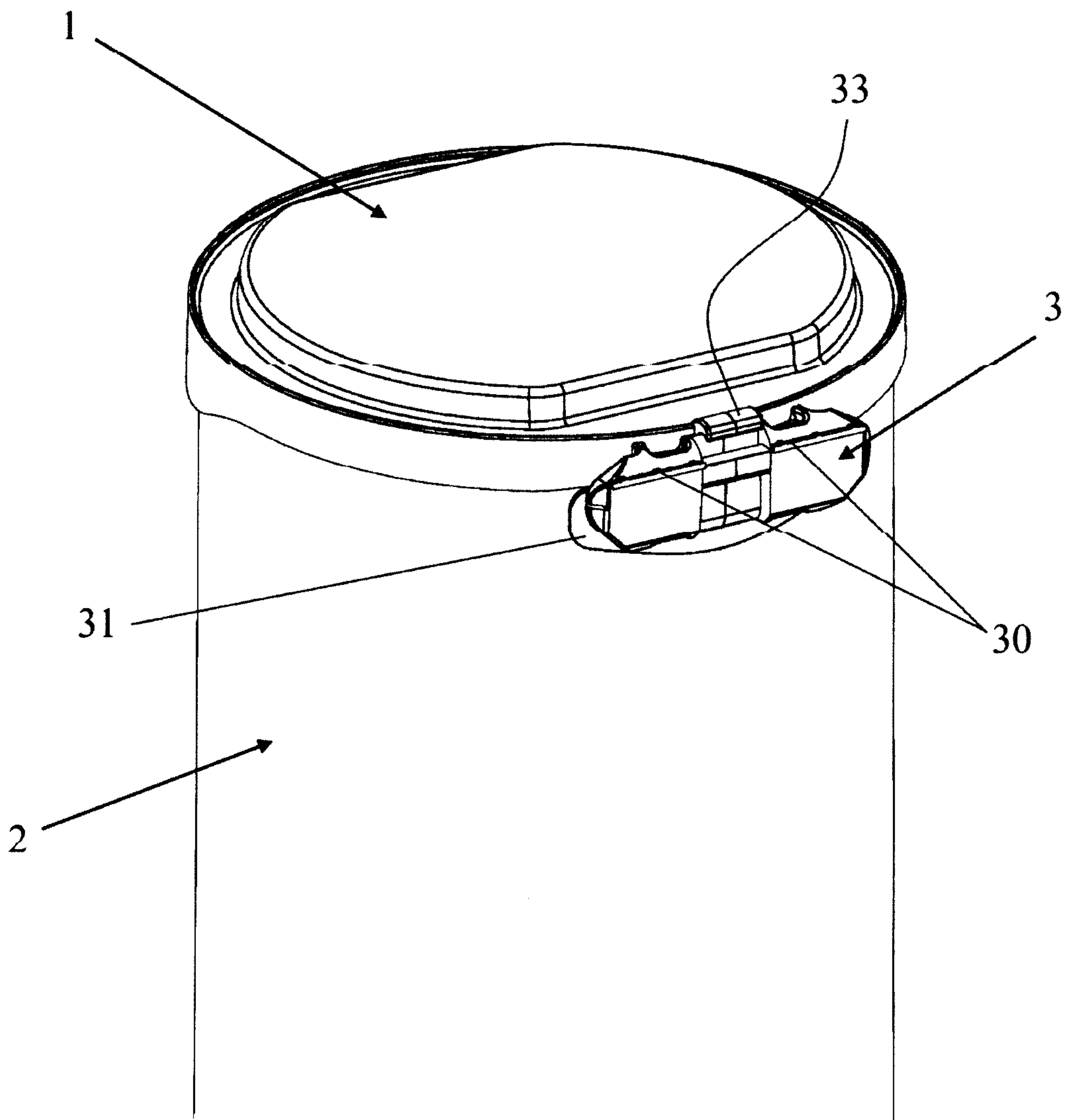


FIG. 3



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FIG. 4

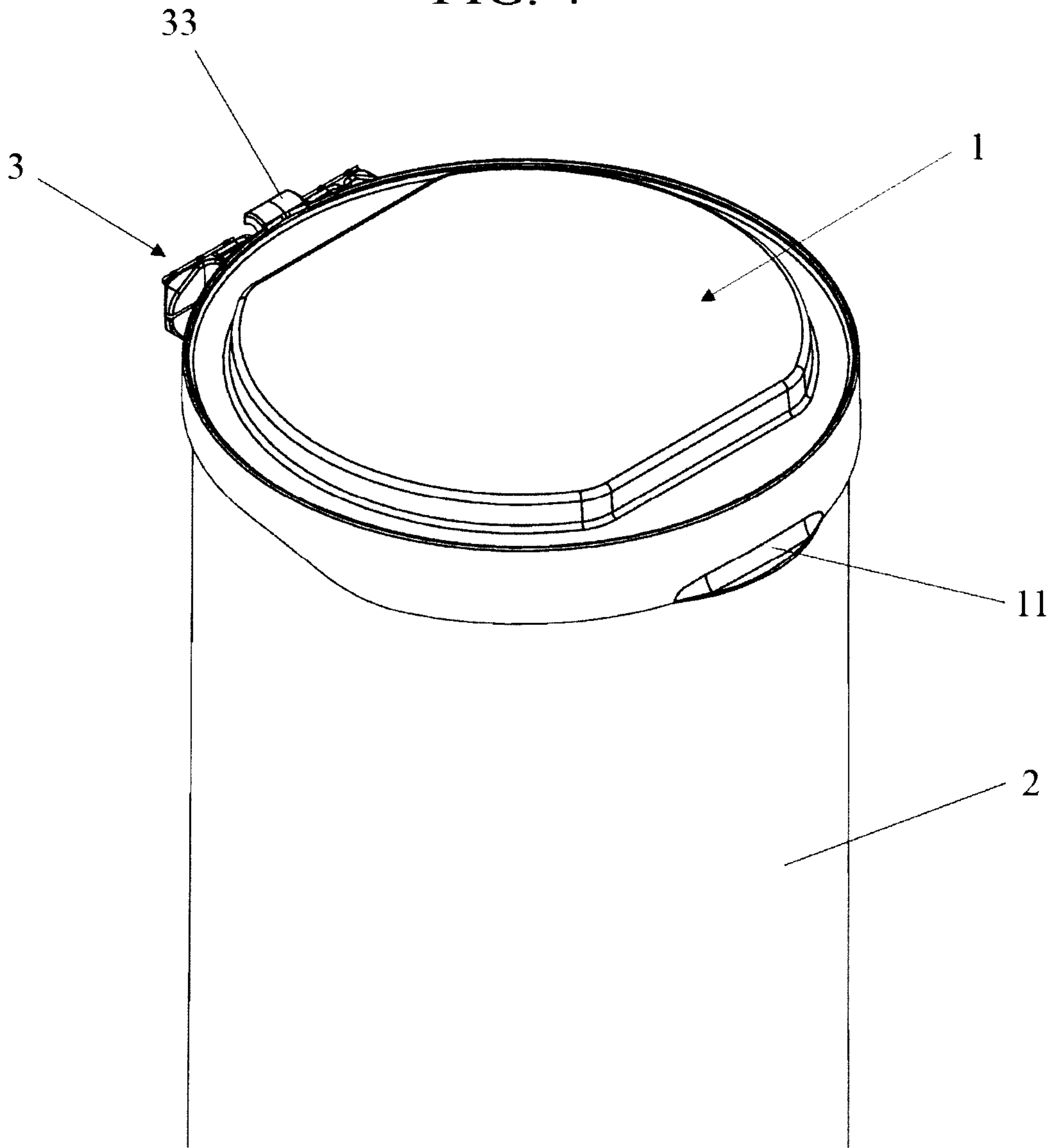
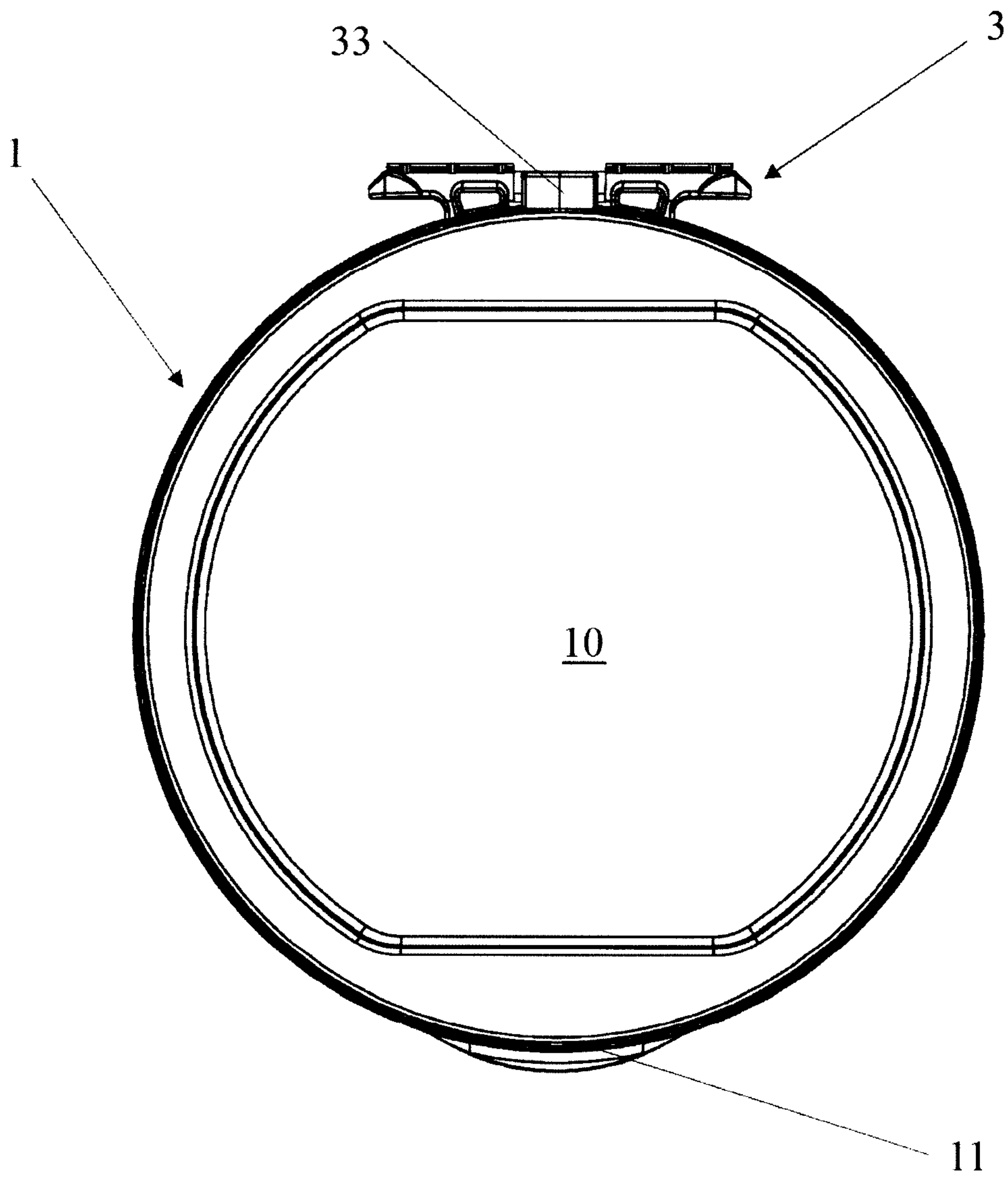
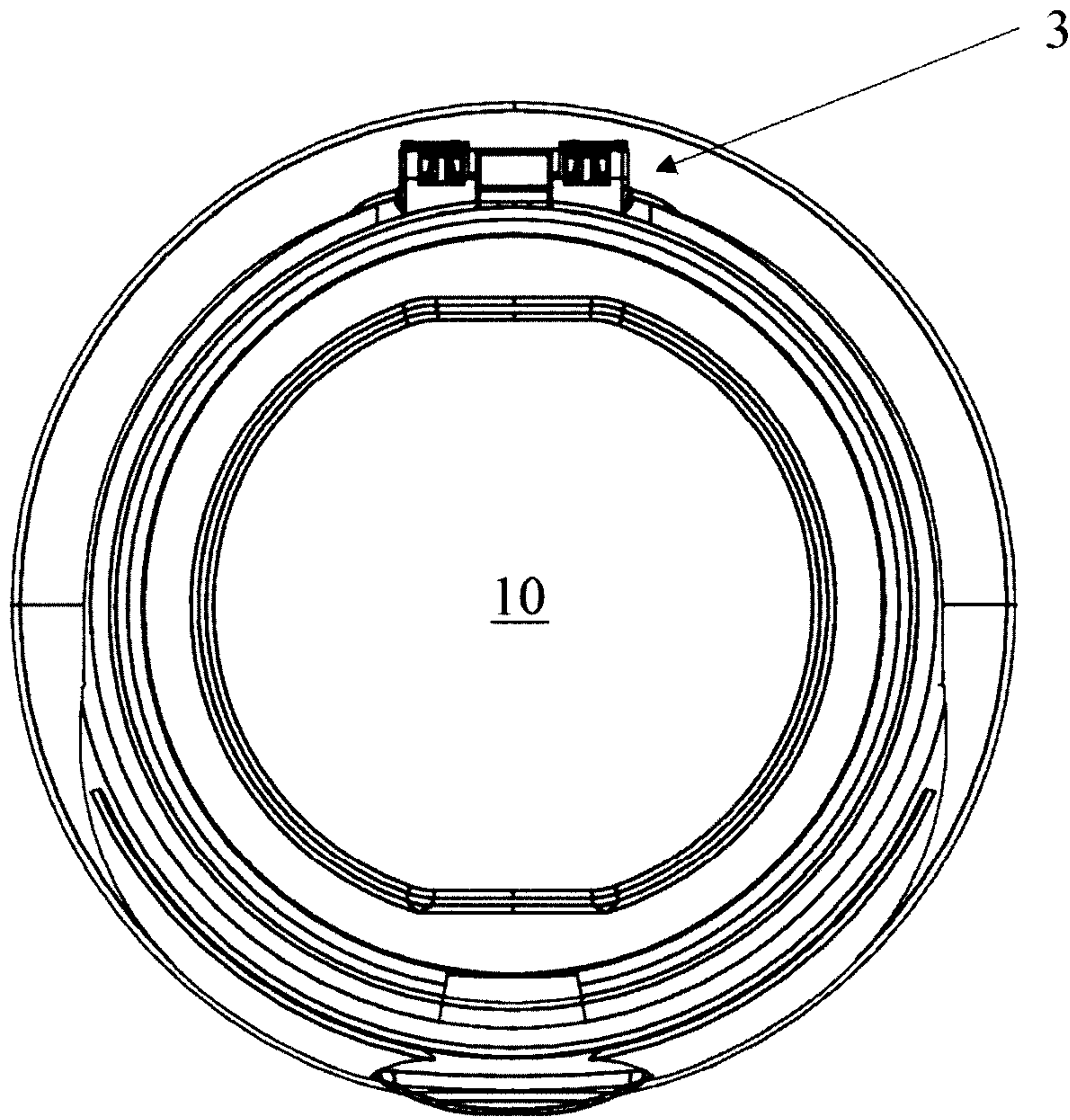


FIG. 5A



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FIG. 5B



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FIG. 6

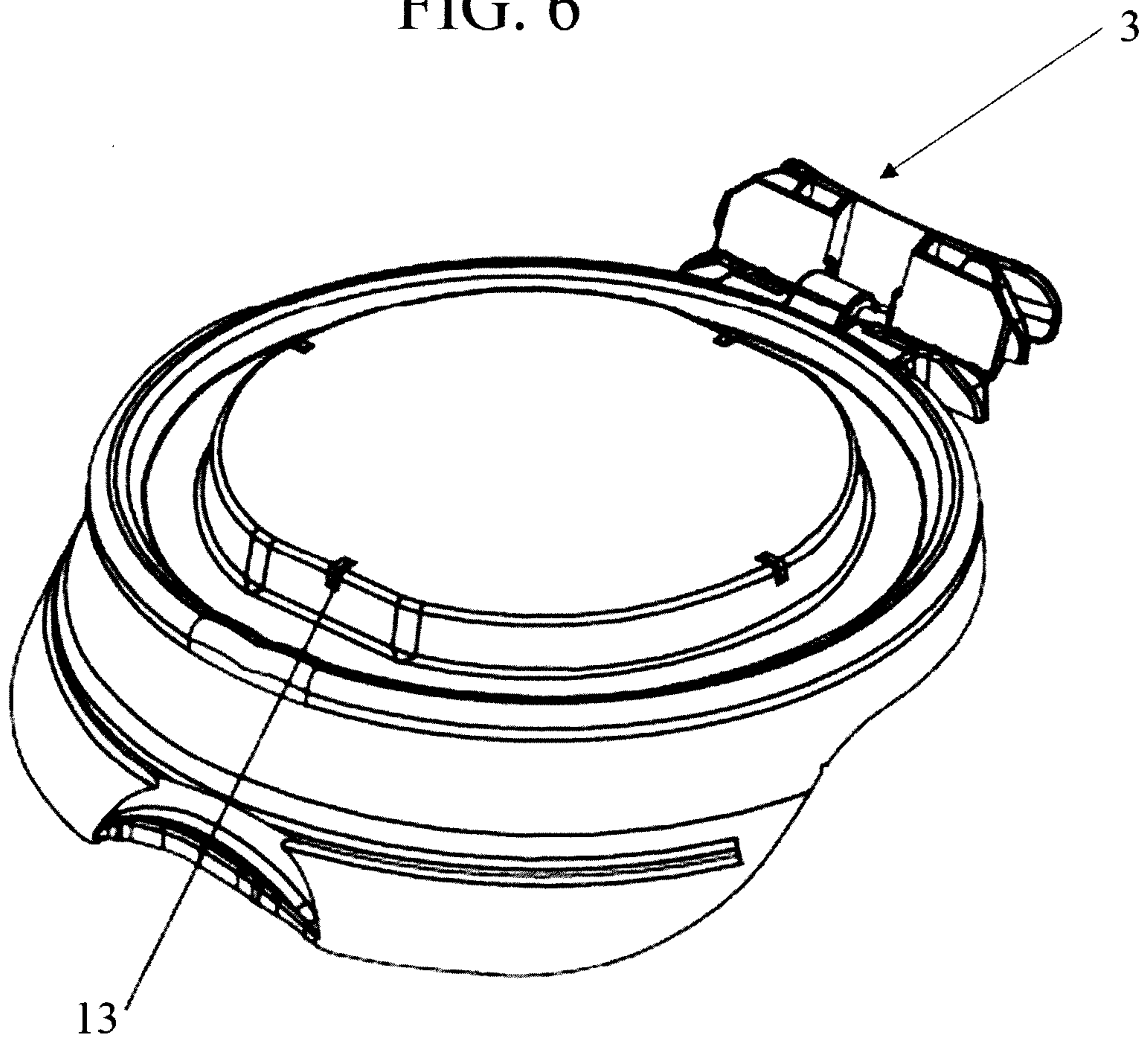


FIG. 7

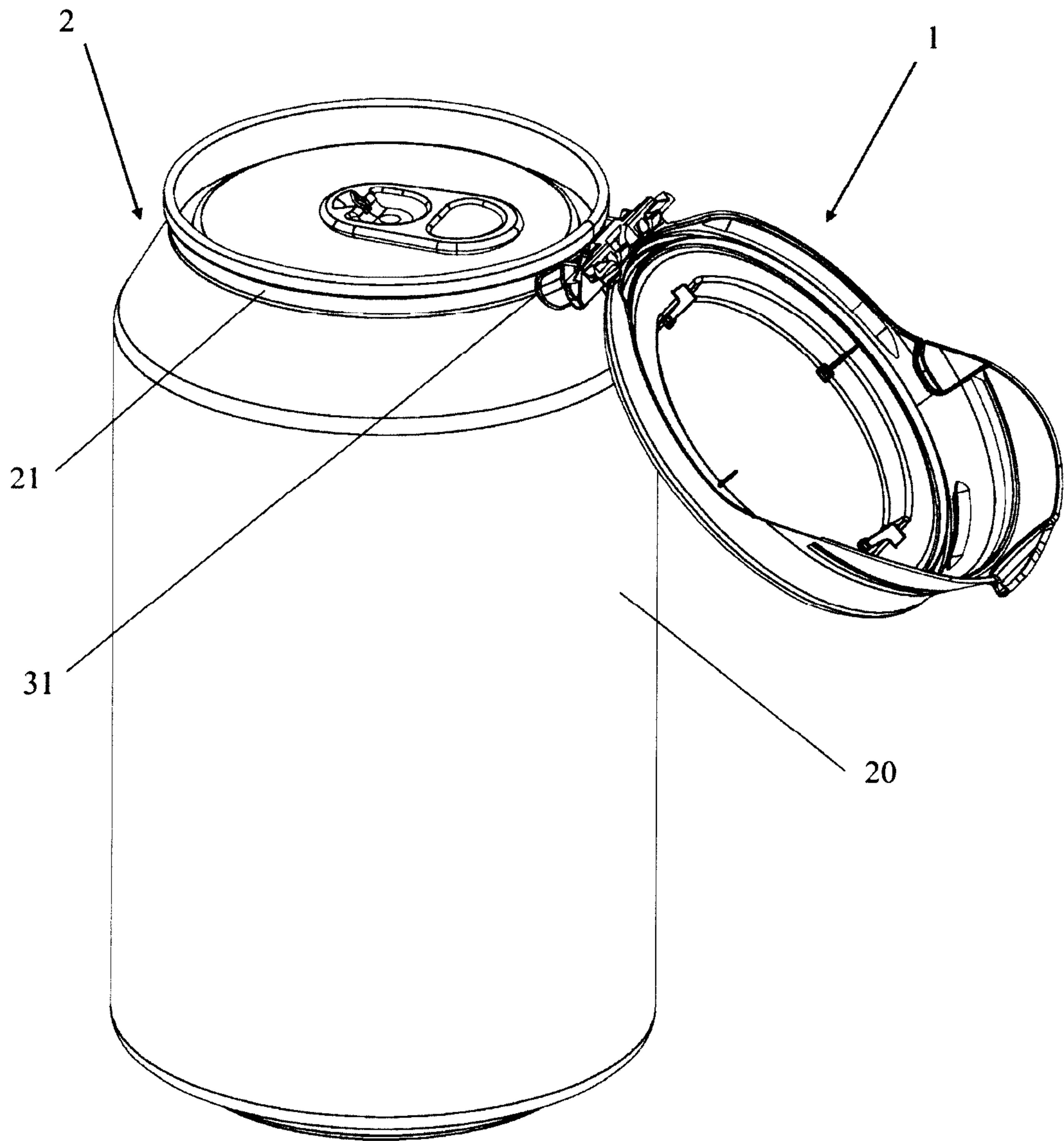
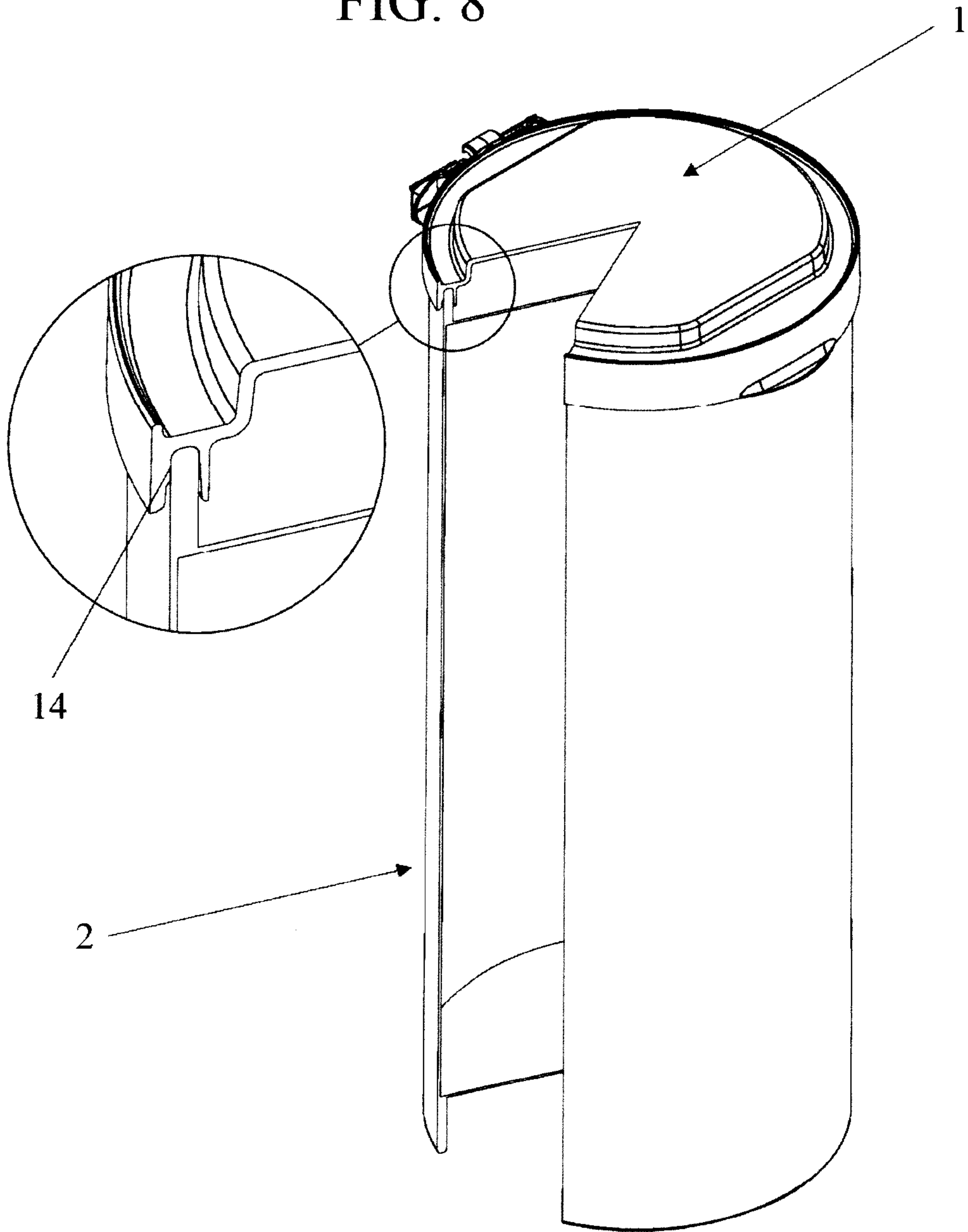


FIG. 8



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FIG. 9

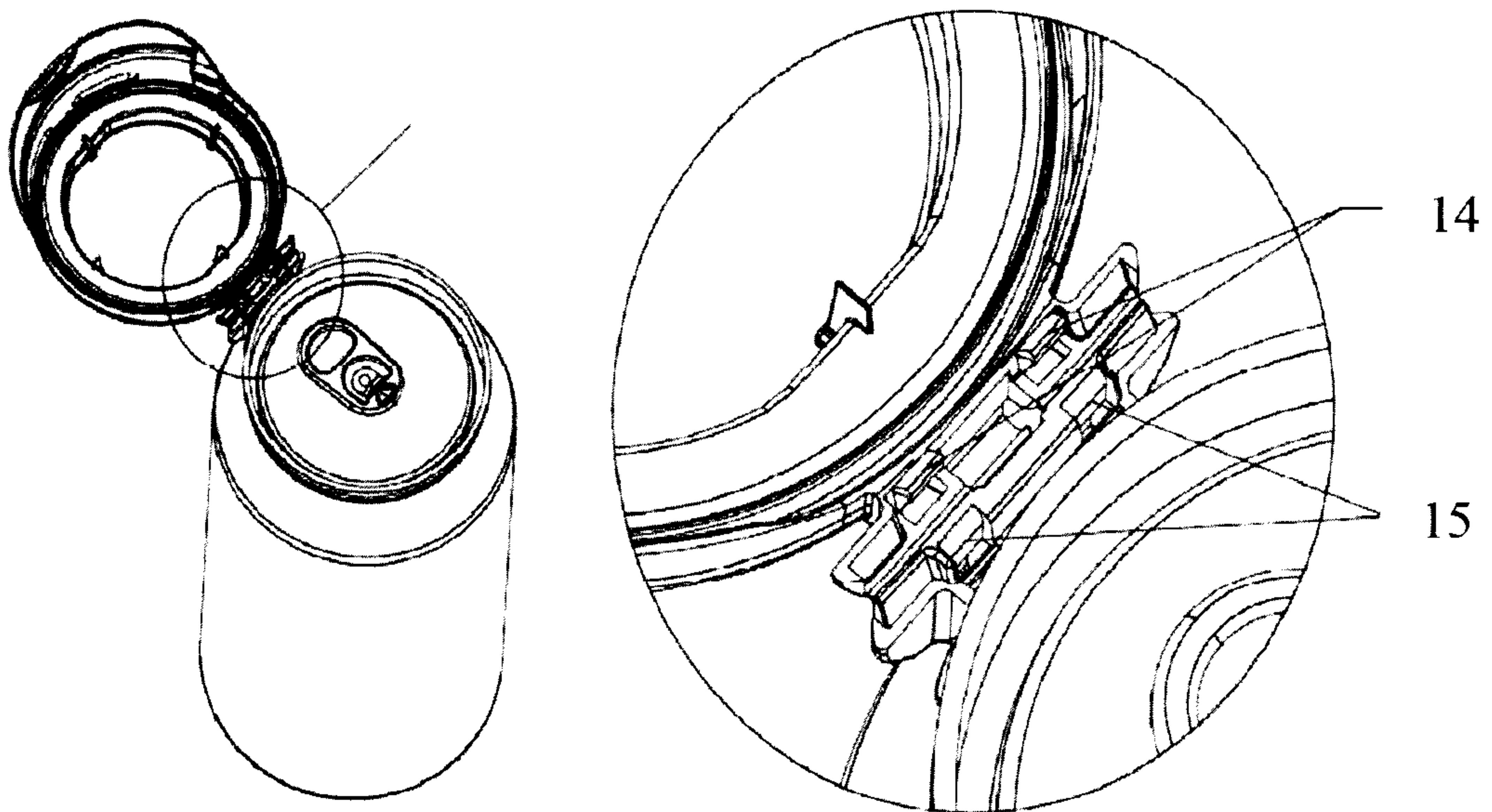


FIG. 1

