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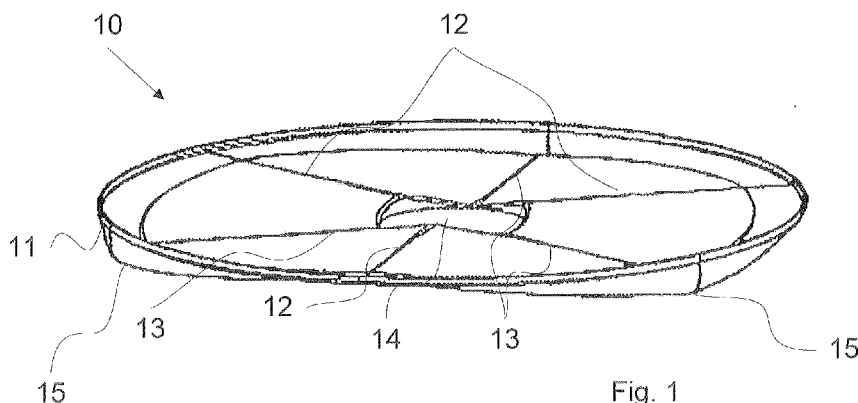


Fig. 1

(57) Abstract: A receptacle for a tea light is provided. The receptacle comprises a body having a bottom portion provided with a ridge having a sloping surface therefrom towards the bottom of the receptacle, enabling a liquid to flow from said ridge towards the bottom of said receptacle

RECEPTACLE FOR A TEA LIGHT, AND WICK HOLDER

Field of the Invention

This invention pertains in general to the field of
5 tea lights, and particularly to a tea light receptacle.

Background of the Invention

A conventional tea light comprises a cylindrical
10 receptacle, having a wick attached to a wick holder. The
wick holder is placed on and attached to the bottom of the
cylindrical receptacle, and holds the wick in a vertical
position. Thereafter, the receptacle is filled with a wax
fuel, such as stearine. The wick will be hold in a vertical
15 position during filling of the stearine, such that the wick
protrude from the stearine.

A problem with current tea lights is that they are
inefficient in terms of not depleting all the stearine
provided in the tea light receptacle before the wick burns
20 out. This results in reduced endurance of the tea light.

Hence an improved tea light receptacle for increased
endurance would be advantageous.

Summary of the Invention

25 Accordingly, the present invention preferably seeks
to mitigate, alleviate or eliminate one or more of the
above-identified deficiencies in the art and disadvantages
singly or in any combination and solves at least the above
mentioned problems by providing a receptacle for a tea
30 light, and a tea light equipped with the receptacle
according to the appended patent claims.

The general solution according to the invention is to
provide the receptacle for a tea light having a bottom
surface being sloped or inclined towards position of the
35 wick in order to enable all stearine in use to flow towards

the wick and thereby increasing the endurance of the tea light.

The present invention has the advantage over the prior art that it increases the endurance or burning time of the wick since a maximum of the stearine provided in the tea light receptacle is consumed in use. A secondary advantage over prior art is that this reduces the waste of the used tea light, since the amount of stearine that is used or consumed during use may be increased.

Brief Description of the Drawings

These and other aspects, features and advantages of which the invention is capable of will be apparent and elucidated from the following description of embodiments of the present invention, reference being made to the accompanying drawings, in which

Fig. 1 is an illustration showing a receptacle according to an embodiment;

Fig. 2 is a top view receptacle according to an embodiment;

Fig. 3a is side view of a receptacle according to an embodiment;

Fig. 3b is side view of a receptacle of Fig. 3a at a different viewing angle;

Fig. 4a is an illustration of a wick holder according to an embodiment;

Fig. 4b is an illustration of a wick holder according to an embodiment;

Fig. 5a is 3D view of a receptacle according to an embodiment illustrating the bottom side of the receptacle; and

Fig. 5b is 3D view of a receptacle according to an embodiment illustrating the bottom side of the receptacle.

Description of embodiments

Several embodiments of the present invention will be described in more detail below with reference to the accompanying drawings in order for those skilled in the art to be able to carry out the invention. The invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. The embodiments do not limit the invention, but the invention is only limited by the appended patent claims. Furthermore, the terminology used in the detailed description of the particular embodiments illustrated in the accompanying drawings is not intended to be limiting of the invention.

The following description focuses on an embodiment applicable to a tea light and in particular to a tea light receptacle. However, it will be appreciated that the invention is not limited to this application but may be applied to many other light devices utilizing a wick and stearine or other substances suitable as wick fuel for a tea light, such as paraffin, wax, animal fats, etc.

In an embodiment, according to Fig 1, a receptacle is provided. In Fig. 1 only the bottom of the receptacle is illustrated. For sake of clarity, Fig. 1 is not intended to be interpreted as a full picture of the receptacle, but only the bottom. The substantial part of the cylindrical body, for receiving the wick fuel therein, is thus not disclosed. The receptacle comprises a cylindrical body portion having a bottom 10 with a bottom portion 11 provided with a number of ridges 12, and a corresponding number of grooves 13, wherein the grooves are declined towards an area 14 of the bottom portion 11. The area 14 may preferably be located substantially in the centre of

the bottom portion 11. This will render the declinations of the different grooves 13 substantially equal, resulting in an even transportation of fuel to the wick, giving a smoother burning of the fuel. Accordingly, a liquid located at one of the ridges will glide from the ridge towards one of the grooves and then further glide towards the area 14. In this way, the liquid, such as fuel, located at any position of the bottom portion 11 will substantially travel towards the area 14.

Fig. 2 illustrates a top view of the receptacle of Fig. 1 wherein the number of ridges and grooves is three. Any number of grooves and ridges may be used within the scope of the present invention, such as one, two, three, four, five, six, etc. However, in order to provide stability a the wick holder being attached to at least a part of the ridges, the number of ridges and grooves is preferably more than three. The functionality of the ridges and declined grooves is to enable the wick fuel to glide towards the area 14. Depending on the characteristics of the wick fuel the number of ridges and grooves may be changed to optimize the transfer of wick fuel to the area 14. Moreover, the configuration of the ridges allows for improved cooling effect towards the foundation on which the receptacle is positioned. This is due to the fact that a ridge forms a corresponding recess or a groove at the bottom side of the receptacle (see Figs. 5a and 5b), allowing ambient air to flow between the receptacle and foundation, in use.

In one embodiment the receptacle has a cylindrical body, wherein the bottom portion 11 is circular. The ridges 12 and the grooves 13 extend in a radial direction from the area 14.

In an embodiment, according to Fig. 3a, the receptacle further comprises a sidewall(s) 31 extending from the bottom surface, such as the boundaries thereof,

thus forming a container allowing to comprise a wick, wick holder and wick fuel. Fig. 3b illustrates the receptacle of Fig. 3a from a different viewing angle.

In an embodiment, the receptacle is provided with a
5 number of distance means 15 allowing for a distance between the bottom portion of the receptacle and the foundation on which the receptacle is standing, in use. Moreover, the distance means 15 allows for reducing the heat conduction between the receptacle and foundation, in use. The distance
10 allows for ambient air to pass between the receptacle and the foundation providing a cooling effect.

The number of distance means 15 may be e.g. be three allowing for stability of the receptacle towards the foundation on which the receptacle is positioned. This
15 allows for a simple and stable solution. Moreover, by utilizing as few distance means as possible, such as three, unnecessary use of raw material is prevented.

However, the receptacle according to some embodiments is not limited to utilizing three distance means. Any
20 number of distance means or any number of ridges or grooves may be utilized, without departing from the scope of the present invention.

In an embodiment, according to Fig. 4a and 4b, a wick holder 40 is provided. The wick holder comprises a plate 41
25 with a hole 42 extending there through. The plate 41 may be circular. When the plate 41 is circular, the need for precisely, and accurately placing the plate 41 on the ridges, according to above, is reduced, since the wick holder will self-center, whereby the plate 41 still will be
30 in a substantially horizontal alignment. This will be further elucidated below. The hole is adapted for receiving a wick therein, in a holding manner. Thus, the hole 42 allows for accommodation of a wick (not shown). Before use, the wick is inserted through the hole 42, such that at
35 least one part thereof is located outside the bottom side

43 of the wick holder. The part extending from the bottom side 43 of the wick holder may be in contact with the area 14 or the wick fluid accommodated at the position of the area 14.

5 The wick holder 40 may comprise a tube like structure 44 as is indicated in Figs. 4a and 4b. The tube like structure allows for improved stability of the wick when placed in the wick holder, whereby the wick will have improved stability in its intended vertical position during
10 filling of the fuel.

 The wick holder may be mounted or attached to a part of at least a number of the ridges. For example, the wick holder may be attached to at least three ridges allowing for increased stability. When attached to the ridges the
15 wick holder is essentially horizontal, and does not lean undesirably. The wick holder may be concentrically aligned to the area 14, or such that the hole 42 of the wick holder is aligned with the area 14. The wick holder may be attached to the parts of the ridges using an adhesive, such
20 as glue.

 In an embodiment, the adhesive cover less than half the area of the bottom side 43 of the wick holder, allowing as much wick fuel as possible to flow towards the area 14, without being affected by the adhesive.

25 Moreover, it is important not to cover the hole 42 with glue, since this would obstruct the insertion of the wick.

 In an embodiment the area 14 comprises a surface being declined towards a centre point thereof. A liquid,
30 such as heated paraffin comprised in the receptacle, will thus travel towards the centre point of the area 14. A wick may be positioned at or adjacently the centre point of the area 14, e.g. by means of a wick holder. By placing the wick near or at the centre point the wick will be in

contact with the liquid as long as there is remaining liquid in the receptacle.

In another embodiment the area 14 comprises a surface being essentially plane.

5 In an embodiment the area 14 is located at the same level as the lowest level of the declined grooves. By providing a height between the bottom of area 14 and the wick holder the wick extending through the wick holder will be exerted to a greater height of liquid wick fluid, thus
10 improving the transporting of wick fluid towards the end of the wick.

In an embodiment the area 14 is located at a lower level than the lowest level of the declined grooves, thus enabling wick fuel to drop into the area 14. In this
15 embodiment are 14 forms an intern separate container.

In an embodiment the receptacle is made of a metallic material, such as aluminium.

In an embodiment the wick holder is made of a metallic material, such as aluminium.

20 In an embodiment, the receptacle is cylindrically shaped.

In an embodiment the bottom portion is approximately 38 mm in diameter. In an embodiment the height of the side wall(s) is approximately 18 mm.

25 In an embodiment the area 14 has an essentially circular shape. The diameter of the area may be approximately 8 mm.

In an embodiment, the vertical distance between the lowest point of the distance means and area 14 is
30 approximately 1 mm.

In an embodiment, the vertical distance between the lowest point of the distance means to the highest point of the ridges is approximately 2 mm.

In an embodiment, the maximum vertical distance
35 between a ridge and a groove is approximately 1 mm.

In an embodiment at least one ridge of the number of ridges is declined towards the area 14, such as essentially parallel with an adjacent groove in a vertical plane.

In an embodiment the wick holder is circular shaped
5 with a diameter of more than 13 mm.

In an embodiment, the wick, when placed in the wick holder, may extend at least approximately 1 mm from the bottom side 43 of the wick holder towards the area 14, when the vertical distance between the bottom side 43 of the
10 wick holder and the area 14 is approximately 1 mm. Accordingly, the extension of the wick may be changed depending on the vertical distance between the bottom side 43 of the wick holder and the area 14. This allows for as much wick fuel as possible to flow towards the area 14,
15 thus avoiding unnecessary excess of remaining wick fuel in the receptacle when the wick is depleted.

In an embodiment a receptacle is provided. The receptacle comprises a body having a bottom portion 11 with at least one ridge 12 having a sloping surface therefrom
20 towards the bottom of the receptacle. The receptacle further comprises an area 14. Moreover, the receptacle is suitable for accommodating a wick fuel. By utilizing a ridge in the bottom portion 11 of the receptacle, the bottom area, i.e. meaning the essentially horizontal bottom
25 area, of the bottom portion 11 is reduced compared to if no ridge were used. Thus by utilizing a ridge in the bottom portion of the receptacle wick fuel located adjacently the ridge will travel downwards towards the bottom of the bottom portion, in use. This increased flow of wick fuel
30 will improve the flow of wick fuel towards the area 14. Hence, in this embodiment there is no need for a groove being declined towards the area 14, since the mere use of a ridge will increase the flow of wick fuel towards bottom of the bottom portion, and thus correspondingly increase the
35 flow of wick fuel towards the area 14.

The use of a ridge also allows for improved cooling effect and reduced heat conduction towards the foundation on which the receptacle may be placed. This is due to the fact that on the opposite side of the ridge, i.e. when the
5 receptacle is turned up side down, the ridge forms a recess thus enabling ambient air to flow between the receptacle and the foundation on which it stands in use.

Fig. 5 is an illustration of receptacle according to some embodiments turned up side down. It may be observed
10 that the ridges at the bottom side of the receptacle form recesses or grooves allowing for increased ventilation between the receptacle and the foundation, in use.

Although the present invention has been described above with reference to specific embodiments, it is not
15 intended to be limited to the specific form set forth herein. Rather, the invention is limited only by the accompanying claims and, other embodiments than the specific above are equally possible within the scope of these appended claims.

20 In the claims, the term "comprises/comprising" does not exclude the presence of other elements or steps. Furthermore, although individually listed, a plurality of means, elements or method steps may be implemented by e.g. a single unit or processor. Additionally, although
25 individual features may be included in different claims, these may possibly advantageously be combined, and the inclusion in different claims does not imply that a combination of features is not feasible and/or advantageous. In addition, singular references do not
30 exclude a plurality. The terms "a", "an", "first", "second" etc do not preclude a plurality. Reference signs in the claims are provided merely as a clarifying example and shall not be construed as limiting the scope of the claims in any way.

CLAIMS

1. A tea light receptacle, comprising
a body having a bottom portion (11),
5 **c h a r a c t e r i z e d i n t h a t**
said bottom portion (11) is provided with a ridge
(12) having a sloping surface therefrom towards the bottom
of the receptacle (10), said ridge enabling a liquid to
flow from said ridge towards the bottom of said receptacle.
10
2. The receptacle according to claim 1, further
comprising a wick holder positioned at the bottom of said
receptacle.
- 15 3. The receptacle according to claim 1, wherein said
body comprises a number of ridges (12), and a corresponding
number of grooves (13), wherein said grooves are declined
towards an area (14) of said bottom portion (11).
- 20 4. The receptacle according to any one of claims 1 to
3, wherein said body further comprises a sidewall (15)
extending from said bottom portion, wherein said sidewall
together with said bottom portion forms a container
suitable for containing wick fuel.
- 25 5. The receptacle according to claim 4, wherein the
receptacle has a cylindrical body, whereby the bottom
portion (11) is circular, and the ridges (12) and the
grooves (13) extends in a radial direction from the area
30 (14).
6. The receptacle according to any of the preceding
claims, wherein said body further comprises a number of
distance means, placed underneath the body, creating a

distance between the receptacle and the foundation, on which it is positioned, in use.

7. The receptacle according to claim 6, wherein the
5 distance means are located in the peripheral part of the bottom portion (11).

8. The receptacle according to any of the preceding claims, wherein at least one ridge forms a corresponding
10 recess at the bottom side of said receptacle.

9. The receptacle according to any one of claims 3 to 8, wherein the number of ridges is three.

15 10. The receptacle according to any of the preceding claims, wherein the number of grooves is three.

11. The receptacle according to any one of any of the preceding claims, said receptacle being filled with
20 stearine, paraffin, wax, or animal fat.

12. The receptacle according to claim 3, wherein said area (14) comprises a surface being declined towards a
centre point of said area 14.

25

13. The receptacle according to claim 3, wherein said area (14) comprises an essential plane surface.

14. The receptacle according to claim 3, wherein said
30 area (14) is situated at the same level as the lowest level of one of the declined grooves.

15. The receptacle according to claim 3, wherein said area (14) is situated in the centre of the bottom portion
35 (11).

16. The receptacle according to claim 3, wherein said area (14) is situated at a lower level than the lowest level of one of the declined grooves.

5 17. The receptacle according to any one of any of the preceding claims, said receptacle being made of aluminium.

18. The receptacle according to any of the preceding claims, wherein the ridges (12) and/or grooves (13) extend
10 in a radial direction from the area (14) towards the boundary of the bottom portion (11).

19. A wick holder (40) comprising a plate (41) and a hole (42) provided there through for accommodation of a
15 wick, such that said wick may be arranged to be located at both sides of said plate in use.

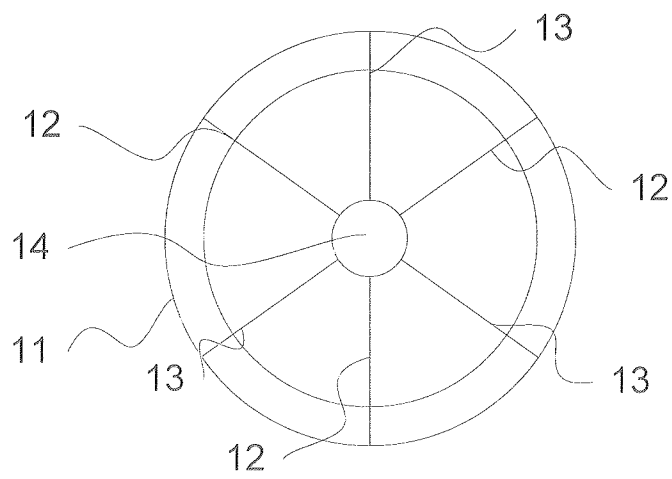
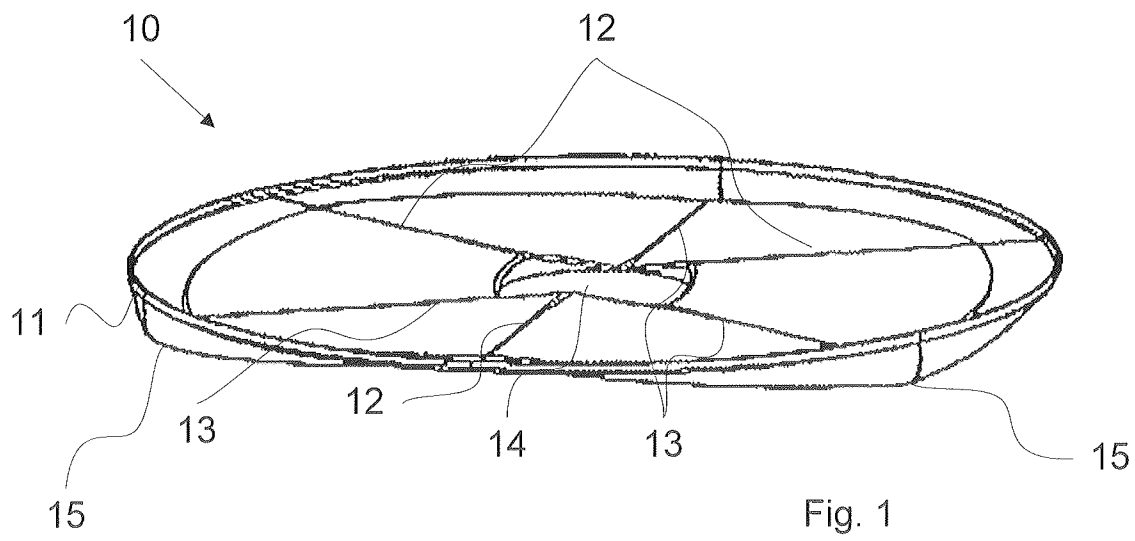
20. The wick holder according to claim 19, further comprising a tubular body (44) arranged on said hole (42)
20 to increase the vertical extension of said hole (42) in use.

21. The wick holder according to claims 19, or 20, wherein said plate (41) is circular.

25

22. The wick holder according to claims 19, 20, or 21, wherein said wick holder comprises a bottom side (43) to be attached to a ridge of a receptacle according to any one of claims 1 to 18.

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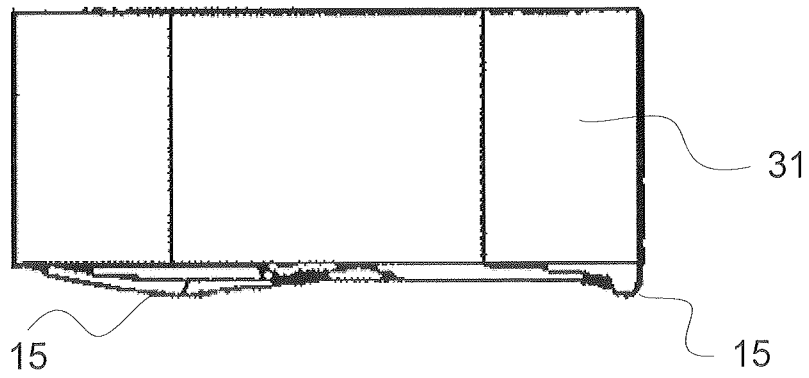


Fig. 3a

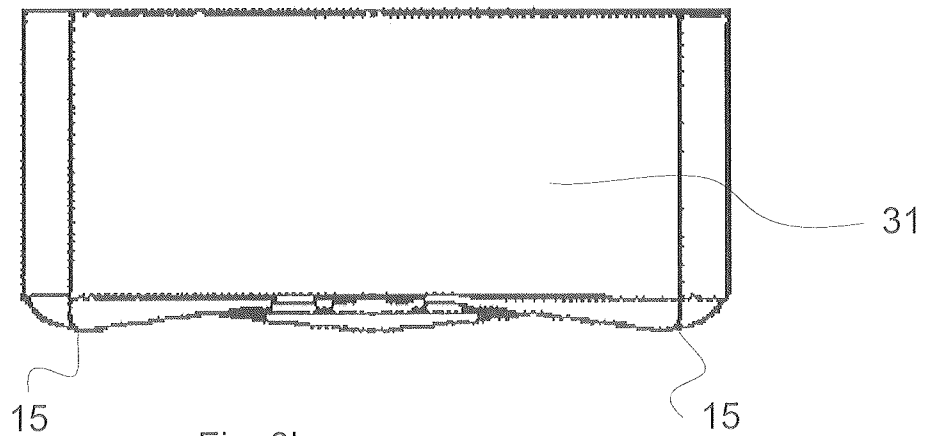


Fig. 3b

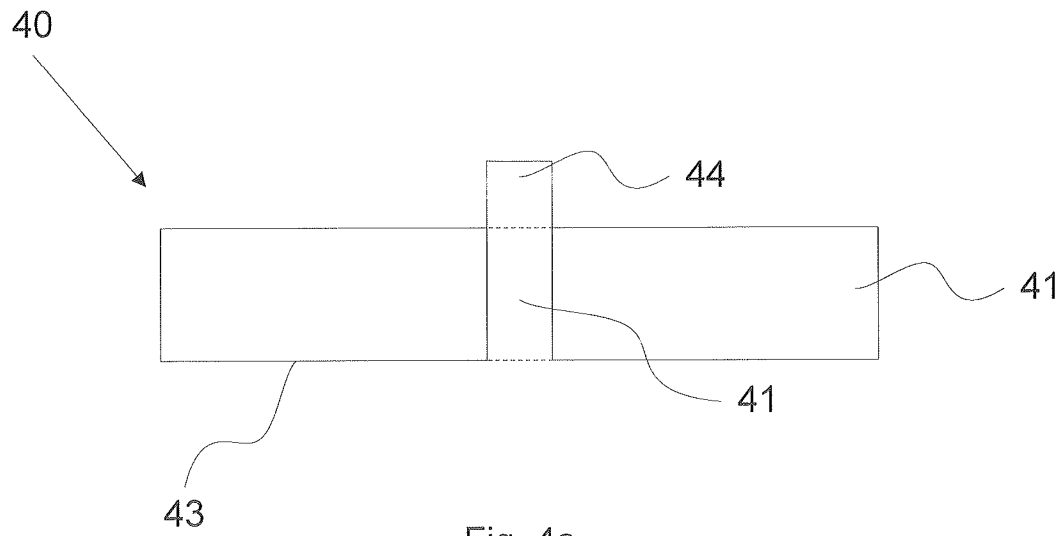


Fig. 4a

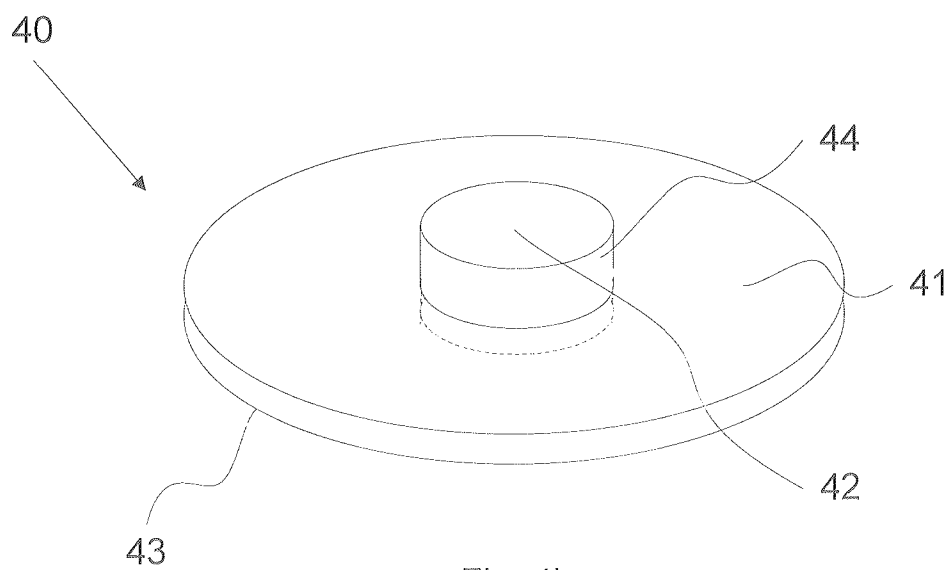


Fig. 4b

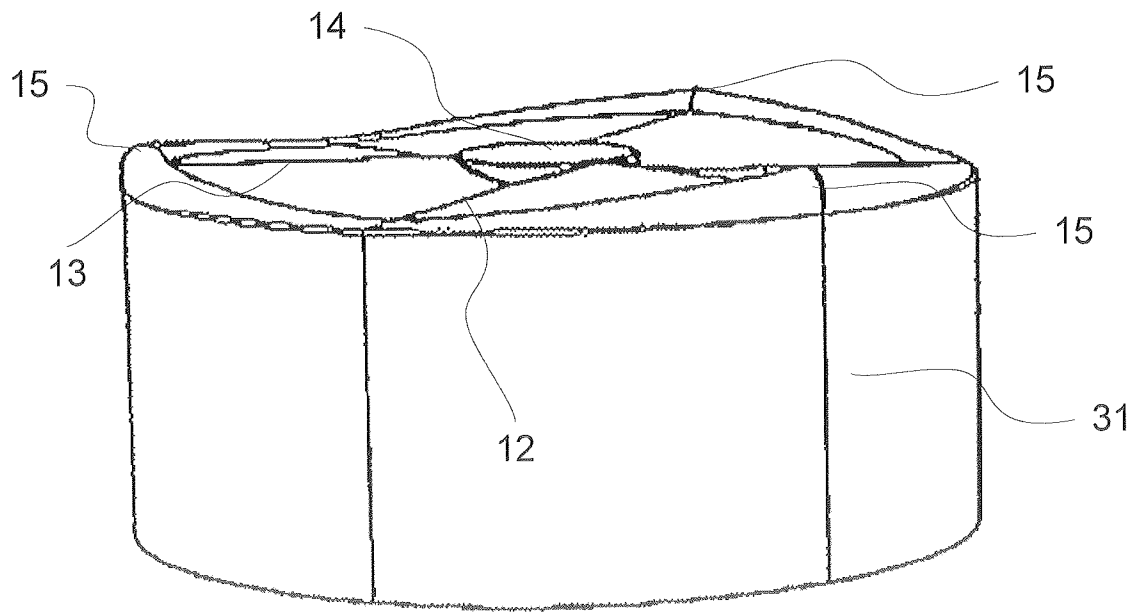


Fig. 5a

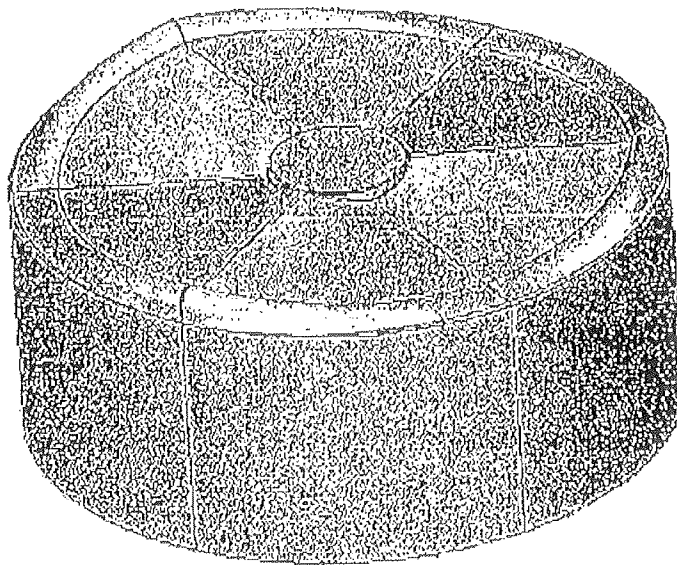


Fig. 5b

INTERNATIONAL SEARCH REPORT

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PCT/EP2009/067237

A. CLASSIFICATION OF SUBJECT MATTER
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 ADD:

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

F21V F23D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	the whole document	6,7
X	BE 1 013 350 A6 (BEHEER VAN TURNHOUT NV [BE]) 4 December 2001 (2001-12-04)	1,2,4, 8-11,17
Y	page 4, paragraph 2 - page 6, paragraph 1	6,7
A	figures 1-5	19-22
X	DE 202 07 766 U1 (HEIMAG A HEINZERLING GMBH & CO [DE]) 12 September 2002 (2002-09-12)	1,4,11, 18
	page 2, paragraph 6 figure 1	
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/21124 A1 (ARCHITECTURAL STRUCTURES INC [US]; JOHANSON LARS GUNNAR [SE]) 11 July 1996 (1996-07-11)	19-22
A	page 5, line 23 - page 6, line 13 figures 1-7	1-18
X	US 2 240 071 A (JOSEPH GISOLFI) 29 April 1941 (1941-04-29) column 2, line 14 - line 25 figures 1,3,5	19,21,22

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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