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(54) **CANDLE COMPRISING A CONTAINER AND A WICK SUSTAINER**

KERZE MIT EINEM BEHÄLTER UND EINEM DOCHTHALTER

BOUGIE COMPRENANT UN CONTENANT ET UN SUPPORT DE MECHE

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Description

[0001] The invention relates to an improved candle wick sustainer.

[0002] Containerised candles having a container filled with candle wax through which a wick passes are generally known. To prevent the wick from floating in liquid wax, or molten wax, the lower end of the wick is usually mounted in a sustainer. The sustainer is generally in the form of a flat metal disc having a central aperture in which the end of the wick is secured. To prevent excessive heating of the bottom of the container and to prevent movement of the sustainer across the bottom of the container, such that the wick is so close to the sides of the container to be able to heat them excessively, users of candles in containers are generally instructed to extinguish the candle when the height of the wax remaining in the container is about one centimetre. However these instructions are not always followed and so alternative solutions to this problem of excessive heating have been sought.

[0003] GB-A-1514338 describes an alternative containerised wax candle. In this candle the wick is inserted into a metallic wick pipe and the pipe is attached to a base disc. The wick is non-combustible and will only enable combustion of the wax which has saturated the wick by way of a slit in the pipe. Thus combustion will be maintained as long as wax remains in the container. Furthermore, the use of a metallic pipe which conducts heat to the metallic disc helps to ensure that the wax at the bottom of the container is molten and thereby exacerbates the problem of heating the bottom of the container.

[0004] In another field, that of oil burning lamps, US-A-4 134 718 describes yet another wick holding device. This consists of a hollow tube which grips the wick sufficiently to allow it to stand freely at any height in the tube and draw up through the hollow bottom, by a capiliary action, oil from the surrounding container. The wick holder is supported in position by a sleeve having a plurality of horizontally extending projections. However, this is a very complicated arrangement which would not be suitable for candles which have a flammable wick, such that the height of the flame lowers as the candle burns. Furthermore candles are generally for one time use and disposal thereafter. The wick holding device of this prior art would be far too expensive to make it commercially viable for use in a candle.

[0005] Other combustion devices have been proposed, such as that of US-A-5425633, which provides apparatus to enable the wick to float. In such devices the wick must be non-flammable and held in a buoyant holder that floats on the top of the combustible fuel. As the fuel is gradually used up, the buoyant device travels slowly downwards. As such devices work by capiliary action the wick will enable the candle to continue to burn until all the fuel is used. This could therefore cause excessive heating of the base of the container, although the sides are protected by the use of arms extending horizontally from the buoyant device.

[0006] WO 98 45 650 A, which is the closest prior art, discloses a candle wick sustainer according to the preamble of claim 1.

[0007] It is therefore an object of the present invention to provide an improved sustainer which is appropriate for use in a candle having a flammable wick.

[0008] According to the invention there is provided a candle comprising a container containing candle wax, said container having at least one side wall and a base, a candle wick sustainer located on the container base comprising a body having an upper section provided with means for securely attaching a wick thereto, the upper section being suported by supporting means such that the sustainer has a hollow space defined by the supporting means and the upper section, and a flammable wick extending through the wax, one end of which wick is securely attached to said sustainer, wherein the supporting means are of a height such that, in use, the candle self extinguishes when the wick has burnt to said end leaving a layer of wax remaining on the base of the container.

[0009] The depth of the wax remaining in the container can be selected to be appropriate according to the material/nature of the container as it depends upon the length of the supporting means of the sustainer. Therefore excessive heating of the sides and base of the container is prevented, the latter especially because the remaining layer of wax in the container insulates the base of the container from the flame.

[0010] The height of the sustainer is generally sufficient for the wick to be extinguished before all of the wax in the candle is consumed. This height can be varied according to the circumstances.

[0011] The present invention provides that the hollow space in the sustainer provides wax to the wick even when the wick has burnt down to the level of the upper section of the sustainer.

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

Fig. 1 is a cross-sectional side elevation of a candle holder comprising a candle wick sustainer in accordance with the present invention, candle wax and a wick;

Fig. 2 is a cross-sectional side elevation of the candle wick sustainer of Fig. 1 on the line II-II of Fig. 3;

Fig. 3 is a plan view of the sustainer shown in Fig. 2;

Fig. 4 is a plan view of an alternative embodiment of a candle wick sustainer in accordance with the present invention;

Fig. 5 is a cross-sectional side elevation of the sustainer of Fig. 4 on the line V-V.

Fig. 6 is a plan view of a third embodiment of a candle

wick sustainer in accordance with the present invention; and

Fig. 7 is a cross-sectional side elevation of the sustainer shown in Fig. 6 on the line VII-VII.

[0013] Referring now to Figs. 1 to 3, there is shown a candle comprising a container 1 filled with wax 3 which may be solid or liquid, through which extends a wick 4 attached to a sustainer 2 situated on the base of the container. The container 1 can be of any suitable shape, but is preferably in the form of a cup having a base and side walls. The container 1 may be made of any suitable material such as glass or ceramics although glass is commonly preferred as it provides better illumination from the flame. The wick is made of any suitable flammable material.

[0014] The sustainer 2 is typically made from metal or another inflammable material. Examples of suitable materials include tin plate, aluminium, brass, copper, steel, lead, fibreglass (especially when treated with a flame retardant) or a ceramic material. Aluminium is preferably used for commercial reasons, in that it is relatively cheap and is easily formed by a pressing process.

[0015] The sustainer 2 has upwardly extending side walls 8a, 8b supporting an upper section 5. In the embodiment shown in Figs. 1 to 3 there are a pair of opposing vertical side walls 8a, 8b and the upper section 5 extends horizontally from one wall 8a to the other 8b. In this embodiment the side walls 8a, 8b are provided at their lower ends with substantially horizontally extending flanges 9a, 9b which help to provide additional stability to the sustainer 2.

[0016] The sustainer 2 thus has a hollow space defined by the side walls 8a, 8b and upper section 5.

[0017] The upper section 5 defines an aperture 6, extending upwardly from which is an annular collar 7. The collar 7 is of a sufficient height and made of a suitable material to enable it to be crimped to securely clamp and hold an end of the wick 4.

[0018] In use, when the upper end of the wick 4 is lit, the flame burns both wax fed via the wick 4 from the wax pool below the flame and the wick 4 itself. When the wick 4 has burnt down to the level of the upper section 5 of the sustainer 2, the flame continues to burn wax which enters the wick 4 from the hollow space beneath the sustainer walls 5, 8a, 8b up through the aperture 6. When the level of the wax 3 in the container 1 is lower than the aperture 6, the wick 4 will no longer be in contact with the wax 3 and will very quickly burn out. The level of the wax 3 left in the container 1 will thus be slightly lower than the under surface of the sustainer upper section 5.

[0019] Referring now to Fig. 4 and 5, there is illustrated an alternative sustainer 2 according to the present invention. This sustainer 2 has a substantially cylindrical side wall 8. The upper section 5 is thus an annular plate supported by the side wall 8. Although not illustrated, this version of the sustainer may also be provided with one or more stabilising flanges 9a, 9b.

[0020] Referring now to Figs. 6 and 7 there is shown a third embodiment of a sustainer 2 having frusto-conical side walls 8. The upper section 5 can either be defined by the upper edges of the side walls 8 as shown or may comprise an annular plate such as that illustrated in Fig. 5.

[0021] Thus it will be acknowledged that the sustainer 2 can take many different shapes with one or more supporting side walls. Other embodiments could include skirts of polygonal cross section, e.g. triangular, square, rectangular or pentagonal etc. Where the supporting side wall is in the form of a skirt it is optionally perforated with apertures. The advantage of having such apertures in the skirt is that wax is better able to flow into the hollow space defined by the side wall 8 and upper section 5 to give it a more aesthetically pleasing appearance. The perforations may also be advantageous whilst the container 1 is being filled with wax as the sustainer 2 is less likely to move out of position.

[0022] Where there are a plurality of separate supporting side walls 8, such as those shown in Figs. 1 to 3, again the shape of these may vary, e.g. triangular, square, rectangular. Alternatively there may be three or even more separate tubular or planar legs.

[0023] In another embodiment of the invention the supporting side wall or walls may be perpendicular to the plane of the upper section or at an angle thereto. Additionally, it should be noted that the upper section 5 does not need to be horizontal although the collar 6 is preferably located around a vertical axis.

[0024] As mentioned above, the sustainer 2 may or may not have stabilising flanges, the dimensions of which will depend on the dimensions of the sustainer and the container in which it is located.

[0025] Although all of the embodiments described above incorporate an aperture 6 in the upper section 5, this is not strictly necessary as long as means are provided, say in the form of the annular collar 7 or other appropriate means, for securely clamping the wick thereto.

[0026] The above embodiments have been described by way of example only and many variations are possible without departing from the scope of the invention, as defined in the appended claims.

Claims

1. A candle comprising a container (1) containing candle wax (3), said container (1) having at least one side wall and a base, a candle wick sustainer (2) located on the container base comprising a body having an upper section (5) provided with means (7) for securely attaching a wick (4) thereto, the upper section (5) being supported by supporting means (8a, 8b) such that the sustainer (2) has a hollow space defined by the supporting means (8a, 8b) and

the upper section (5), and a flammable wick (4) extending through the wax (3), one end of which wick (4) is securely attached to said sustainer (2), wherein the supporting means (8a, 8b) are of a height such that, in use, the candle self extinguishes when the wick (4) has burnt to said end leaving a layer of wax remaining on the base of the container **characterised in that,** in use, said hollow space provides wax to the wick even when the wick has burnt down to the level of the upper section of the sustainer.

2. A candle as claimed in claim 1 wherein the sustainer supporting means is provided with at least one outwardly extending stabilising flange (9a, 9b).

3. A candle as claimed in claim 1 or claim 2 wherein the wick attaching means comprise an annular collar (7) having a side wall which is crimpable to hold the wick (4) securely in place.

4. A candle as claimed in any one of the preceding claims comprising two or more supporting means (8a, 8b) .

Patentansprüche

1. Kerze, aufweisend einen Behälter (1), der Kerzenwachs (3) enthält, wobei der Behälter (1) mindestens eine Seitenwand und einen Boden aufweist, einen Kerzendochtträger (2), der auf dem Behälterboden angeordnet ist, welcher einen Körper umfasst, welcher einen oberen Abschnitt (5) auf weist, der mit Mitteln (7) zum sicheren Befestigen eines Dochts (4) daran versehen ist, wobei der obere Abschnitt (5) durch Stützmittel (8a, 8b) derart getragen wird, dass der Träger (2) einen hohlen Raum aufweist, der durch die Stützmittel (8a, 8b) und den oberen Abschnitt (5) definiert wird, und einen brennbaren Docht (4), der sich durch das Wachs (3) hindurch erstreckt, wobei ein Ende des Dochts (4) sicher an dem Träger (2) befestigt ist, wobei die Stützmittel (8a, 8b) von einer solchen Höhe sind, dass in Verwendung die Kerze von selbst gelöscht wird, wenn der Docht (4) bis zu dem Ende abgebrannt ist, wobei eine Schicht von Wachs zurückbleibt, welche auf dem Boden des Behälters verbleibt, **dadurch gekennzeichnet, dass** in Verwendung der hohle Raum dem Docht Wachs bereitstellt, selbst wenn der Docht auf die Höhe des oberen Abschnitts des Trägers herabgebrannt ist.

2. Kerze nach Anspruch 1, wobei die Stützmittel des Trägers mit mindestens einem sich nach außen erstreckenden, stabilisierenden Flansch (9a, 9b) versehen sind.

3. Kerze nach Anspruch 1 oder 2, wobei die Befestigungsmittel für den Docht einen ringförmigen Kragen (7) umfassen, welcher eine Seitenwand aufweist, die verformbar ist, um den Docht (4) sicher an seiner Stelle zu halten.

4. Kerze nach irgendeinem der vorangegangenen Ansprüche, aufweisend zwei oder mehr Stützmittel (8a, 8b).

Revendications

1. Bougie comprenant un réceptacle (1) contenant de la cire à bougie (3), ledit réceptacle (1) comportant au moins une paroi latérale et une base, un socle de mèche de bougie (2) situé sur la base du réceptacle comprenant un corps comportant une section supérieure (5) pourvue d'un moyen (7) pour y fixer de façon sûre une mèche (4), la section supérieure (5) étant supportée par des moyens de support (8a, 8b) de façon que le socle (2) comporte un espace creux défini par les moyens de support (8a, 8b) et la section supérieure (5), et une mèche inflammable (4) s'étendant à travers la cire (3), une extrémité de laquelle mèche (4) est fixée de façon sûre audit socle (2), les moyens de support (8a, 8b) ayant une hauteur telle que, à l'utilisation, la bougie s'éteint automatiquement lorsque la mèche (4) a brûlé jusqu'à ladite extrémité en laissant une couche de cire restant sur la base du réceptacle, **caractérisée en ce que**, à l'utilisation, ledit espace creux fournit de la cire à la mèche même lorsque la mèche a complètement brûlé jusqu'au niveau de la section supérieure du socle.

2. Bougie selon la revendication 1, dans laquelle les moyens de support de socle sont dotés d'au moins un rebord stabilisateur s'étendant vers l'extérieur (9a, 9b).

3. Bougie selon la revendication 1 ou la revendication 2, dans laquelle le moyen de fixation de mèche comprend une collerette annulaire (7) comportant une paroi latérale qui peut être sertie pour fixer en place la mèche (4) de façon sûre.

4. Bougie selon l'une quelconque des revendications précédentes, comprenant au moins deux moyens de support (8a, 8b).

FIG. 1.

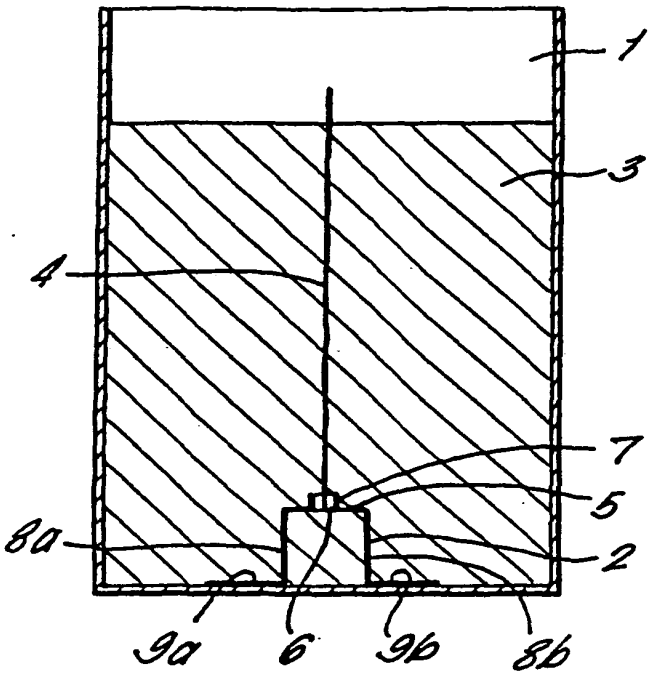

FIG. 2.

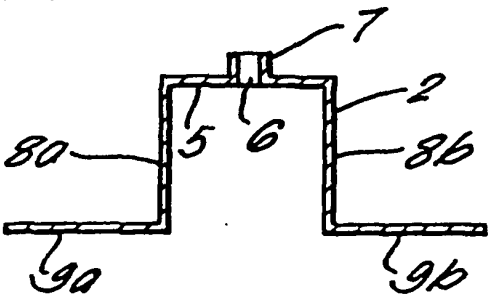

FIG. 3.

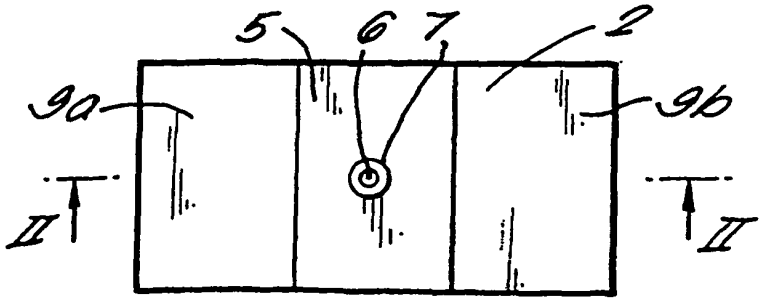

FIG. 4.

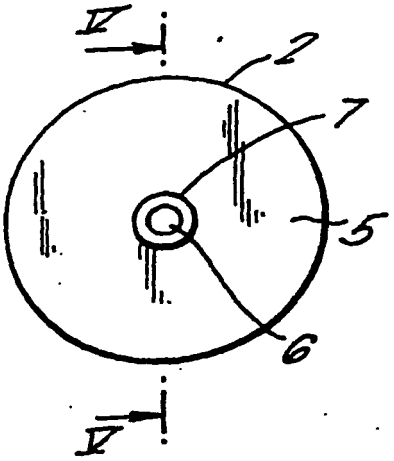

FIG. 5.

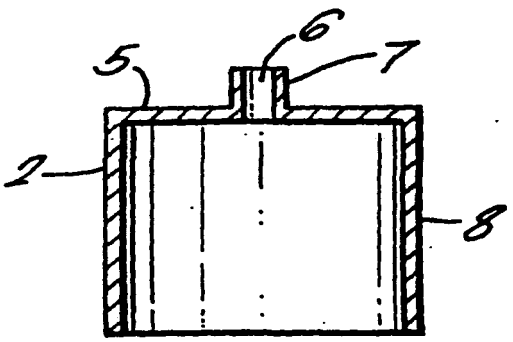

FIG. 6.

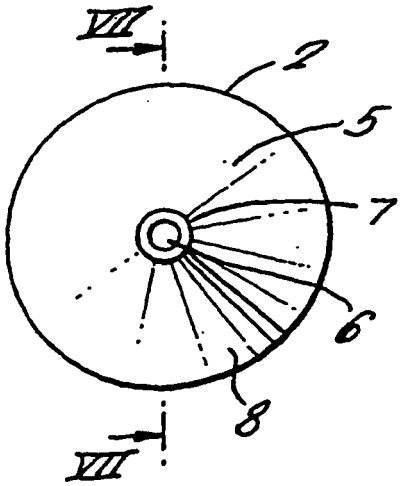

FIG. 7.