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MOSQUITO-REPELLENT SMOKE GENERATOR

Technical Field

The present invention relates to a mosquito-repellent smoke generator.

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Background Art

As a typical mosquito-repellent smoke generator, there is known a mosquito-repellent smoke generator which comprises a tray-like casing body containing therein a metal net on which a mosquito coil is placed and a safety lid with an opening defined in the top surface thereof for covering the casing body (see Japanese Utility Model Laid-Open Publication No.47-5754 for example).

However, the aforementioned mosquito-repellent smoke generator must have a wide opening in the top surface of the safety lid so as to prevent a retarded burning of the mosquito coil or heavy accretion of tar contained in the smoke. Therefore, if a bed cloth, blanket or the like accidentally covers the smoke generator wherein the mosquito coil is burning, the bed cloth or the like will scorch or may catch fire in the worst case.

Additionally, when the smoke generator is moved, ash on the metal net tends to be scattered from the opening. Further, if the smoke generator receives a

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shock such as caused by being kicked, the mosquito coil is apt to fall out of the smoke generator.

In view of the foregoing, it is an object of the present invention to provide a mosquito-repellent smoke generator which is enhanced in safety.

It is another object of the present invention to provide a mosquito-repellent smoke generator preventing the ash from being scattered or preventing the mosquito coil from falling out the smoke generator.

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Disclosure of the Invention

To achieve the above objects, a mosquito repellent smoke generator in accordance with the present invention comprises a casing body accommodating a mosquito coil for allowing the same to burn therein, a lid openably coupled to the casing body by means of a hinge and designed to shut the casing body hermetically as set at a close position, and a retaining member for retaining the aforesaid mosquito coil within the casing body.

According to the mosquito-repellent smoke generator as arranged above, the smoke generator may allow the mosquito coil to burn within the casing body with the lid opened at a predetermined angle. If a bed cloth or the like accidentally covers the lid while the mosquito coil is burning, the lid is closed by the weight of the bed

cloth, thereby shutting the casing body hermetically. Consequently, the burning mosquito coil may be extinguished. This eliminates a danger of the bed cloth or the like scorching or catching fire and thus, the safety
5 of the smoke generator may be enhanced.

A preferred mode of the mosquito-repellent smoke generator in accordance with the invention is characterized by that the aforementioned retaining member comprises a pair of non-flammable pads for holding by sandwiching the mosquito coil therebetween.
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According to this mode, ash resulting from a burned mosquito coil can be retained between the pair of pads. This prevents the ash from being scattered when the smoke generator is moved or the like.

15 It is preferred that the pair of pads are openably coupled to each other by way of a hinge and are removably secured to the casing body at the hinge side thereof by means of a fixing member pivotable about a horizontal shaft.

20 According to this mode of the invention, the pair of pads are openably coupled to each other by means of a hinge and therefore, the integrity of the pads may be readily secured. This facilitates operations such as detaching pads from the casing body, reattaching the
25 removed pads to the casing body, disposing of ash re-

·tained by the pads, and loading a mosquito coil between the pads. Further, the aforesaid unwoven textile pads are secured to the casing body by means of the fixing member, thereby preventing a burning mosquito coil from falling out of the casing body or ash held between the pads from begin scattered even if the smoke generator receives a shock. Additionally, the fixing member, which is pivotable about the horizontal shaft, can be tilted in a direction wherein the pads are detached or attached. This allows the pads to be detached or attached even more readily.

Brief Description of the Drawings

Fig. 1 is a perspective view for illustrating a preferred mode of a mosquito-repellent smoke generator in accordance with the present invention.

Fig. 2 is an exploded perspective view of a principal part of the mode.

Best Mode for Carrying Out the Invention

Detailed description will be given on a preferred embodiment of the present invention with reference to the attached drawings.

Fig. 1 is a perspective view for illustrating a preferred embodiment of a mosquito-repellent smoke

generator of the present invention. The mosquito-repellent smoke generator comprises a casing body 1, a lid 2 for enclosing the casing body 1, a pair of non-flammable pads 3 within the casing body 1 for holding by sandwich-
5 ing a mosquito coil K therebetween, and a fixing member 4 for detachably securing the pads 3 relative to the casing body 1.

The external appearance of the casing body 1 and the lid 2 is shaped like a shell and the interior thereof
10 has a circular sectional form. The aforesaid lid 2 is pivotally coupled to the casing body 1 by means of a hinge H. In this embodiment, the casing body 1, lid 2 and hinge H are unitarily formed of a resin material.

The respective opening edges 11 and 21 of the
15 casing body 1 and the lid 2 are formed in flat surfaces so as to establish a close contact relationship therebetween such that the casing body 1 may be shut hermetically when the lid 2 is closed. The lid 2 includes an engaging leaf 22 at the pivotable distal end thereof
20 which is brought into engagement with an engaging portion 12 of the casing body 1 when the lid 2 is closed. The engaging leaf 22 has a projection 22a at the tip end thereof for providing a resilient engagement with an unillustrated groove defined in the engaging portion 12
25 of the casing body 1 whereby the closed lid 2 is prevent-

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ed from opening at random. It is noted that the lid 2 is resiliently pivotable as urged by the hinge H so as to be retained at an angular position of approximately 45° in a free state.

5 Each pad 3 is formed of a non-woven textile of a non-flammable fiber such as glass fiber. The pad 3 is reinforced by a metal annular ring 31 such as made of aluminum which is fixed to the outer circumferential edge of the pad 3. The pads 3 are pivotally coupled to each
10 other by means of a hinge 32 attached to the respective metal annular rings 31 thereof so as to establish an open/close relationship relative to each other. The coarseness of the pad 3 is so established as to interfere with the permeation of the ash and to secure the ventila-
15 tion for the mosquito coil K.

 The fixing member 4 for securing the aforesaid pads 3 includes an arc-like grip portion 41 and a shaft hold 42 provided at the center of the back surface of the grip portion 41. The shaft hold 42 is pivotally coupled to a
20 pair of fixing strips 13 by way of a shaft 14, which pair of fixing strips 13 are formed in the casing body 1 at the hinge side of the inner periphery thereof. More specifically, the fixing member 4 is pivotable about the horizontal shaft relative to the casing body 1. It
25 should be noted here that the shaft hold 42 is resilient-

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ly held between the fixing strips 13 of the casing body
1 such that the fixing member 4 may be stopped at a
desired pivotable angular position by the pivoting
resistance of the fixing member 4. Further, the grip
5 portion 41 is formed with a groove 41a for gripping the
metal annular rings 31 of the pads 3, which groove 41a
extends over the total length of the grip portion 41.

The fixing member 4 is disposed near the opening
edge 11 of the casing body 1 so as to removably support
10 the pads 3 as lifting the same up from the bottom of the
casing body 1. There is provided a gap between the hinge
32 of the pads 3 and the inner periphery of the casing
body 1 for allowing a finger to be inserted therein such
that the metal annular ring 31 may be readily pulled up
15 with the finger when the pads 3 are detached or attached.

According to the foregoing construction, the
mosquito coil K sandwiched between the pads 3 may be
allowed to burn within the casing body 1 with the lid 2
opened at a predetermined angle. If a bed cloth acciden-
20 tally covers the lid 2 while a person is sleeping in a
bed or the like, the lid 2 is closed by the weight of the
bed cloth, thereby sealing the interior of the casing
body 1 hermetically and thus, the burning mosquito coil
K may be extinguished. This prevents the bed cloth or
25 the like from scorching or catching fire. It is of

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course possible to extinguish a mosquito coil K in the middle of the burning process thereof by intentionally closing the lid 2 of the smoke generator in which the mosquito coil K is burning.

5 Ash produced from a burned mosquito coil K is held between the pair of pads 3. Thus, the ash is prevented from being scattered when the smoke generator is moved. Furthermore, the pair of pads 3 are coupled to each other by means of the hinge 32, thereby readily securing the
10 integrity thereof. this facilitates operations such as detaching the pads 3 from the casing body 1 by pulling them out from the grip portion 41, inserting the detached pads 3 into the grip portion 41, disposing of ash held between the pads 3 and sandwiching a mosquito coil K
15 between the pads 3.

 In addition, the pads 3 are secured to the casing body 1 by means of the fixing member 4 such that even if the smoke generator receives a shock such as caused by being kicked, a burning mosquito coil k together with the
20 pads 3 may be prevented from falling out of the smoke generator or the ash held between the pads 3 may be prevented from being scattered. Additionally, in detaching or attaching the pads 3, the fixing member 4 may be pivoted to be tilted in an upward slanting direction to
25 detach or attach the pads 3, thereby facilitating an

operation for detaching or attaching the pads 3.

The aforesaid pair of pads 3 are removably supported by the fixing member 4 as lifted up, thereby preventing the heat of the mosquito coil K from being conducted to the bottom of the casing body 1. Accordingly, a material member having a smaller thickness may be used for the pads 3. More specifically, if the pad 3, having a smaller thickness, is in contact with the bottom of the casing body 1, the heat of the mosquito coil K is conducted to the bottom of the casing body 1, causing change in the color of a piece of furniture or the like which contacts with the bottom of the casing body 1. In contrast, the preferred embodiment has the pads 3 removably supported as lifted up from the bottom of the casing body 1 and therefore, even if a thin pad 3 is used, the occurrence of such trouble may be avoided. Further, the ventilation of the pads 3 may be easily secured, thus preventing the mosquito coil K from dying out half-burned.

It is to be distinctly understood that a mosquito-repellent smoke generator according to the present invention is not limited to the above embodiment and that modifications may be made without departing from the spirit of scope hereof. For example, the casing body 1, the lid 2 and the hinge may be individually formed and be

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assembled together by means of a screw or the like.

Alternatively, the fixing member 4 may be provided at the pads 3 such that the fixing member 4 may be removably attached to the casing body 1. The pads 3 may be formed
5 of a coarse metal net.

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What is Claimed is:

1. A mosquito-repellent smoke generator comprising:
a casing body accommodating a mosquito coil for
5 allowing the same to burn therein;
a lid openably coupled to said casing body by means
of a hinge and designed to shut said casing body hermeti-
cally ~~when set in~~ a close position; and
* a retaining member for retaining said mosquito coil
10 within said casing body.

2. A mosquito-repellent smoke generator according
to Claim 1,
wherein said retaining member comprises a pair of
non-flammable pads for holding by sandwiching a mosquito
15 coil therebetween.

3. A mosquito-repellent smoke generator according
to Claim 2,

wherein said pair of pads are openably coupled to
each other by means of a hinge and removably secured to
* 20 at the hinge side of the said casing body
by way of a
fixing member pivotable about a horizontal shaft.