Aug. 5, 1924. 1,503,661

B. MULLER-THYM

SANCTUARY LAMP

Filed June 26, 1922

Fig. 1

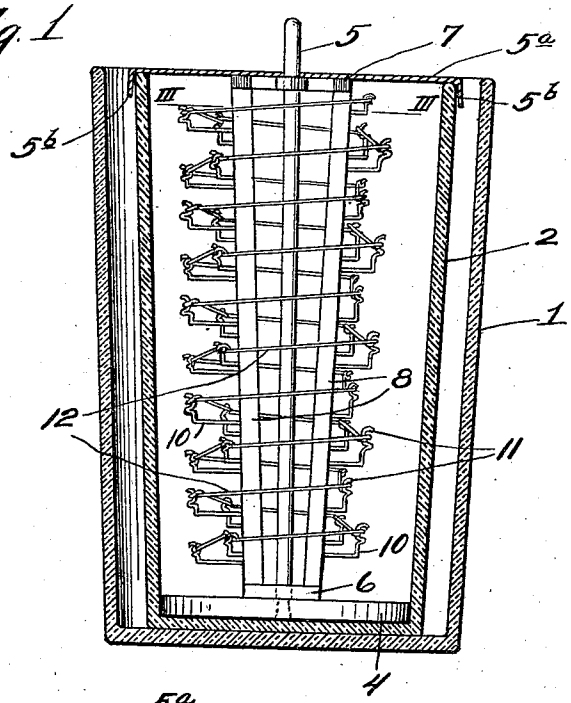


Fig. 2

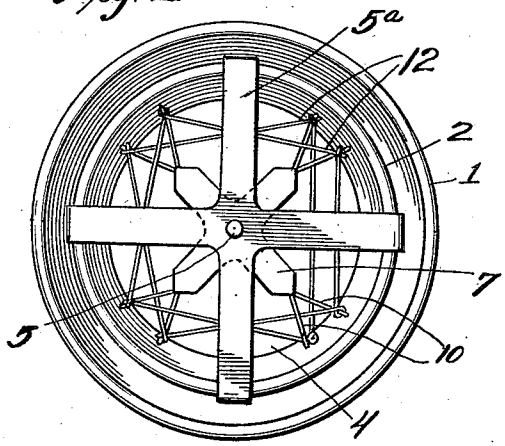
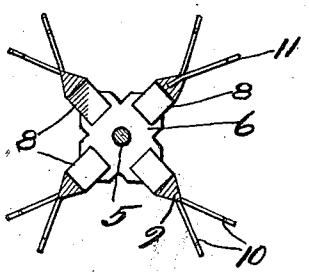


Fig. 3



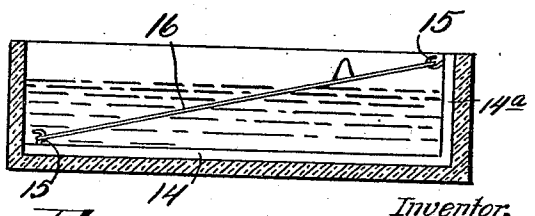


Fig. 4

Witness:

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UNITED STATES PATENT OFFICE.

BERNARD MULLER-THYM, OF KANSAS CITY, MISSOURI.

SANCTUARY LAMP.

Application filed June 26, 1922. Serial No. 570,992.

To all whom it may concern:

Be it known that I, BERNARD MULLER-THYM, a citizen of the United States, and resident of Kansas City, county of Jackson, State of Missouri, have invented a certain new and useful Improvement in Sanctuary Lamps, of which the following is a complete specification.

This invention relates to sanctuary lamps and has for its object to produce an inclined wick and a supporting structure therefor, of such character as to increase the amount of fresh wick exposed to the action of the flame for the gasification of the heavy vegetable oil employed in sanctuary lamps, within a fixed period of time, when compared to the length of vertical wick exposed in the same period of time and under the same conditions, as it has been found that the length of fresh vertically extending wick exposed hourly is insufficient to avoid the formation of a crust which leads to the extinguishment of the flame.

If in order to overcome the objectionable feature above mentioned, a wick of greater cross sectional area is employed, to increase the rate of oil consumption, it will be found that the flame is smoky and objectionable for this reason.

The prime object of the present invention, therefore, is to produce an inclined wick combined with any suitable support, whereby the comparative length of the fresh wick exposed to the action of the flame, will be greater under the same conditions as to time and the character and quantity of oil, than with a vertical wick.

By supplying an inclined wick it will be evident that the length of wick exposed by a predetermined lowering in the liquid level, will be greater than the length of wick exposed by the same lowering of the liquid level when the wick stands vertical.

Another object of the invention is to produce means whereby the spilling of the oil shall be guarded against, should the oil-containing vessel be fractured or broken while in use, and also to act as a heat retaining vessel when the device is used in a comparatively unheated room, to prevent the congealing of the oil, as will be readily understood.

With the objects named in view, and others as may hereinafter appear, the invention consists in certain novel and useful features of construction and organization of parts as hereinafter described and claimed; and in order that it may be fully understood, reference is to be had to the accompanying drawing, in which:—

Figure 1 is a central vertical section through the containing vessels and illustrates the wick and wick support in side elevation.

Figure 2 is a top plan view of the same.

Figure 3 is a section taken on the line III—III of Figure 1.

Figure 4 is a central vertical section taken through a modified form of the invention.

In the said drawing, where like reference characters identify corresponding parts in all of the figures, 1 represents a suitable vessel preferably of less diameter at its bottom than top, and 2 represents a second vessel adapted to be received within the first vessel and rests on the bottom thereof. In this connection, it is desirable to point out that this double vessel construction, however, is not necessary to the proper operation of the device, and is illustrated only as an efficient method of guarding against the spilling of oil should the oil-containing vessel 2 be fractured, and also to retain a certain degree of the heat which will be radiated by the inner vessel to guard against congealing of the oil when the device is used in a relatively unheated room during the winter.

Resting on the bottom of the vessel 2 is a weighted disc 4 of any suitable material and secured firmly in the axis of said disc is a vertical stem 5, it being noted in this connection that the disc 4 is preferably of substantially equal diameter to the interior of the vessel, so that the stem 5 may be automatically centralized with respect to the walls of the vessel, as will be readily understood.

In order to steady and centralize the upper or free end of the stem 5, said stem passes through a central opening in a cross-shaped brace member 5^a formed at its ends with downwardly projecting lips 5^b for engagement with the brim of the vessel.

Loosely mounted on the stem 5 and resting on the disc 4 is a supporting plate 6 of substantially cross-shaped form, and a second plate 7 of somewhat greater area than the plate 6 and loosely mounted on the stem 5 forms an upper support for a series of inclined bars or uprights 8, rigidly connected at their bottoms and tops respectively

to the plates 6 and 7. It will be noted in this connection, that the bars 8 are of such length as to place their upper ends substantially flush with the brim of the vessel, and also that the plates 6 and 7 are of such comparative size that the said bars 8 will be held in an inclined position with their outer edges spaced equal distances from the wall of the vessel 2.

The uprights 8 are of substantially triangular shape in cross section and have one of their edges 9 projecting outwardly, and secured in spiral relation successively in said V-shaped edges 9 of the uprights, are a series of spacer arms 10, which are bent alternately to the right and left throughout the length of each of the uprights 8, the uppermost arms of each of said uprights all being bent in the same direction preceding the bending of the other arms. The result of the bending of the arms just described, is to so arrange said arms that the outer end of none of the arms will lie directly under the corresponding end of the arm next above and secured to the same bar 8, as it has been found that when such condition exists the flame passing around said arm will impinge on the superposed arm and will lead to the rapid oxidation of said arm, give off obnoxious fumes and smoke, and have other objectionable effects.

A non-combustible wick 11 is preferably employed, and is wound spirally around the spacer arms which preferably terminate in out-turned hooks 12. The wick is fastened to the lowermost or uppermost hook 12 and then is looped successively around the intermediate hooks, in such a manner that the descending wick with respect to that particular hook always overlies the ascending wick, in order that the ascending wire, down which the flame will approach the hook, may ignite the descending wick, regardless of whether the flame is extinguished in its attempt to pass around the hook. This arrangement of the wick has been found necessary, as when the wick is merely looped around the hook, the flame cannot be always depended upon to pass around said hook and is therefore extinguished, and the objects of the invention may be defeated which is of course to produce a flame which will burn continuously and without attention for several days. The invention in its simplest embodiment is shown in Figure 4, in which 13 is the oil containing vessel, and 14 is a plate resting on the bottom of the vessel and provided with a vertical stem 14^a having its end projecting slightly from the surface of the oil. The plate and stem are provided with suitable hooks 15, and extending between and secured to said hooks is an inclined wick 16 preferably of non-combustible material.

By reference to Figure 4, it will be noted that the inclined wick where it emerges from the liquid shows as indicated, the result of capillary attraction of the oil and said figure also indicates the relative position of the flame, which is a slight distance above the surface of the oil and in a higher plane than the point of emergence of the wick from the oil, and it will be understood that this spaced relation between the oil and flame continues to the lower extremity of the wick, the flame moving downward at a rate proportionate to the consumption of the oil.

It will be apparent from the above description that by slight variations in the proportion of the various parts, the length of fresh wick exposed after a predetermined length of burning may be regulated, as found desirable.

From the above description it will be apparent that I have produced a device of the character described, which possesses all of the features of advantage set forth as desirable, and while I have described and claimed the preferred embodiment of the same, I reserve the right to make all changes properly falling within the spirit and scope of the appended claims.

I claim:

1. In a sanctuary lamp, the combination of a vessel containing oil, a wick support resting on the bottom of said vessel, a second wick support secured in a position above the surface of the oil in said vessel, and a wick connected at its opposite ends to said supports and extending in an inclined position with respect to the surface of the oil.

2. In a sanctuary lamp, the combination of a vessel containing oil, a plate resting on the bottom of said vessel, a stem extending upward from said plate and projecting above the surface of the oil, a wick securing element supported by the plate in close proximity to the bottom of the vessel, a second wick securing element supported by said stem above the surface of the oil, and a wick extending from one support to the other and in an inclined position with respect to the surface of the oil in the vessel.

3. In a sanctuary lamp, the combination of a vessel containing oil, and a wick extending angularly through and projecting above the surface of said oil; the said projecting portion of said wick being fully exposed to the air above the level of the fuel.

4. In a sanctuary lamp, the combination of a vessel containing oil, and a wick extending angularly through and projecting above the surface of said oil; said wick embodying non-combustible means to prevent the severing of the wick by the heat of the flame in order that it may be supported in such angular position regardless of the depth of the oil in the vessel.

5. In a sanctuary lamp, the combination of a vesesl containing oil, supports located near the top and bottom of the vessel respectively, and a wick extending angularly between and attached to said supports.

6. In a sanctuary lamp, the combination of a vessel containing oil, and a wick extending angularly through and projecting above the surface of said oil; said wick being so supported throughout its length as to offer unimpeded progress to a flame passing downwardly into the vessel as the level of oil in said vessel is lowered.

7. In a sanctuary lamp, the combination of a vessel containing oil, a standard in said vessel, a plurality of wick supports on said standard, and a wick carried by and inclining from each support to the next higher and lower supports; said wick being arranged around each succeeding support in such a manner that the supported point of the upper end of each downwardly extending portion is in a higher plane than the supported point of the lower end of the adjacent upwardly extending portion.

8. In a sanctuary lamp, the combination of a vessel containing oil, a standard in said vessel, a plurality of wick supports on said standard, and a wick carried by and inclining from each support to the next higher and lower supports; said wick being arranged around each succeeding support in such manner that the supported point of the upper end of each downwardly extending portion is in a higher plane than the supported point of the lower end of the adjacent upwardly extending portion, the wick being looped upon each support in such a manner that each downwardly extending portion crosses the adjacent upwardly extending portion.

In witness whereof I hereunto affix my signature.

BERNARD MULLER-THYM.