W. L. PLUMB.

DISINFECTING LAMP OR CANDLE.

APPLICATION FILED MAY 6, 1910.

978,200.

Patented Dec. 13, 1910.

Fig: 1

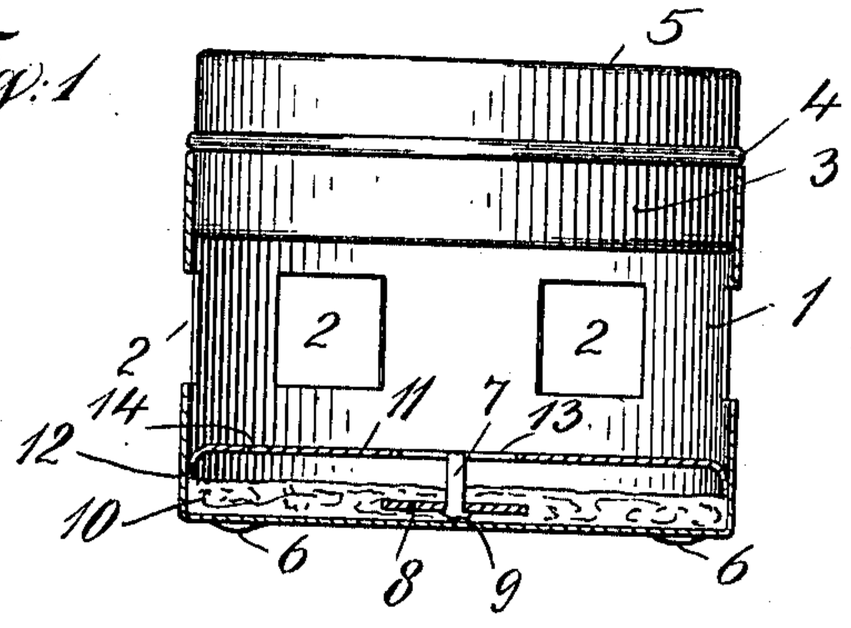


Fig: 2,

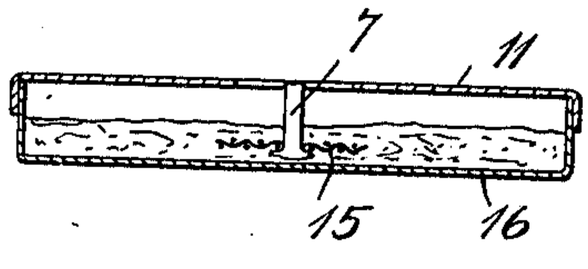


Fig: 3,

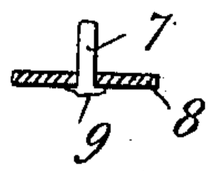


Fig: 4,

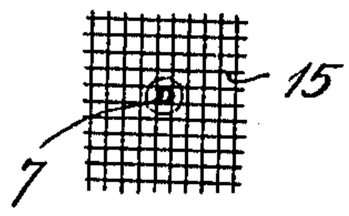
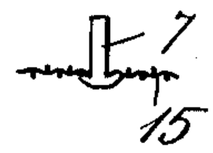


Fig: 5,



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UNITED STATES PATENT OFFICE.

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DISINFECTING LAMP OR CANDLE.

978,200. Specification of Letters Patent. **Patented Dec. 13, 1910.**

Application filed May 6, 1910. Serial No. 559,700.

To all whom it may concern:

Be it known that I, WALTER L. PLUMB, a citizen of the United States, and a resident of Glen Ridge, county of Essex, State of New Jersey, have invented a new and useful Improvement in Disinfecting Lamps or Candles, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 illustrates a vertical sectional view of one form of apparatus in which my invention may be employed; Fig. 2 illustrates a vertical sectional view of a modified construction of the apparatus; Fig. 3 illustrates a vertical sectional view of one form of wick supporter; Fig. 4 illustrates a plan view of another form of wick supporter; and Fig. 5 illustrates an edgewise or elevation view of that which is shown in Fig. 4.

Considerable difficulty has been experienced in the manufacture and use of such devices as are here under consideration, in providing means whereby the wick of the lamp will be caused to maintain a vertical or substantially vertical position throughout the burning of the lamp, owing to the fact that the wicks in such structures are necessarily very short and the body of tallow, paraffin, or similar substance, whatever it may be, which is used as the inflammable material is necessarily of little depth, so that when it becomes melted or heated by the heat generated by the lamp, the wick is apt to topple over, resulting sometimes in too great flame, whereby the apparatus is overheated sometimes to the danger point, and on other occasions the wick being submerged in the melted tallow or paraffin, becomes extinguished. Various means have been devised to correct this difficulty, but none of them, so far as I am aware, have been very successful.

It is the purpose of this present invention to provide the means which I have found invariably entirely satisfactory and by which the wick is maintained in upright position until the entire amount of inflammable material, whatever it may be, has been consumed. Under my invention there is entire freedom from any danger of overheating or danger of extinguishment of the flame.

Referring to the drawings, Fig. 1 illustrates a lamp of a construction which I have found useful. It embodies the following features: 1 is the body of the lamp provided with openings 2 for air drafts, ventilation, etc.; 3 is the superposed box which fits into the upper end of the body part 1 and is provided with a rib 4 which determines the extent to which it shall enter said body part; 5 is a cover for the box 3 which confines the disinfecting material, whatever it may be, which is placed within the box. The cover is, of course, removed at the time the apparatus is to be used. 6, 6, represent legs, or feet, which are in effect mere globules of solder which I prefer to attach to the bottom of the body part 1 to raise the receptacle somewhat above the surface upon which it rests.

Referring now to the parts which are more immediately involved in the invention, 7 is the wick of the lamp. As shown, it is a short piece of any suitable wick material which may be ordinary absorbent paper, cotton yarn, or a wick more carefully made, as preferred.

8 is a small plate of metal having a hole in its center. It may beneficially be an ordinary cheap iron washer. The hole in it should be of such size as to hold the wick somewhat snugly. The wicks can be readily inserted through the hole in this little metal disk by threading the yarn, or other wicking, through the eye of an ordinary bodkin and then passing the bodkin through the hole in the washer. The wick is drawn through the hole until a small part of it only projects below the bottom of the washer. It will naturally spread itself out as shown at 9, in Fig. 3, giving the effect of its being headed on the under side of the washer. This serves to hold the washer slightly above the bottom of the lamp body, so that the melted wax, or other material, will readily flow under the washer to the bottom or lower end of the wick. In fact, I have found that the natural tendency of such material as melted tallow or paraffin to pass through crevices influenced by the attraction of cohesion tends to suck or draw all the melted fuel to the wick. After the wick has been thus drawn through the washer, it is cut off on the upper side to the desired length.

Returning now to the lamp construction, 10 represents the body of tallow, paraffin, or other inflammable material which is supplied in such amount as required, usually sufficient to cover the washer, as shown, and surround also a portion of the wick. Above the tallow, I introduce a plate 11, which has

a downwardly presented circumferential flange 12, which is adapted to fit somewhat snugly within the body 1, of the lamp. This is pressed down to position so that the wick is about level with its upper surface and rests centrally within an opening 13, made in the plate. There is another opening 14, made through the upper surface of the plate 11, so as to permit a little circulation of air through the body chamber seen between the surface of the inflammable material and the under side of the plate 11. Such an opening I find aids in the better combustion of the inflammable material. There may be more than one opening 14, if desired.

In Fig. 4 I show a still more simple and inexpensive method of supporting the wick. In this construction I employ a small piece of ordinary mosquito netting 15, which can be bought by the square yard and cut up into innumerable small pieces. The size of the piece shown in Fig. 4 may be actual size. The wick 7 is passed through one of the central meshes of the little piece of netting 15 in the same manner as above described and will be held by the expansion, so to speak, of its lower end below the netting and in upright position by the pinch of the wires which define the particular mesh through which the wick is passed.

In Fig. 2 I show a construction in which the lamp is made separate from the body of the structure and is to be inserted therein. The plate 11 is substantially the same as that shown in Fig. 1, but in this case, it fits over a pan-like bottom part for the lamp proper marked 16. In this form I have shown the wire netting support for the wick the same as shown in Figs. 4 and 5.

It will be noted that my invention affords an extremely inexpensive, operative, and useful method of supporting the wicks in such structures, and its safety and durability are obvious. The weight of the metal washer, or the wire netting, as the case may be, affords stability to the wick during the operation of the lamp, because although the inflammable material is fluid at that time, nevertheless there is nothing to move the lamp and therefore nothing to displace the wick.

Obviously no particular or special form or construction of the parts either of the lamp or of the apparatus otherwise is essential. These devices are made in a variety of forms. All that is essential within the scope of my invention is the method of supporting the wick and it is also clear that various other special devices may be employed for this purpose, as, for instance, a piece of tin with a hole punched through it, the upwardly turned edges of the tin serving as the pinching or confining surfaces for the wick. In fact, various modifications may be made. Also it is very clear that any form of wick which may be preferred may be employed in connection with this invention, provided it is adapted to be passed through an orifice in a non-floating substance and held there during the operation of the lamp.

I claim:

1. A lamp for a disinfecting apparatus comprising a shallow, imperforate pan to contain the fuel, a fixed cover plate therefor having a central opening, a detached perforated piece of material which will not float upon the fuel if the latter is fluid, and a piece of wicking short enough to stand erect during all the burning of the lamp, said wicking passing through a perforation in said detached material and supported entirely by the sides of the perforation.

2. A disinfecting apparatus embodying a shallow pan-like part containing the fuel, a fixed cover plate therefor having a central opening, a detached perforated piece of metal wholly within the shallow pan, and a piece of wicking passing through the perforation in the piece of metal and supported entirely by the sides thereof, said wicking being short enough to stand erect during all the burning of the lamp and which extends upwardly to about the upper side of the cover plate.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER L. PLUMB.

Witnesses:
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