B. F. ROEHRIG.

KEROSENE LAMP.

APPLICATION FILED FEB. 25, 1909.

954,650. Patented Apr. 12, 1910.

FIG. 1.

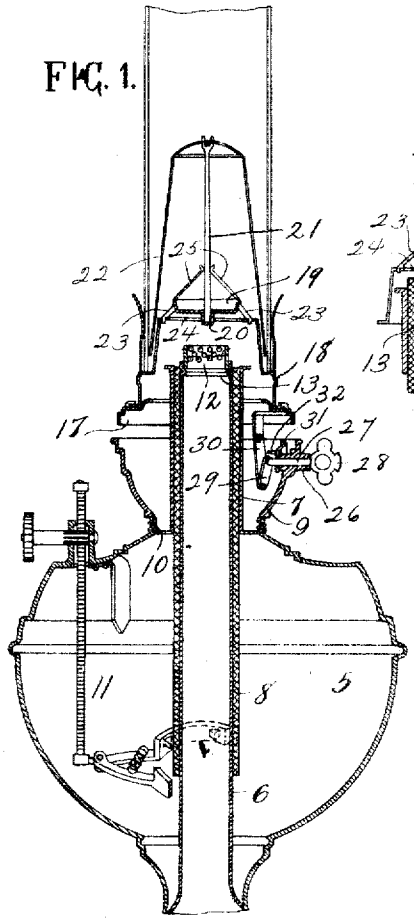


FIG. 3.

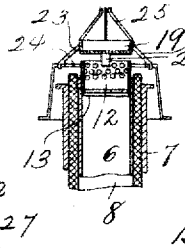


FIG. 2.

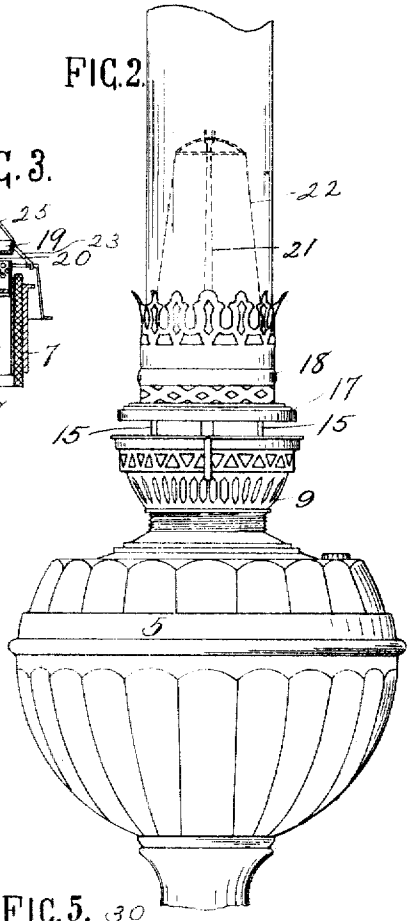


FIG. 4.

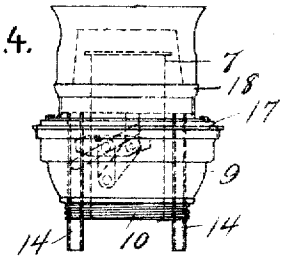


FIG. 5.

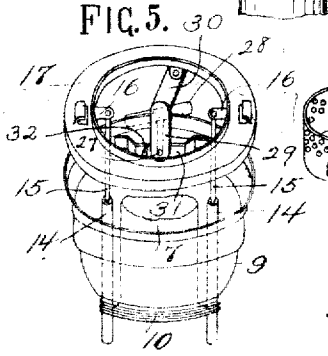


FIG. 6.

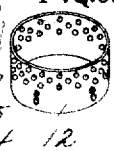
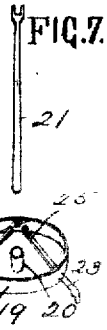


FIG. 7.



WITNESSES

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KEROSENE-LAMP.

954,650. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed February 25, 1909. Serial No. 479,910.

To all whom it may concern:

Be it known that I, BERNARD F. ROEHRIG, a citizen of the United States of America, residing at San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Kerosene-Lamps, of which the following is a specification.

This invention relates to lamps and more particularly to that class of kerosene lamps employing an incandescent mantle, the object of the invention being to provide improved means in a lamp of this character for controlling the air supply to the flame, said air supply being so controlled that the proper amount of air is delivered whether the wick be turned high or low.

A further object of the invention is the provision of an improved mantle support and flame spreader.

A further object of the invention is the provision of improved means for holding the chimney and mantle in an elevated position while the lamp is being lighted.

Further objects and advantages of the invention will be set forth in the detailed description which now follows:

In the accompanying drawing, Figure 1 is a vertical section of a lamp constructed in accordance with the invention, Fig. 2 is a side elevation of said lamp, Fig. 3 is a vertical section showing the position the parts occupy when the lamp is burning, Fig. 4 is a side elevation of a portion of the lamp with the chimney elevating means shown in dotted lines, Fig. 5 is a perspective view of the chimney and mantle elevating mechanism, Fig. 6 is a perspective view of a perforated ring hereinafter described, and, Fig. 7 is a perspective view of a mantle support and flame spreader hereinafter described.

Like numerals designate corresponding parts in all of the figures of the drawing.

By referring to the drawing, it will be seen that this lamp comprises the usual bowl 5, an inner wick tube 6 which also serves as an air duct, and an outer wick tube 7. The wick 8 travels between the inner and outer wick tubes. As is clearly illustrated in Fig. 1, the outer wick tube is bent to form a cup-like member 9 which is threaded at 10 to adapt it to be screwed into the bowl 5. A wick controlling device which has been indicated in a general way at 11, serves to raise and lower the wick as desired. This wick controlling device is not novel. It forms no part of the present invention and consequently will not be described in detail.

One of the most important features of the present invention is the perforated ring 12 shown in Figs. 1, 3, and 6. This ring is inserted in the upper end of the inner wick tube 6 and is preferably held against sliding down inside of said wick tube by an integral rib 13 formed upon said wick tube. It is of course apparent that this ring may be held in position in a number of ways and it is to be understood that the invention is not limited to the specific manner of holding this ring in position. If the proper proportion of air be supplied to a kerosene burner of the character shown, a clear blue flame will result. If too much air be supplied, the result is a red and smoky flame which speedily coats the mantle with soot. The perforated ring herein shown and described is so proportioned and arranged as to supply just exactly the right amount of air to the burner at all times, whether the wick be turned high or low. As is clearly shown in Fig. 6, the perforations in the ring 12 are more numerous in the upper portion of the ring than they are in the lower portion thereof. Consequently, when the wick is turned low it receives less air than when it is turned higher, the result of which is to supply just the right amount of air needed at all times. The importance of this will be apparent when it is reflected that if the right proportion of air is not supplied to the burner, a red and sooty flame will result. As has been before stated this will speedily coat the mantle with soot and the coating of the mantle with soot will in turn prevent the passage of the gases generated at the burner, through the mantle, thereby rendering the lamp totally useless.

The cup-like member 9 carries guide tubes 14 in which rods or smaller tubes 15 slide. These rods or tubes 15 are connected to ears 16 of a ring 17, said ring in turn supporting a chimney carrying cap 18. A cup-like flame spreader 19 has a socket 20 formed therein for the reception of a mantle supporting rod 21. The mantle 22 is supported by this rod and incloses the flame spreader. The cup-like flame spreader carries outwardly and downwardly projecting arms 23 which engage the edge 24 of the chimney carrying cap 18. The cup 19 also carries inwardly and upwardly directed arms 25 which engage the mantle supporting rod 21, the lower end of said rod entering

the socket 20. Journaled in a bearing 26 of the cup-like member 9 is a shaft 27 to which rotation may be imparted by a thumb piece 28. Rigidly secured to the inner end of this shaft 27, is a crank 29 which has a pivoted link connection 30 with the ring 17. A strap 31 carries a pin 32, said pin serving as a stop for the crank 29 as will be hereinafter set forth. When it is desired to light the lamp, the shaft 27 is rotated to throw the crank 29 upwardly and over its center. This raises the ring 17 and the parts carried thereby, it being apparent that said parts include the chimney and mantle. This permits free access to the wick for the purpose of lighting the lamp. When the crank 29 is thrown slightly over its vertical center, it strikes the pin 32 and downward movement of the ring 17 is thereby prevented. The ring 17 will therefore be held in an elevated position until the crank 29 is swung back over its vertical center. In Fig. 1, the parts have been illustrated in the position in which they lie when the shaft 27 has been partially rotated to elevate the chamber carrying ring 17. The position in which the parts lie when the lamp is burning has been illustrated in Fig. 3. During the vertical movement of the chimney and mantle, the guide members 14 and 15 hold the parts in proper vertical alinement.

From the foregoing description, it will be seen that simple and efficient means are herein provided for accomplishing the objects of the invention, but while the elements shown and described are well adapted to serve the purposes for which they are intended, it is to be understood that the invention is not limited to the precise construction set forth, but includes within its purview such changes as may be made within the scope of the appended claims.

Having described my invention, what I claim is:

1. In a device of the character described, the combination with an inner wick tube, an outer wick tube of a perforate ring carried by said inner wick tube at the upper end thereof, a chimney carrying cap, a flame spreader supported from said cap, and a mantle support mounted upon said flame spreader.

2. In a device of the character described, the combination with a chimney bearing cap, of a cup-like flame spreader, supporting arms extending from the flame spreader to said cap, there being a socket formed in said cap, a centrally disposed mantle supporting rod adapted to enter said socket, and arms extending from said flame spreader to said rod.

3. A lamp of the character described, comprising an inner wick tube and an outer wick tube, a removable, perforated ring seated in the upper end of the inner wick tube, a chimney carrying cap, a centrally disposed flame spreader, and spaced arms extending from said flame spreader to the upper edge of the chimney carrying cap.

4. A lamp of the character described, comprising an inner wick tube and an outer wick tube, a removable, perforated ring seated in the upper end of the inner wick tube, a chimney carrying cap, a centrally disposed flame spreader, spaced arms extending from said flame spreader to the upper edge of the chimney carrying cap, and a centrally disposed mantle support projecting upwardly from said flame spreader.

5. A lamp of the character described, comprising an inner wick tube and an outer wick tube, a removable, perforated ring seated in the upper end of the inner wick tube, a chimney carrying cap, a centrally disposed flame spreader, spaced arms extending from said flame spreader to the upper edge of the chimney carrying cap, a centrally disposed mantle support projecting upwardly from said flame spreader, and inwardly and upwardly directed arms extending from the edge of the flame spreader and engaging and bracing said mantle support.

In testimony whereof I affix my signature in presence of two witnesses.

BERNARD F. ROEHRIG.

Witnesses:
I. A. SCRIBNER,
C. M. BENJAMIN.