

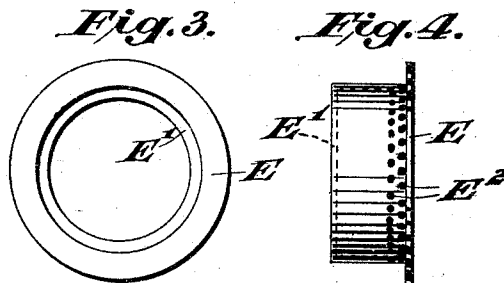
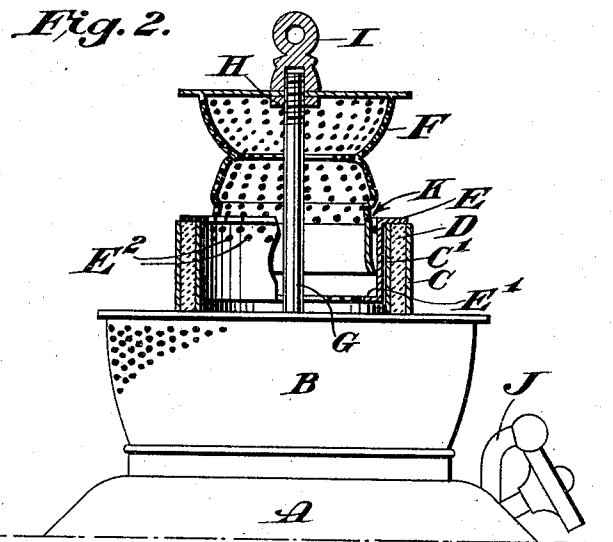
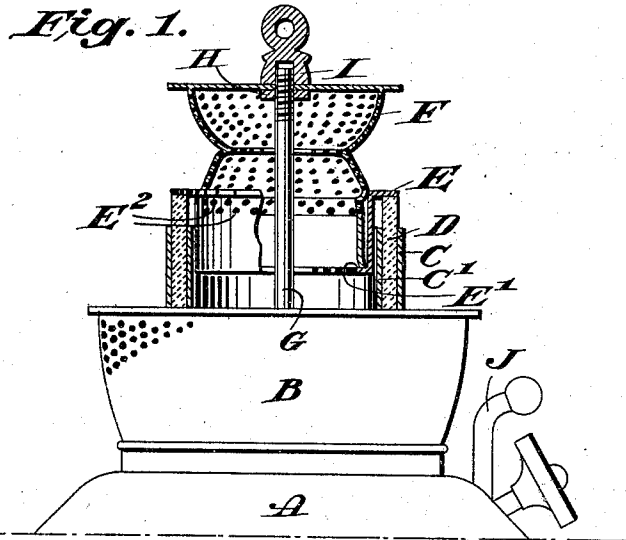
No. 644,786.

Patented Mar. 6, 1900.

F. T. WILLIAMS.
LAMP.

(Application filed Oct. 20, 1899.)

(No Model.)



WITNESSES:

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FRANK THEODORE WILLIAMS, OF MERIDEN, CONNECTICUT, ASSIGNOR TO
THE EDWARD MILLER & COMPANY, OF SAME PLACE.

LAMP.

SPECIFICATION forming part of Letters Patent No. 644,786, dated March 6, 1900.

Application filed October 20, 1899. Serial No. 734,185. (No model.)

To all whom it may concern:

Be it known that I, FRANK THEODORE WILLIAMS, a citizen of the United States, residing at Meriden, New Haven county, Connecticut, have invented certain new and useful Improvements in Lamps, of which the following is a full, clear, and exact description.

My invention relates to lamps, and is more particularly addressed to the burner portion thereof.

Among the chief objects of my invention is the provision of a simple, inexpensive, and effective means whereby the lamp may be readily extinguished and whereby the user is prevented from raising the wick to an unnecessary and dangerous height, the means by which this object is accomplished combining another feature—to wit, that of causing a more uniform and effective distribution of gas, whereby more perfect combustion is attained and flickering avoided.

In the drawings, Figure 1 is a side elevation of my invention, partly in section, the wick being raised to its extreme limit. Fig. 2 is a similar view, the wick being lowered to substantially its extreme limit. Fig. 3 is a plan view of a detail. Fig. 4 is a side elevation of the same detail.

A is a lamp-fount.

B is a perforated skirt.

C C' are respectively outer and inner wick-tubes of that type of lamp commonly termed "central-draft" lamp.

D is the wick.

E is a guard, which may be in the form of a substantially-flat annular ring, the inner circumference of which is extended into a tubular portion, which extends down loosely within the central wick-tube C', the lower end of the tubular portion of the guard E being flanged inwardly, as at E'.

F is a perforated spreader mounted upon a stationary post G, which may be carried by the lamp in any suitable manner. The spreader F is stationary with respect to the wick-tubes C C'.

H is a nut, which may be adjustably carried near the upper end of the post G and upon which the spreader F may rest. By the shifting of the position of the nut H the de-

sired position of the spreader may be definitely determined.

I is a set-nut to hold the spreader firmly in place.

J is a wick-lift.

K is an air gap or space formed between the lower portion of the spreader F and the inner wall of the tubular portion of the guard E. E² are perforations around the tubular wall of the guard E, through which the gases from the oil carried by the wick may pass in a direction the reverse of that shown by the arrow on Fig. 2 pointing to said air-space.

Operation: When it is desired to light the lamp, the wick is raised by the wick-lift J in the usual manner to a point, for example, half way between the point indicated in Fig. 1 and that indicated in Fig. 2. By applying a match to the exposed portion of the wick the gas will become ignited upon the outer side of the wick. The raising of the wick will also raise the guard E, thus uncovering the perforations E², so that gas will pass as before described, which will become mingled with and ignited by the gas which is delivered from the outer side of the wick. The upper edge of the wick does not burn, because upon it rests the guard E. The wick cannot be raised beyond the predetermined distance by reason of the flange E' striking against the lower edge of the spreader, which may project down into the tubular portion of the guard E. The limit of the upward movement is shown in Fig. 1. When it is desired to extinguish the lamp, the wick is quickly lowered into the position indicated in Fig. 2, in which the perforations on the inner side of the guard become closed by the inner wick-tube C' and the annular flat portion of the guard substantially closes the space between the wick-tubes C C', thus accomplishing the desired result.

Various changes in the proportion of the parts may be made, but I have found substantially the construction herein shown and described to be productive of entirely satisfactory results, and hence such construction may be considered a preferable one.

A particularly-important feature secured by using the construction herein shown is the

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manner in which air is supplied to the base of the flame on the inner side. This is accomplished by having the spreader F extend down inside of the guard E and providing this extension with perforations which will approximately register with the perforations in the guard E when the latter is raised, thereby directing air to the base of the flame and securing more perfect combustion.

10 The spreader F is so constructed and arranged with relation to the inner wick-tube C' that practically all of the air which passes through the wick-tube C' is passed through the perforations in the spreader, whereby a more uniform circulation is secured and regular combustion promoted.

What I claim is—

1. In a device of the character described in combination, an inner and outer tube forming between the same a passage in which a wick is adapted to move, a stationary spreader a portion of which is adjacent said inner tube and forms a continuation thereof, a movable guard resting upon the wick and means carried near the lower portion of said guard to engage with the spreader at the limit of its upward movement.

2. In a device of the character described, an outer and an inner wick-tube, a perforated spreader a portion of which is adjacent said inner tube and forms a continuation thereof, a guard carried by the wick so as to be movable therewith, a tubular extension upon said guard projecting loosely into the inner wick-tube, an inward flange at the lower end of

said tubular extension adapted to engage with said stationary spreader when the wick is raised to the limit of its upward excursion.

3. In a device of the character described, an inner wick-tube, an outer wick-tube, a spreader stationary with respect to said tubes, a portion of said spreader being adjacent said inner tube and forming a continuation thereof, a wick located between said tubes, a guard supported by said wick, said guard having a tubular extension with an inner flange near its lower end, in combination with perforations around said tubular portion and an air-gap between the inner wall of said tubular portion and the external wall of the adjacent portion of the spreader.

4. In a device of the character described in combination, an inner and an outer wick-tube, a spreader stationary with respect thereto, a portion of said spreader being adjacent said inner tube and forming a continuation thereof, a guard for the top of said wick and movable therewith, means carried by the lower portion of said guard to engage with said spreader and limit the upward excursion of the wick, said guard being of a size sufficient to substantially cover the wick-space between the aforesaid wick-tubes when the wick is lowered.

Signed at Meriden, Connecticut, this 14th day of October, 1899.

FRANK THEODORE WILLIAMS.

Witnesses:

CLARA B. MILLER,
NORMAN E. SMITH.