S. B. MORSS.

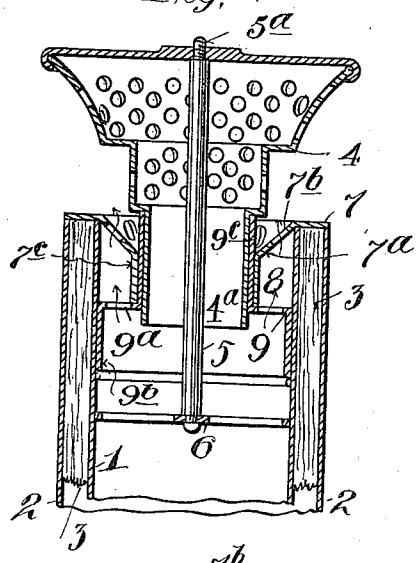
LAMP BURNER.

APPLICATION FILED FEB. 15, 1910.

1,068,601.

Patented July 29, 1913.

Fig. 1.



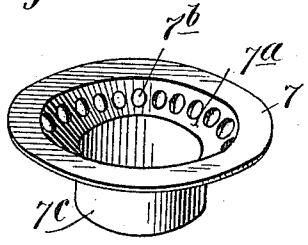


Fig. 3.

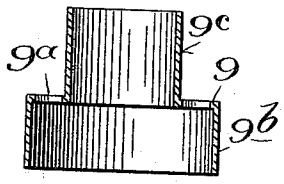


Fig. 2.

Fig. 5.

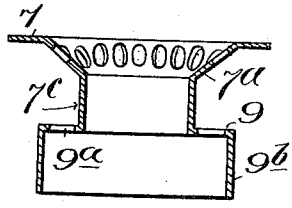
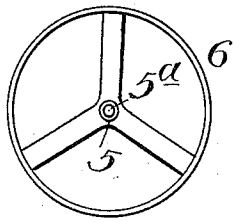


Fig. 4.



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UNITED STATES PATENT OFFICE.

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LAMP-BURNER.

1,068,601. Specification of Letters Patent. Patented July 29, 1913.

Application filed February 15, 1910. Serial No. 544,036.

To all whom it may concern:

Be it known that I, STEPHEN B. MORSS, a citizen of the United States, and resident of Rahway, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Lamp-Burners, of which the following is a specification.

My invention has reference to improvements in burners for lamps or stoves, and particularly to the class of burner set forth in Letters Patent No. 941,163, granted to me November 23, 1909.

The object of my invention is to provide a burner with a chamber or space between the wick tube and the air distributer, which chamber or space will act as a check to the swiftly ascending air carried from below, enabling the gas or air in said chamber or space to become thoroughly mixed and put in proper condition for burning before such mixture escapes from the chamber or space to the flame, said chamber or space also acting to prevent backdraft in and through the chamber.

My invention comprises novel details of improvement and combinations of parts that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming part hereof, wherein, Figure 1 is a vertical section of a burner embodying my improvements; Fig. 2 is a perspective view of the gas generator shown in Fig. 1; Fig. 3 is a sectional view of part of a shell forming the aforesaid chamber or space; Fig. 4 is an inverted view of the distributer support, and Fig. 5 is a sectional view of a modification.

Similar numerals of reference indicate corresponding parts in the several views.

In the drawings the numerals 1, 2, indicate inner and outer wick tubes which may be in usual form receiving the wick 3 between them.

At 4 is a perforated air distributer supported above the wick in any suitable or well known manner. I have shown the air distributer 4 as supported by rod 5 attached to a frame or spider 6 secured within the inner wick tube, the air distributer 4 being removably attached to rod 5 by the threads 5^a thereon. The air from below passes up into tube 1 to the air distributer in usual manner. The flange or ring 7, preferably of metal, is adapted to rest over and upon the wick and inner tube 1, said flange or ring being shown provided with an inwardly extending portion 7^a shown guided to rise and descend with respect to the air distributer. Said portion 7^a of the flange or ring 7 is provided with a suitable number of openings 7^b to permit the passage of air and gas mixture from below. The inwardly extending portion 7^a of the flange or ring 7 is shown provided with a tubular part 7^c serving to guide said flange or ring as it rises and descends.

The parts 1, 7^a, and 7^c are so arranged as to provide a chamber 8, the lower wall of which chamber is established by the partition or wall 9, extending between wick tube 1 and the tubular part 4^a of distributer 4, while the tubular part 7^c of the flange or ring 7 is fitted to slide on the tubular part 9^c that extends from partition or wall 9. The construction described provides the chamber or space 8, whether the flange 7 is raised by the wick or rests upon the wick and wick tubes as shown in Fig. 1. Air from wick tube 1 may pass through openings 9^a into chamber 8 where such air mingles with gas generated at the inner surface of wick 3 when the latter is raised, and such air and gas mixture passes through perforations 7^b.

The parts 7, 7^a constitute what I term a gas generator and extinguisher, and serve when heated by the flame to aid in generating gas at the inner portion of the wick, the gas flowing out of 7^b aiding in causing a draft upwardly. The air and gas are enabled to be thoroughly mixed in chamber 8 in proper condition for burning before the mixture escapes from chamber 8, and said chamber and the perforations 9^a prevent backdraft being set up in the lamp, whereby the flame is prevented from being drawn into space 8 and tube 1, overcoming danger of burning or exploding gases within the wick tubes or chamber 8. Furthermore, by having the perforations 9^a communicating with chamber 8 an effective check is supplied to the rapidly ascending air from below into the gas generating space 8, thereby effecting steadiness to the flame and preventing too great a draft of air through perforations 7^b.

Instead of making the parts 9 and 9^b separate from the flange or ring 7 said parts may be made in a single piece, or separate pieces joined together, as illustrated in Fig. 5, wherein the tubular parts 7^c, 9^b are shown connected with the partition or plate 9. In

this case the tubular part 9^b will fit sufficiently freely within wick tube 1 to rise and descend therein, and will thereby also serve in guiding the flange or ring 7 during its movement.

Changes may be made in the details of construction and arrangements of parts set forth, within the scope of the appended claims, without departing from the spirit of my invention.

Having now described my invention what I claim is:—

1. A central draft burner provided with an air distributer having a passage alined with the central draft tube, a gas generator having a flange resting upon the wick tube and having a perforated portion within the wick tube, and a perforated partition extending across the space between the wick tube and distributer providing a gas chamber below and adjacent the upper part of the wick.

2. A central draft burner comprising inner and outer wick tubes, a perforated air distributer having a hollow portion communicating with the inner wick tube, a gas generator comprising a flange to rest upon the wick and provided with an inwardly and downwardly projecting portion having one or more openings communicating with the inner wick tube, said gas generator surrounding the hollow portion of the air distributer and being arranged to rise and descend, and a perforated partition within the inner wick tube and located below the gas generator providing a gas chamber communicating with the perforations of the gas generator.

3. A central draft burner comprising inner and outer wick tubes, a perforated air distributer, a gas generator adapted to rest upon and over the wick, and a gas generating chamber between the wick tube and the axis of the air distributer, said chamber having a downwardly and inwardly inclined top and openings at its top and bottom, the gas generating chamber communicating respectively with the space above the wick and with the inner wick tube below the chamber.

4. A gas generator for a central draft burner comprising a flange to rest over a wick and having an inward extension provided with openings spaced apart, and an outwardly disposed perforated partition below said extension.

5. A gas generator for a central draft burner comprising a flange to rest over the wick and having an inward extension provided with openings spaced apart, an outwardly disposed perforated partition below said extension, and a guide connected with said partition.

Signed at New York city, in the county of New York and State of New York this 14th day of February A. D. 1910.

STEPHEN B. MORSS.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."