

No. 685,479.

Patented Oct. 29, 1901.

N. JOHNSON.
LAMP.

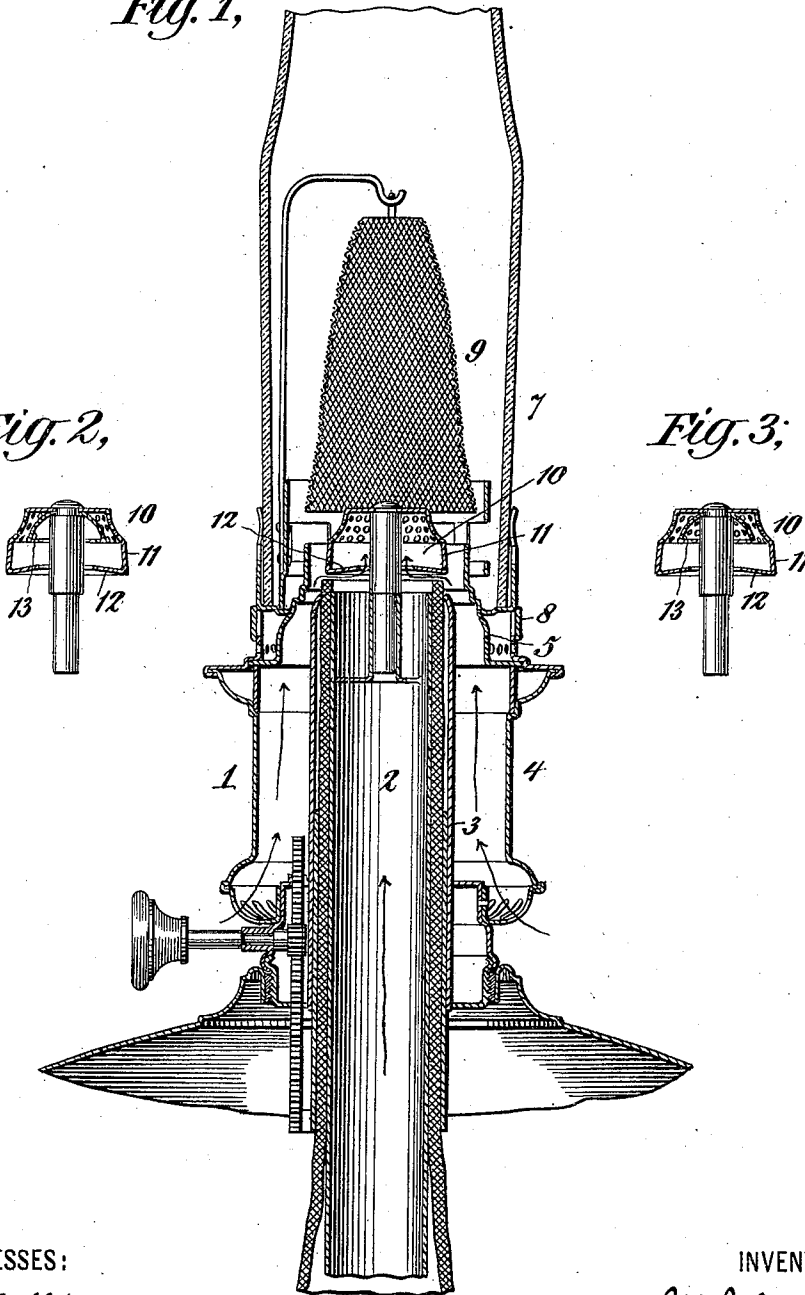
(Application filed Nov. 12, 1898. Renewed Apr. 2, 1901.)

(No Model.)

Fig. 1,

Fig. 2,

Fig. 3;



WITNESSES:

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NIS JOHNSON, OF MERIDEN, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE INCANDESCENT PETROLEUM LIGHT COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF WEST VIRGINIA.

LAMP.

SPECIFICATION forming part of Letters Patent No. 685,479, dated October 29, 1901.

Application filed November 12, 1898. Renewed April 2, 1901; Serial No. 54,105. (No model.)

To all whom it may concern:

Be it known that I, NIS JOHNSON, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates generally to lamps, and particularly to the gasifiers of incandescent petroleum-lamps, such as the lamp covered by the patent to Paul Lucas, No. 597,682, dated January 18, 1898. The gasifier herein described is an improvement upon the gasifier illustrated and described in the said Lucas patent.

My invention consists in the novel construction of the gasifier.

The objects of my invention are to produce an even colorless flame of great heating power, free from luminous tips, which smoke the mantle, and to avoid the production of a disagreeable noise by the lamp when burning. These objects are attained in the invention herein described, and illustrated in the drawings which accompany and form a part of this specification, in which the same reference-numerals indicate the same or corresponding parts, and in which—

Figure 1 is a central vertical section of a burner of an incandescent petroleum-lamp containing my improved gasifier. Fig. 2 is a central vertical section of a gasifier differing slightly from that shown in Fig. 1, and Fig. 3 shows a gasifier differing slightly from that shown in Fig. 2.

In the drawings, 1 is the burner of the lamp. It is a central-draft burner, 2 being the central-draft tube, extending through the oil-reservoir to the base of the lamp in the ordinary manner.

3 is the outer wick-tube, and 4 is the outer skirt or casing of the burner.

5 is a draft-collar which concentrates the currents of air rising through the space between the outer wick-tube 3 and the skirt 4.

7 is the draft-chimney, supported upon the

chimney-gallery 8, and 9 is the incandescing mantle, suspended from a supporting-hook.

10 is the gasifier. It resembles the gasifier of the said Lucas patent in that it is composed principally of a shell or thimble 11, supported at the center, closed at the top and open at the bottom, and having at the bottom a deflecting ring or flange 12, extending over the wick; but it differs from the Lucas gasifier in that while the sides of the Lucas gasifier are cylindrical and are perforated from top to bottom the sides of my gasifier are divided into a lower imperforate portion and an upper perforated portion, which is inclined or curved inwardly. Preferably the imperforate lower portion of the gasifier has a slight upward taper. I prefer also that the diameter of this imperforate lower portion should be equal to that of the deflecting-ring, so that said ring projects inward from the sides of the gasifier. I find that this gasifier causes a very even colorless flame of great heating power to be produced and that its use avoids the production of a roaring noise by the lamp. To insure that the flame shall not be affected by currents of air passing upwardly through the draft-tube, the gasifier may be provided inside the casing 11 with a draft-shield 13, which may be imperforate, as shown in Fig. 2, or perforated, as shown in Fig. 3, according as to whether the utmost protection against drafts is desired or whether only a moderate protection is desired.

The lamp when provided with my improved gasifier operates in the same manner as the lamp of the said Lucas patent. When first lighted, the wick being quite low, a luminous flame surrounding the gasifier is produced; but if the wick be raised quickly after the luminous flame has been burning for a few seconds the luminous flame changes to a non-luminous flame of great heating power, which heats the mantle to incandescence.

Having thus completely described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A gasifier of the type described, consisting of a hollow shell open at the bottom, and having an imperforate lower part and a per-

forated and inwardly-inclined upper part, and adapted to be placed over the wick-tube of a lamp with its bottom opening above the top of such wick-tube, substantially as described.

2. A gasifier of the type described, consisting of a hollow shell open at the bottom, and having a tapering imperforate lower part and a perforated and inwardly-inclined upper part, and adapted to be placed over the wick-tube of a lamp with its bottom opening above the top of such wick-tube, substantially as described.

3. In a lamp, the combination, with a central-draft wick-tube, of a hollow gasifier, having an open lower end and sides divided into a lower imperforate part and an upper perforated and inwardly-inclined part, said gasifier being located over the wick-tube with the opening in its lower end above the top thereof, substantially as described.

4. A gasifier of the type described, consisting of a hollow shell open at the bottom and perforated at the sides, and having a draft-shield within said shell, and adapted to be

placed over the wick-tube of a lamp with its bottom opening above the top of such wick-tube, substantially as described.

5. A gasifier of the type described, consisting of a hollow shell open at the bottom and perforated at the sides, and having a perforated draft-shield within said shell, and adapted to be placed over the wick-tube of a lamp with its bottom opening above the top of such wick-tube, substantially as described.

6. A gasifier of the type described, consisting of a hollow shell open at the bottom, and having an imperforate lower part and a perforated and inwardly-inclined upper part, and having within said shell a draft-shield, and adapted to be placed over the wick-tube of a lamp with its bottom opening above the top of such wick-tube, substantially as described.

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

NIS JOHNSON.

Witnesses:

E. A. MERRIMAN,
D. T. PATTON.