

No. 686,079.

Patented Nov. 5, 1901.

N. JOHNSON.
LAMP.

(Application filed Apr. 12, 1899. Renewed Oct. 9, 1901.)

(No Model.)

Fig. 1,

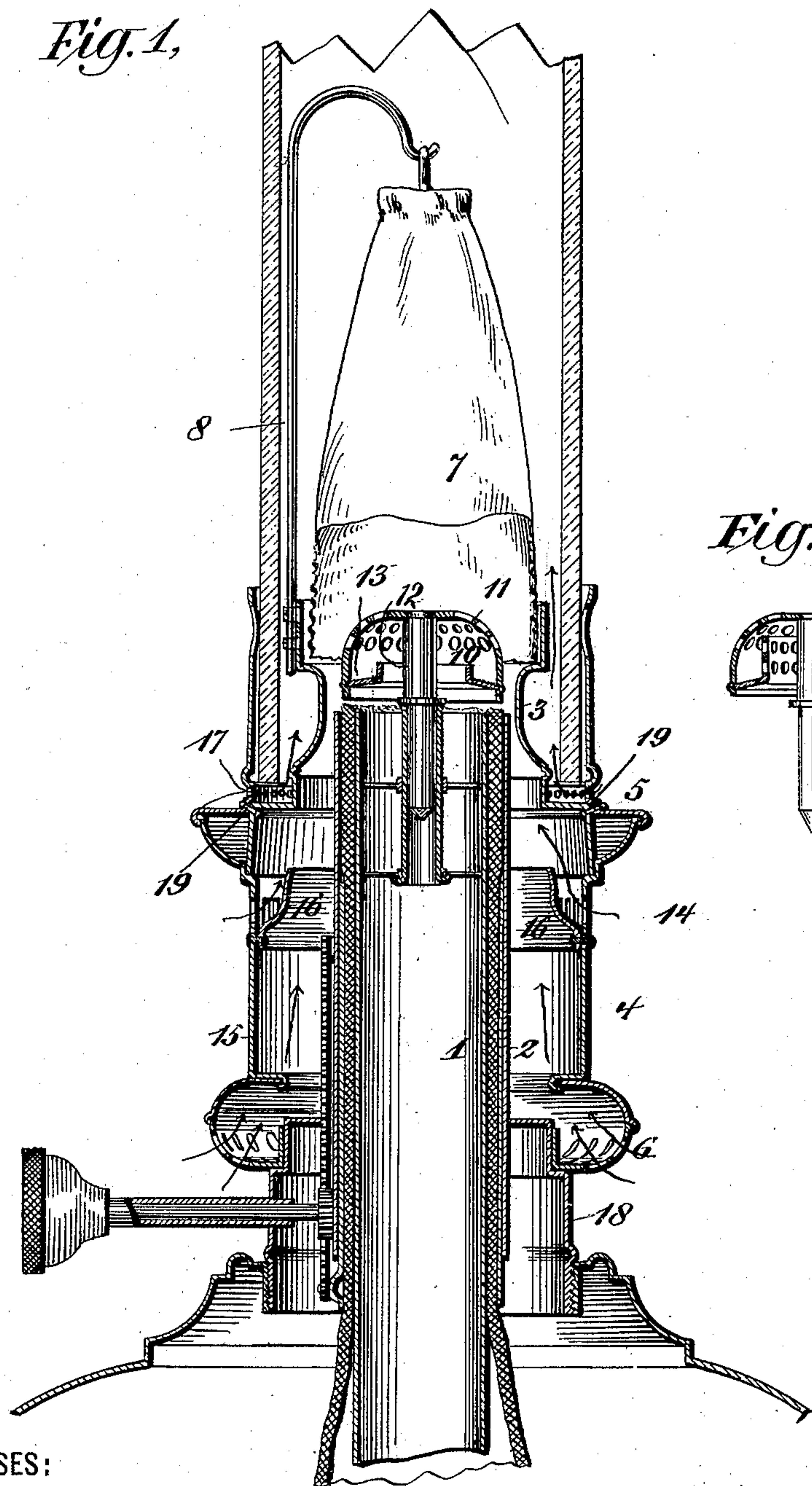
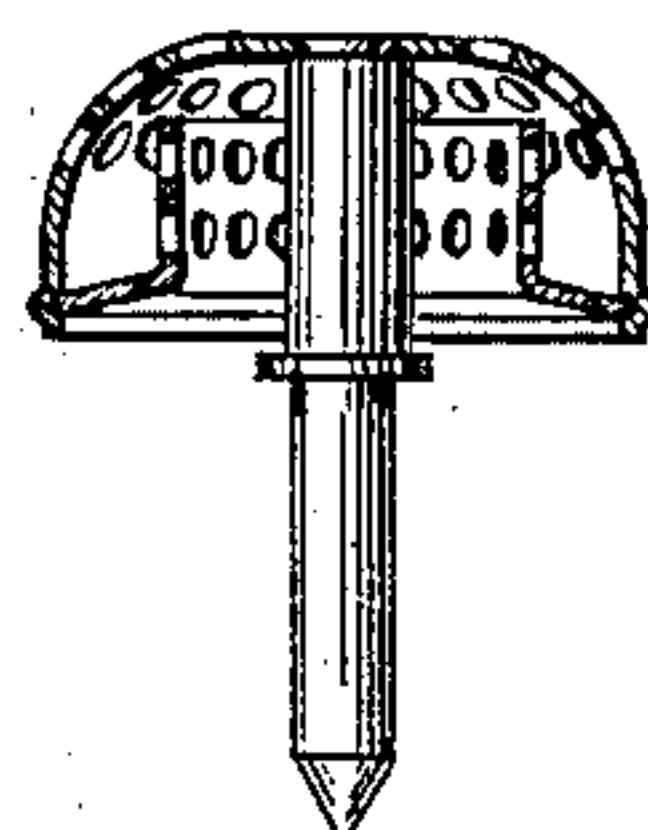


Fig. 2,



WITNESSES:

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UNITED STATES PATENT OFFICE.

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. 686,079, dated November 5, 1901.

Application filed April 12, 1899. Renewed October 9, 1901. Serial No. 78,131. (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 Gasifiers for Incandescent Oil-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 to improvements in gasifiers for incandescent oil-lamps of the class which produce light through the heating to incandescence of a suitable refractory body, such as a gauze mantle composed of refractory material.

My invention resides in the novel construction of the gasifier.

The gasifier herein described is an improvement on the gasifier covered by the patent to Paul Lucas, No. 597,682, dated January 18, 1898.

The object of my invention is to improve the construction of the gasifiers of incandescent oil-lamps. This object is attained in the gasifier 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 lamp-burner containing my improved gasifier, and Fig. 2 is a central vertical section of a gasifier differing slightly in construction from the gasifier shown in Fig. 1 and which may be used interchangeably with said latter gasifier.

In the drawings, 1 designates the central draft-tube or inner wick-tube of the lamp; 2, the outer wick-tube; 4, the skirt of the burner, and 5 the chimney-gallery.

3 is a sleeve surrounding the upper portion of the wick-tube, extending up into the space between the hereinafter-mentioned gasifier and the draft-chimney and seated in a groove in the skirt 4. The use of this sleeve 3 is covered in my application for improvements in lamp-burners, filed January 11, 1899, Serial No. 701,781. The sleeve is so shaped as

to form a contracted draft-collar, which concentrates the currents of air to the extent necessary for the production of a non-luminous flame. The mantle is supported from the sleeve by a rod 8.

The gasifier 10 consists of a hollow shell 11, having a convexly-curved dome-shaped top and open at the bottom. It is supported by a spindle 12, fitting within a suitable socket within the central draft-tube 1. The shell 11 has at the bottom an inwardly and upwardly extending deflecting-flange 13, located substantially over the wick. The lower portion of the shell 11 is imperforate, but in the upper curved portion perforations for the escape of combustible gases are provided. The inwardly and upwardly extending flange 13 may be extended upward, so as to form a tube surrounding the stem 12, screening to a certain extent the openings in the outer shell, and this tube may be perforated, all as shown in Fig. 2. It is found that when the lamp is in use most of the combustible gases issue from the lowermost holes in the outer shell of the gasifier, and the perforations in the inner tubular portion of the part 13 therefore serve to mix, diffuse, and distribute the combustible gases and air. Both of these forms of gasifiers produce a very even and steady flame issuing in the best manner for heating the mantle. The shell 11 may be spun from a single piece of metal or may be stamped by dies, and hence may be made very cheaply.

In the operation of the lamp air to supply the flame enters through perforations in the bead 6 at the bottom of the skirt 4 and also through perforations 14 near the upper part of the skirt (these perforations being shielded by a collar 16) and thence passes through the sleeve 3. Combustible gases rising from the wick pass into the gasifier 10, being there mixed with air rising through the central draft-tube 1, and then pass outward through the perforations in the shell 11 of the gasifier and burn with a blue or substantially colorless flame, which heats the mantle to incandescence.

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

1. In a lamp, the combination, with draft and wick tubes, of a gasifier consisting of a hollow shell having a convexly-curved dome-shaped top, said shell being open at the bottom, being provided with upwardly and outwardly directed perforations, in the inclined portion of its dome-shaped top, for the escape of combustible gases, and being located over the wick-tube of the lamp with its bottom opening above the top of such wick-tube.

2. A gasifier of the type described, consisting of a hollow shell having a convexly-curved dome-shaped top, said shell being open at the bottom, being provided with upwardly and outwardly directed perforations, in the inclined portion of its dome-shaped top, for the escape of combustible gases, and being adapted to be placed over the wick-tube of a lamp with its bottom opening above the top of the wick-tube.

3. A gasifier of the type described, consisting of a hollow perforated shell open at the

bottom and provided with an inwardly-extending deflecting-flange, and with a tubular portion extending upward into the interior of the shell, said gasifier being adapted to be placed over the top of the wick-tube of a lamp with its bottom opening above the top of such wick-tube.

4. A gasifier of the type described, consisting of a hollow perforated shell open at the bottom and provided with an inwardly-extending deflecting-flange, and with a perforated tubular portion extending upward into the interior of the shell, said gasifier being adapted to be placed over the top of the wick-tube of a lamp with its bottom opening above the top of such wick-tube.

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

NIS JOHNSON.

Witnesses:

WILBUR F. DAVIS,
WILLIAM C. MUELLER.