

(No Model.)

H. E. SHAFFER.

LAMP BURNER.

No. 358,892.

Patented Mar. 8, 1887.

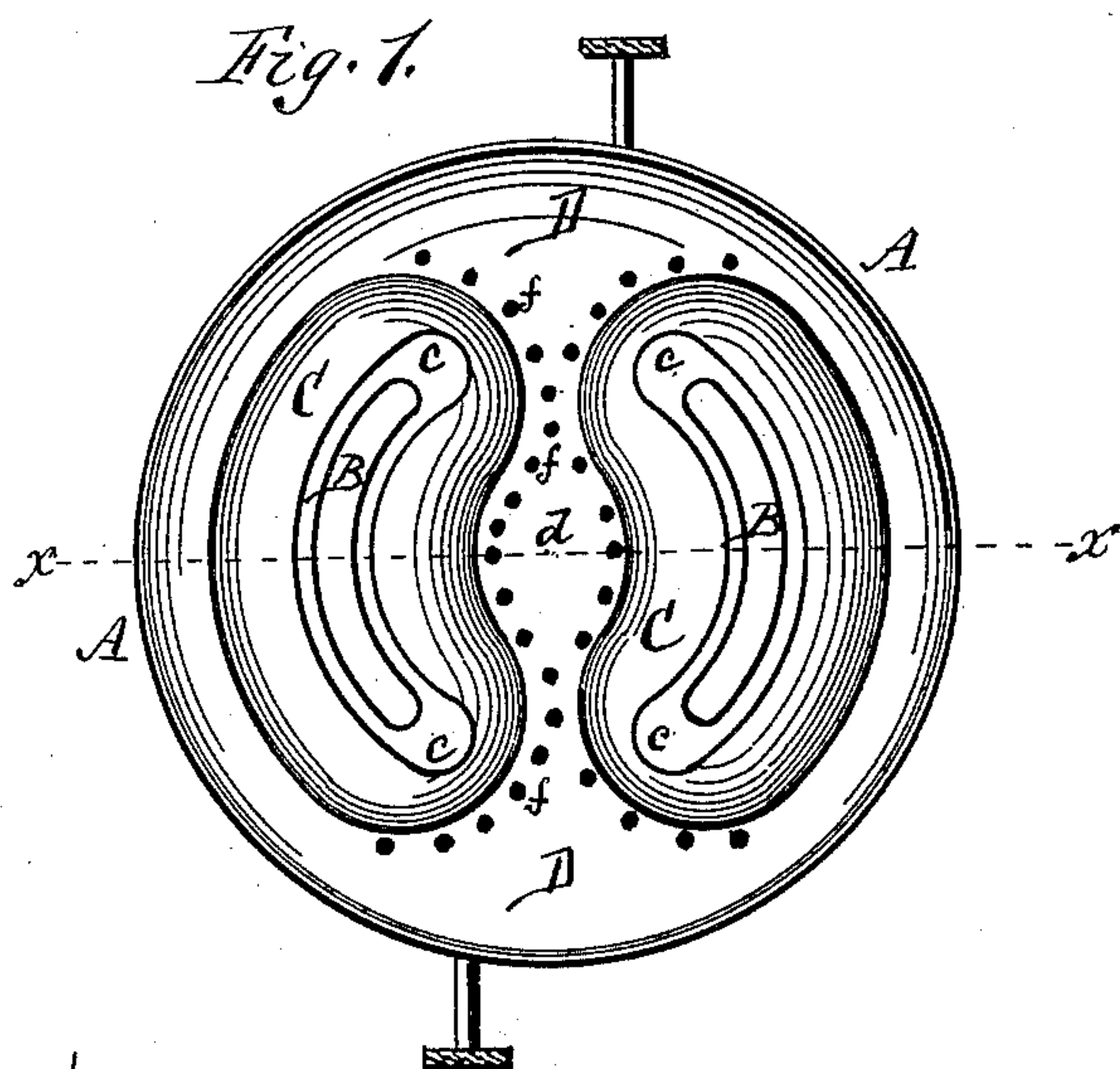


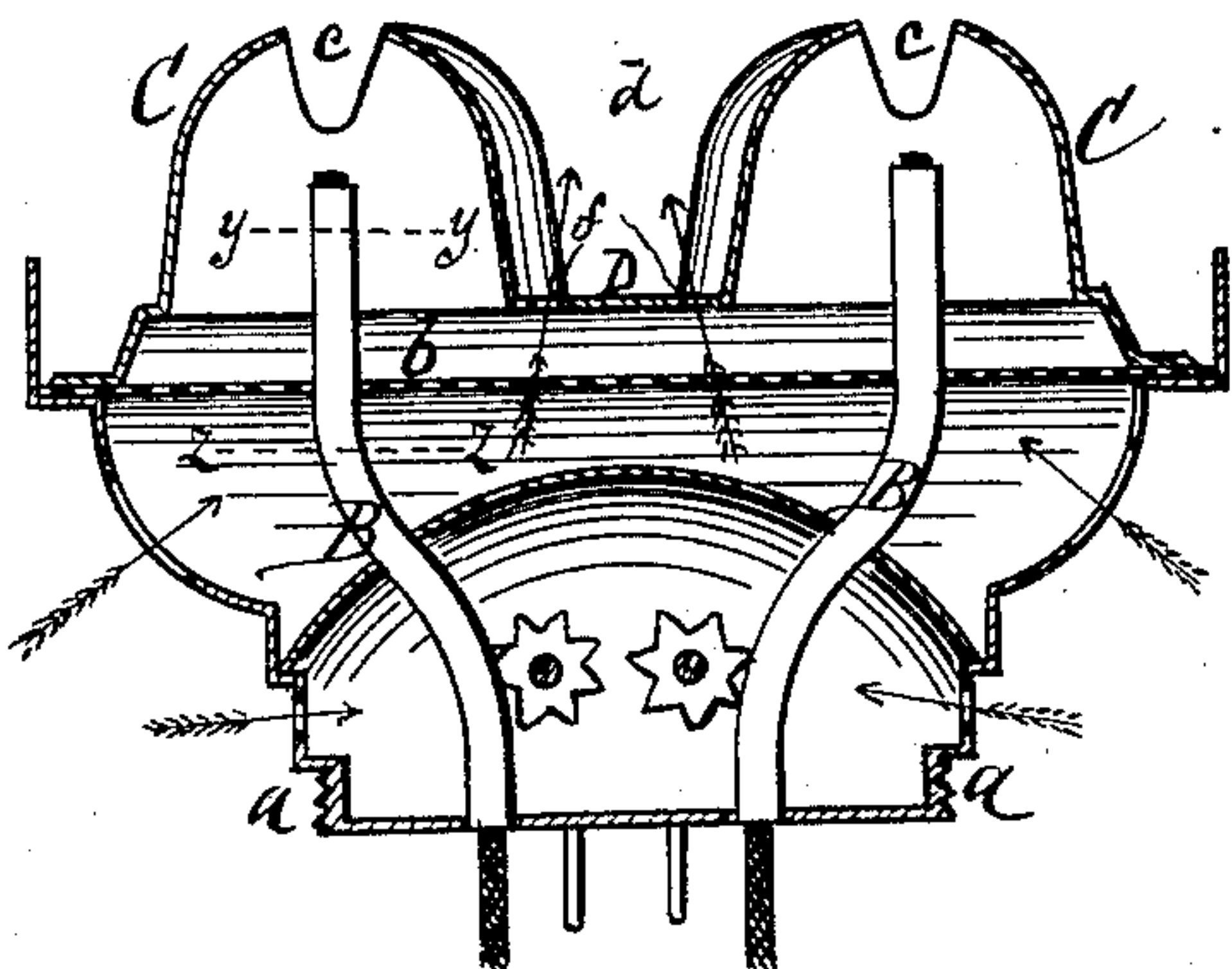
Fig. 4.



Fig. 3.



Fig. 2.



Attest.

E. N. Adams
Chas. H. Widener

Inventor.

H. E. Shaffer,
per R. F. Osgood,
Atty.

UNITED STATES PATENT OFFICE.

HENRY E. SHAFFER, OF ROCHESTER, NEW YORK.

LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 358,892, dated March 8, 1887.

Application filed March 12, 1886. Serial No. 194,973. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. SHAFFER, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Burners; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

My improvement relates to that class of lamp-burners in which two or more separate and independent wick-tubes and two or more separate cones are employed for the purpose of producing more light than a single flame can produce.

It also relates to that class of burners in which the wick-tubes are bent vertically, so as to enable their lower ends to come within the compass of the screw-collar of ordinary size that screws into the top of the lamp.

Burners of the general character above described are well known. In all burners of this kind with which I am acquainted the tops of the wick-tubes are made straight, and as the cones have to be located at some distance apart such straight-topped wick-tubes have to be made narrow, for the reason that they are located some distance from the center and toward the outer edge of the circular burner, and consequently the amount of straight wick-surface, in width, is comparatively small.

It is the object of my invention to increase the width of the wick-surface in this class of lamps by the employment of bent wick-tubes with their upper or top ends curved, and the use of independent curved cones that cover the wick-tubes, as hereinafter more fully described.

In the drawings, Figure 1 is a plan view of a burner showing my invention. Fig. 2 is a central vertical section in line *xx* of Fig. 1. Fig. 3 is a cross-section of one of the wick-tubes in line *yy* of Fig. 2. Fig. 4 is a similar section in line *zz* of Fig. 2.

A indicates the burner, which may be of any desired form, and provided with a screw-collar, *a*, that screws into the stationary collar of the lamp in the usual way.

My improvement is as follows:

B B are two or more wick-tubes, which in vertical length are bent, as shown, so that the upper ends will be spread apart as far as the

cones will allow and the lower ends will be brought toward each other, so as to come within the compass of the ordinary-sized screw-collar *a*. The upper ends of these wick-tubes, above the perforated plate *b*, stand in a vertical line, so as to come properly under the slots of the cones. These straight upper ends of the wick-tubes are curved in cross-section, as shown in Fig. 3, the curve being concentric, or nearly so, with the circular outline of the burner. That portion of the wick-tube that extends below the perforated plate *b* is preferably straight in cross-section, as shown in Fig. 4.

C C are two or more separate cones attached to or forming a part of the cone-plate D and covering the ends of the wick-tubes. These cones are also curved in outline, corresponding with the tops of the wick-tubes, and are provided with curved slots *cc*, to allow passage of the draft, as in other lamps. The outer sides of the cones come to the outer edges of the cone-plate, or nearly so, while the inner sides curve from each other and are at such a distance apart as to leave a hollow space, *d*, of such capacity as to form an air-chamber between the cones for feeding the blaze at that point where it is most difficult to supply air. *ff* are perforations through the cone-plate by which air is fed into the space between the cones.

By the construction above described the following advantages are secured: The wick-tubes are so far separated at the top that the lights come near the outer edge of the burner and throw the rays downward without obstruction by the sides of the burner. The curved form of the top of the wick-tubes enables them to be made of any desired width, which cannot be done if the tops are straight. Much greater wick-surface can therefore be obtained in a burner of given size. The curved form of the cones produces a hollow air-chamber between them at the point where there is the most heat and concentrates and holds the air and feeds it to the inner walls of the flames. By this construction, also, there is less danger of breaking or smoking the chimney, as the side, and not the edges of the flame, comes toward the chimney. It has been demonstrated by practice that it is only by the edges of the blaze coming too near the chimney that smoke at-

taches itself to the chimney, whereas the curved blaze may run up close to the glass and the chimney continue clean without the least smoke attaching itself thereto.

5 Having described my invention, I do not claim, broadly, two or more separate wicks and cones; neither do I claim, broadly, two or more wick-tubes curved in their vertical length; nor do I claim, broadly, two or more
10 wick-tubes with tops curved in cross-section.

What I claim as new is—

1. The combination, with the burner, of two or more wick-tubes bent in vertical direction and curved at their tops to follow the circle
15 of the burner, and two or more independent cones correspondingly curved and covering the wick-tubes, as and for the purpose specified.

2. The combination, with the burner, of two or more wick-tubes bent in vertical direction and curved at their tops, and two or more in- 20 dependent cones covering the wick-tubes, the cones being curved in reverse directions and forming a central air-space between them, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed
my name in the presence of two subscribing
witnesses. 25

HENRY E. SHAFFER.

Witnesses:

R. F. OSGOOD,
P. A. COSTICH.