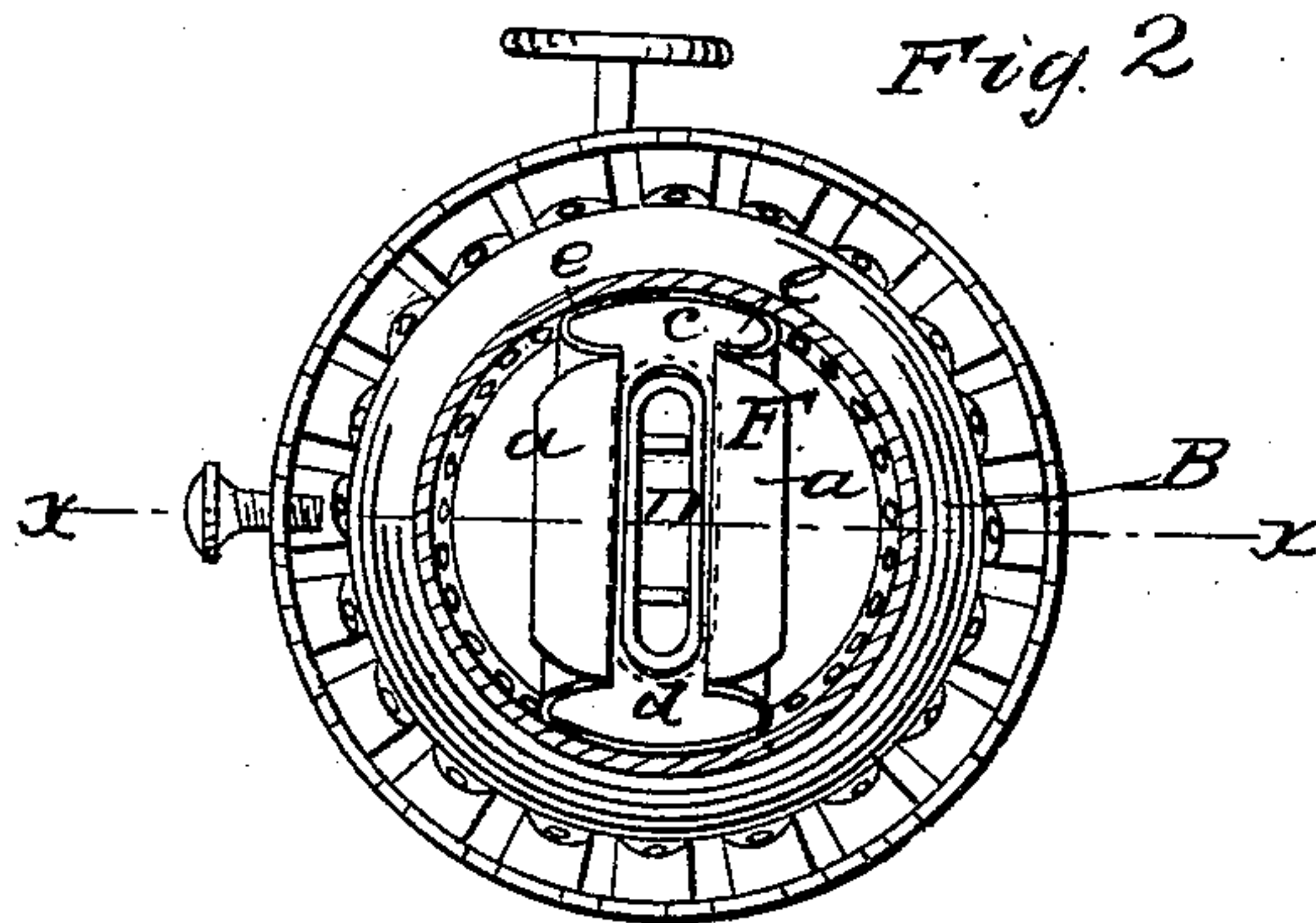
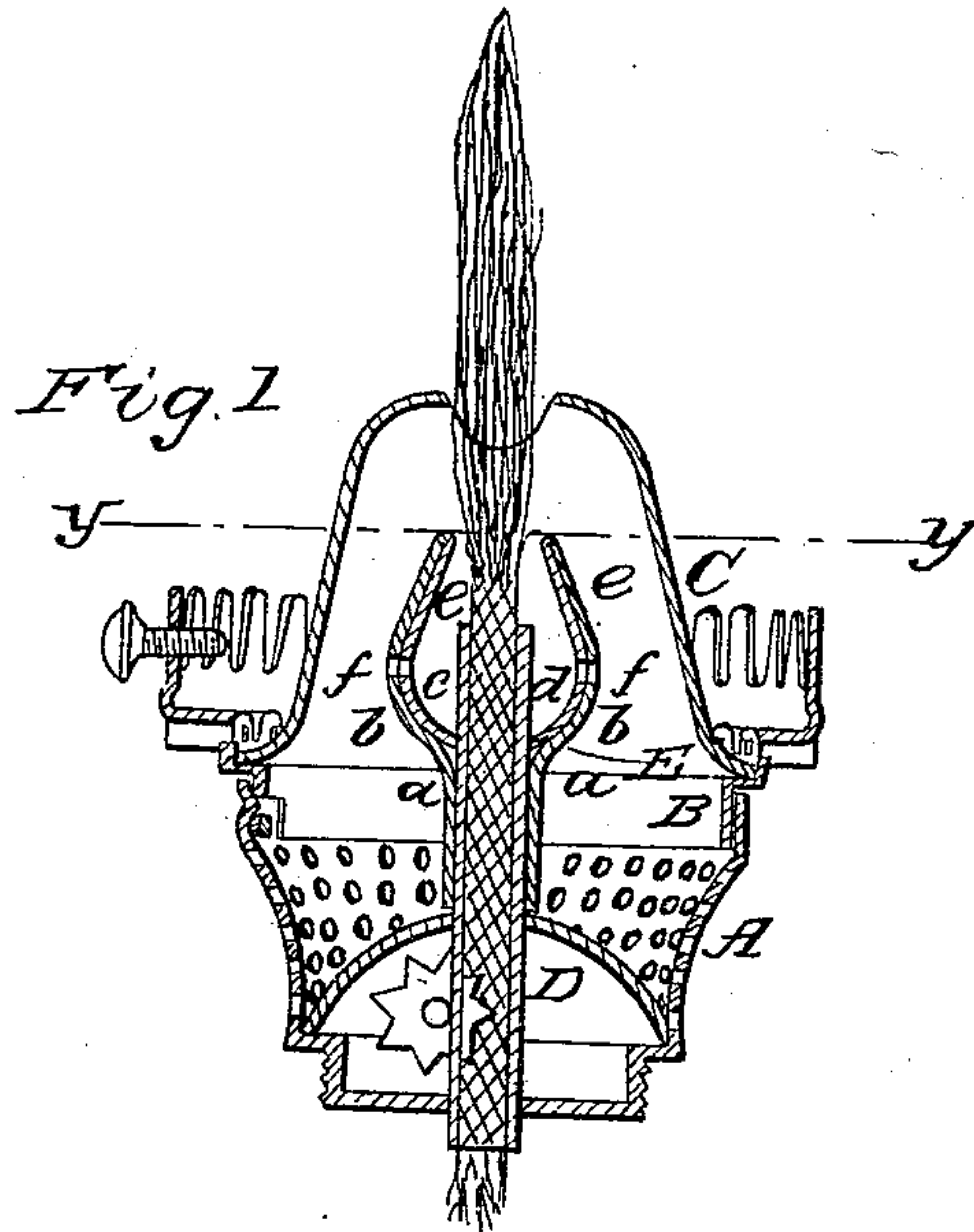


J. McHENRY.

Lamp Burner.

No. 39,413.

Patented Aug. 4, 1863.



witnesses  
James D. Lard  
Laurie Skim

Inventor  
John McHenry

# UNITED STATES PATENT OFFICE.

JOHN McHENRY, OF CINCINNATI, OHIO.

## IMPROVED LAMP-BURNER.

Specification forming part of Letters Patent No. 39,413, dated August 4, 1863.

*To all whom it may concern:*

Be it known that I, JOHN McHENRY, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Lamp-Burner; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical central section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a horizontal section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and improved lamp-burner for burning coal-oil, either with or without a draft-chimney; and it consists in the employment or use of a supplemental cap or flame-spreader, constructed, arranged, and applied to the wick tube in such a manner and in such relation with the cone or deflector as to produce a large and brilliant illuminating-flame, much larger, it is believed, than is produced by the ordinary coal-oil burners in use.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the lower part of the burner, which is screwed into the upper part of the lamp, as usual, and B is the upper part, which is fitted on the lower part, A, by any suitable fastening. The lower part, A, of the burner is perforated for the admission of air, and the upper part, B, is provided with a cone or deflector, C, and also with a flange to receive the lower part of the draft-chimney.

D is the wick-tube, which is of the ordinary flat kind, and is inserted and secured in the lower part, A, of the burner in the usual manner.

The above parts are all constructed and arranged in the ordinary way, and therefore do not require a minute description.

On the wick-tube D there is placed or fitted a supplemental cap, E, which serves as a flame-spreader. This supplemental cap is formed of two curved plates, *a a*, the lower ends of which are connected together and form a tube or socket to fit on the wick-tube. The upper parts of the plates *a a* are curved outward in semicircular form, as shown at *b*, and then extend obliquely in a straight line upward toward each other, as shown clearly in Fig. 1. Between these two plates *a a*

there is placed a plate, *c*, which is curved so as to form a chamber with a rounded bottom, *d*, and curved sides *e e*, the latter corresponding in shape to the upper parts of the plates *a a*. The upper edges of the curved plate *c* are secured to the upper ends of the plates *a a*, or the plates *a a* and *c* may all be formed of one piece of metal, bent or swaged in proper form by means of suitable dies. The upper edges of the plates *a a c* extend a trifle above the upper end of the wick-tube D, as shown in Fig. 1, and the curved plate *c* is somewhat longer than the width of the tube D, the latter passing up through a slot in the bottom of *c*. The space between the upper edges of the curved plate *c* is somewhat wider than the wick-tube D, and through each plate *a* and each side of the plate *c* there is made a hole, *f*, as shown in Fig. 1. A suitable space is allowed between the upper edges of the cap E and the top of the cone or deflector C to admit of the air impinging against the flame just above the cap E. The cap E (which consists principally of the curved plate *c*, so far as the effect produced is concerned, the plates *a a* being merely supports for *c*) causes the flame to spread, the vapor filling the chamber within the cap E, extending out to its ends and up to the top of the chamber, so that the flame at its base will be equal in width to the length of the plate *c*. A broad, high flame is consequently obtained, and the combustion is perfect, the cap E preventing the vapor escaping from the wick-tube unconsumed, as it holds it around the base of the flame and spreads it in a thin sheet at the upper edges or top of the plate *c*. The holes *f f* in the plates *a a* and plate *c* admit air within the cap E, so as to insure the combustion of the vapor at the top of *c*. The air mingling with the vapor in *c* cools it, and prevents its escape faster than it can be consumed.

The holes *f* are essential when a draft-chimney is employed. When a chimney is not used, they are not so important.

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

The supplemental cap E, constructed as described, and applied to the wick-tube D, within the cone or deflector C, in manner substantially as and for the purposes set forth.

Witnesses: JOHN McHENRY.

JAMES LAIRD,  
TIMOTHY SHINE.