

(No Model.)

J. C. MORRISON & R. SMITH.

OIL BURNER.

No. 338,862.

Patented Mar. 30, 1886.

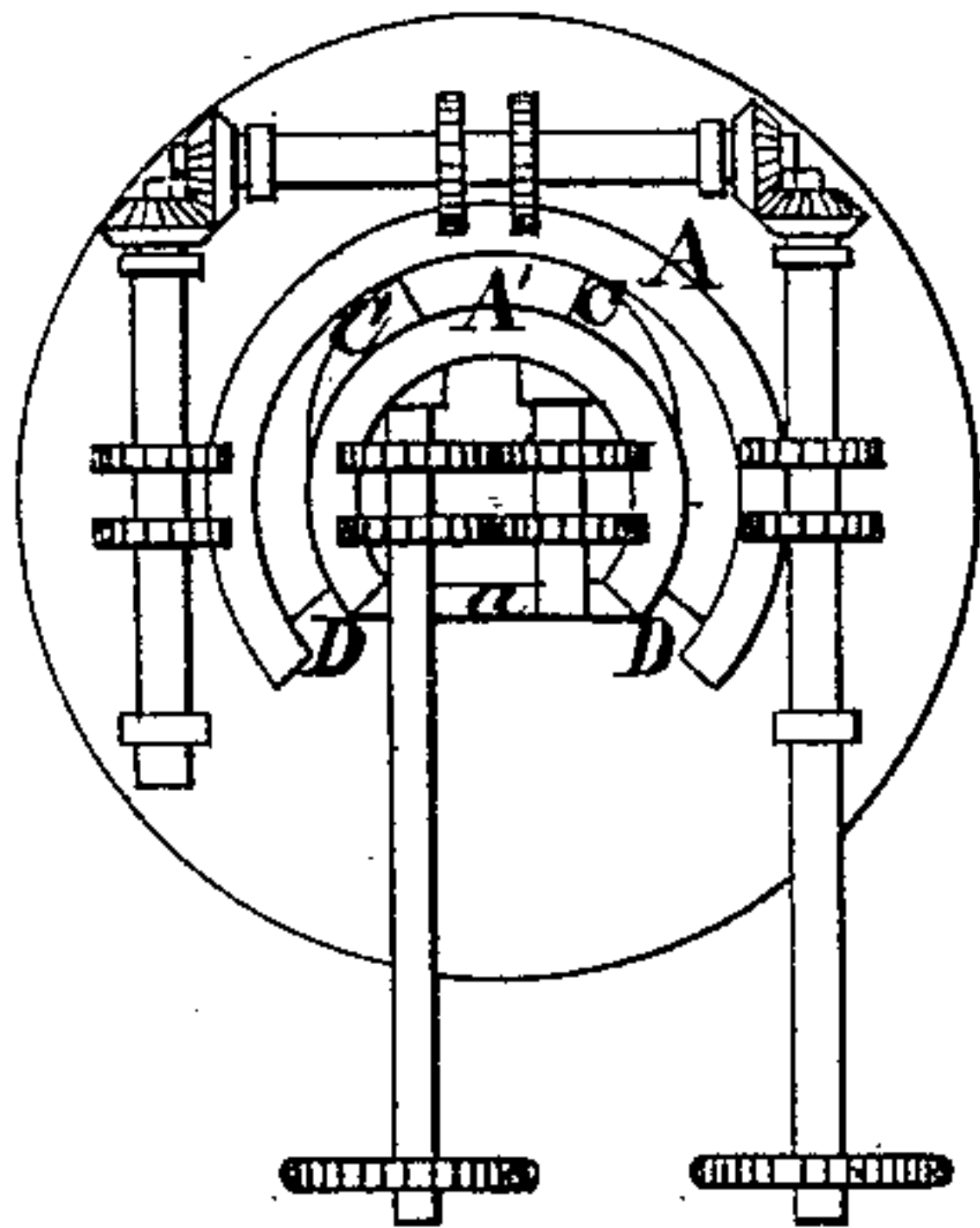


Fig: 5.

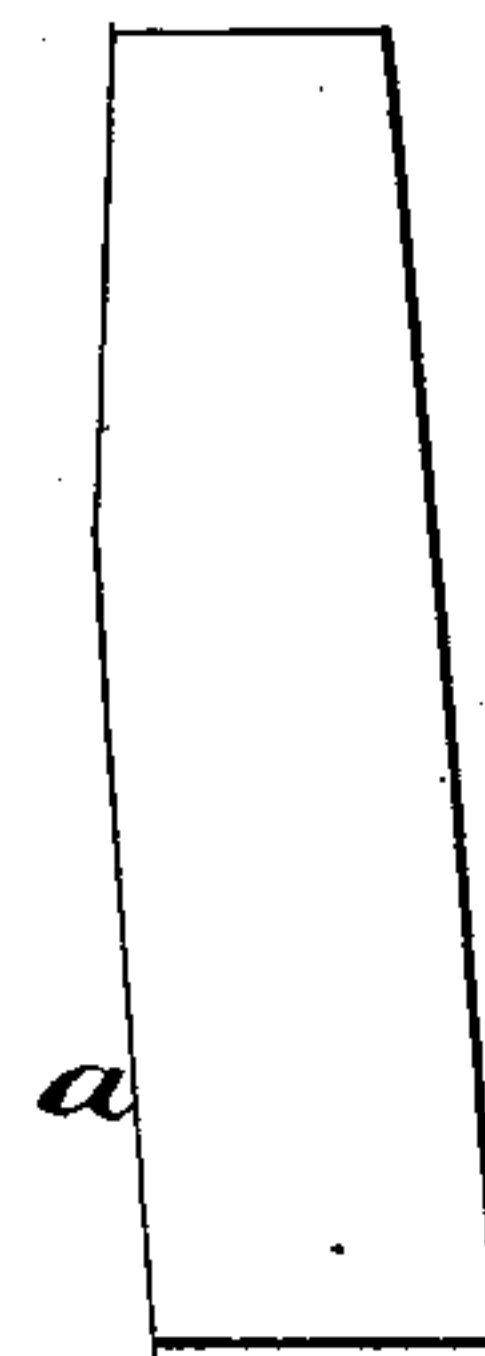


Fig: 1.

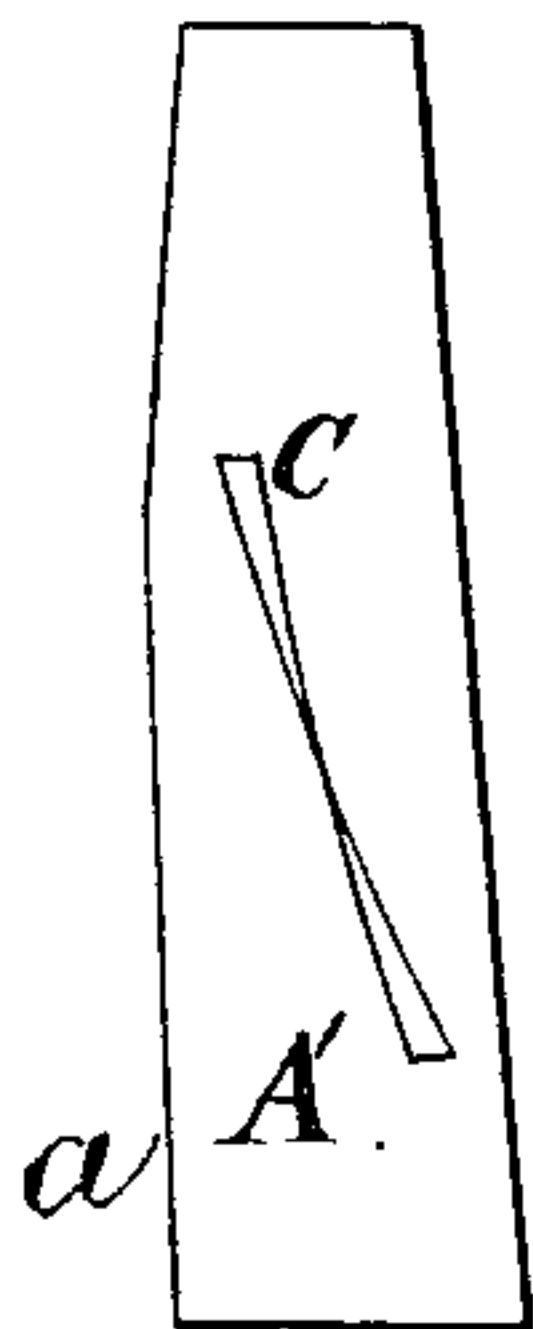


Fig: 7.



Fig: 8.

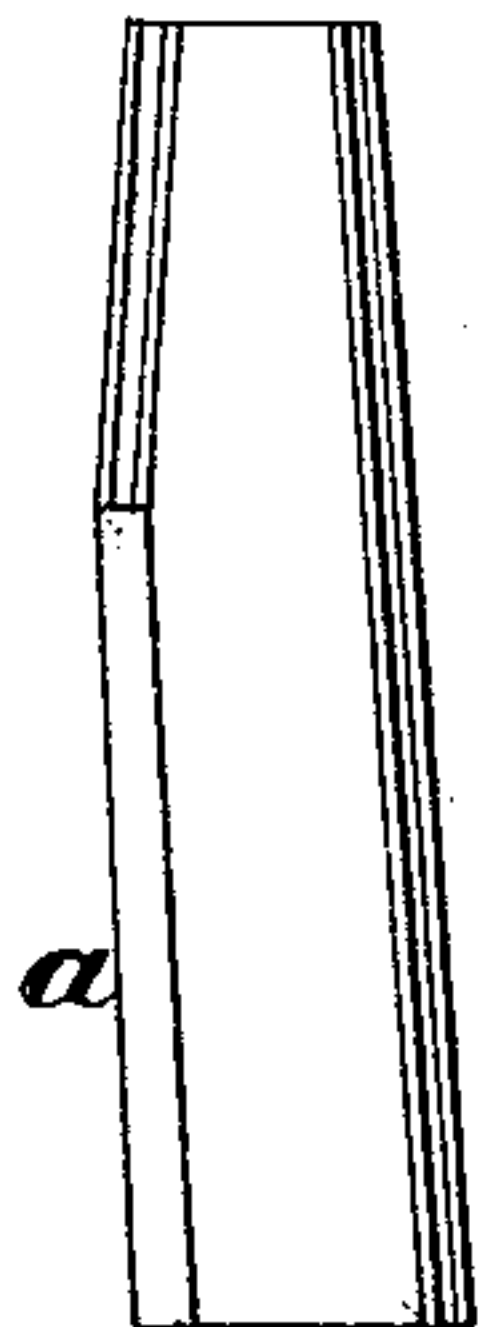


Fig: 2.

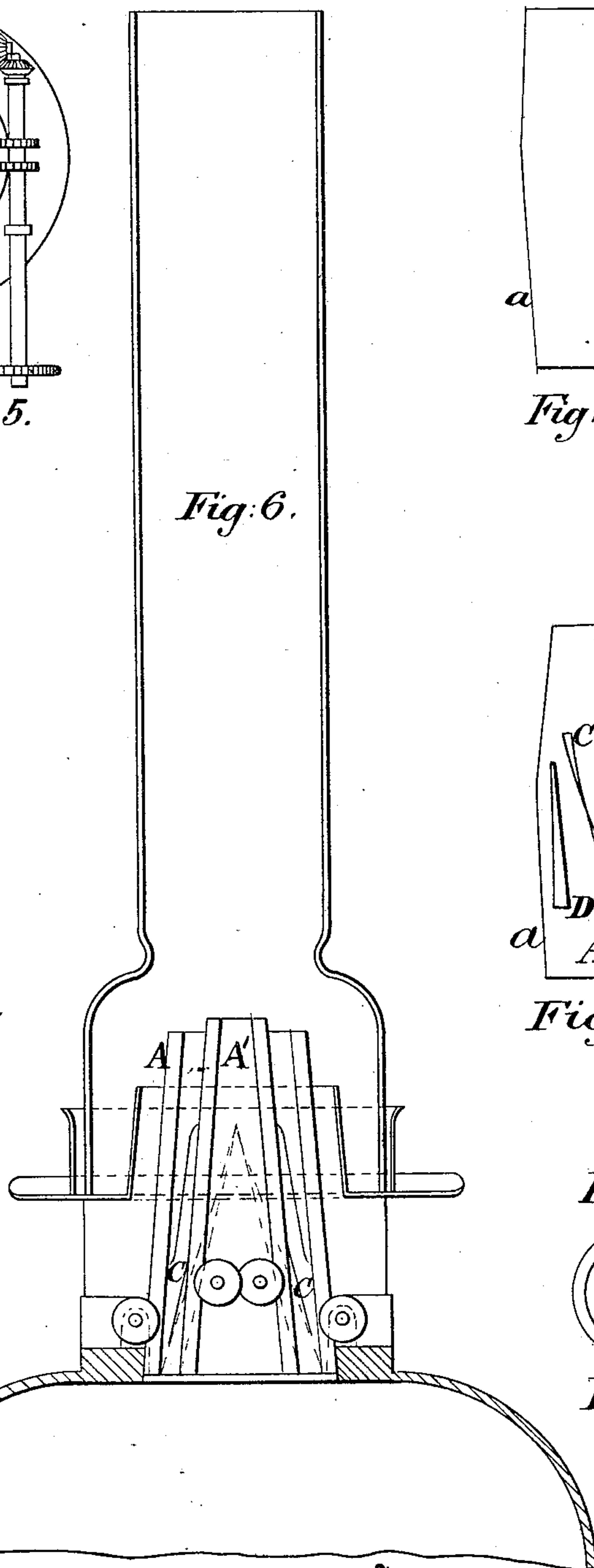


Fig: 6.

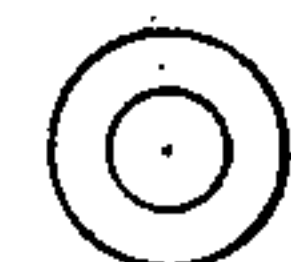


Fig: 3.

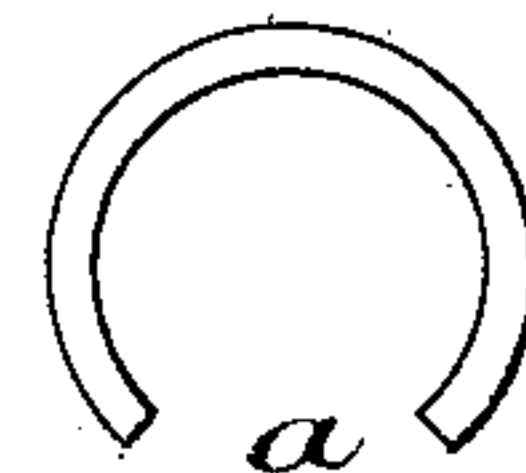


Fig: 4.

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UNITED STATES PATENT OFFICE.

JAMES CHARLES MORRISON, OF WEST HAM, COUNTY OF ESSEX, AND
ROBERT SMITH, OF BROMLEY, COUNTY OF MIDDLESEX, ENGLAND.

OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 338,862, dated March 30, 1886.

Application filed November 22, 1884. Serial No. 148,567. (No model.) Patented in England December 22, 1883, No. 5,836, and in France December 22, 1883, No. 159,345.

To all whom it may concern:

Be it known that we, JAMES CHARLES MORRISON, of West Ham, in the county of Essex, England, and ROBERT SMITH, of Bromley, in the county of Middlesex, England, have invented certain new and useful Improvements in Oil - Burners, (for which we have received Letters Patent in England, No. 5,836, dated December 22, 1883, and in France, No. 159,345, dated December 22, 1883,) of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in the construction of burners having two or more wick cases or holders of a circular shape, at the upper ends, and which are constructed from wick cases or holders made for containing flat wicks, the said wick cases or holders being gradually curved, so that while the upper part of each wick case or holder is caused to assume a circular shape there will be a conical opening between the lower part of the side edges for the admission of air.

The object of these improvements is principally to regulate and distribute the supply of air to the interior of the outer flame and to the inner flame or flames.

Each wick case or holder of the nature hereinbefore described has a conical opening between the lower part of the side edges for the admission of air; and for the purposes of this invention we employ a peculiar arrangement of division-plates within the air space or spaces between the wick cases or holders, consisting of two or more wick cases or holders of a circular shape, arranged concentrically, and constructed in the manner hereinbefore referred to. Two or more division-plates are arranged—that is to say, one, at least, on each side—at an angle inclining toward the top of the conical openings between the side edges of the wick cases or holders. The division-plates commence a short distance from the bottoms of the wick cases or holders and terminate before reaching the upper ends thereof, and they are so constructed as to extend at their lower ends across the air-space in which they are arranged between the two wick cases or holders, and to decrease in width toward their upper ends, at which point they are attached to the outer case

of the inner wick case or holder, or to the inner case of the outer wick case or holder, as may be desired. In some cases we arrange in front of each of the said inclined plates a division-plate in a more or less upright position. The upper ends of the inclined plates, which are in close proximity to the corresponding ends of the last-mentioned plates, are made to extend slightly beyond the latter.

Circular burners, constructed of two or more flat wick cases or holders, as hereinbefore referred to, usually have the mechanism for regulating the height of the wick covered by a case, which extends over a portion of the conical opening at the lower part of the burner. In the larger or compound burners it will be found that the partial closing of the said conical opening, by preventing a sufficient supply of air from entering the space or spaces between the wick-holders, is the cause of diminishing the intensity of the light obtained, and in order to obviate this difficulty it will be found advantageous to form a number of perforations in the said case; or, when desired, the said case may be constructed to terminate at each side of the conical opening. It is desirable in all cases that the conical openings between the side edges of the wick cases or holders should be in juxtaposition with each other. The lower part or parts of each air-space between the wick cases or holders, and also the bottom of the air-space in the center case or holder are closed or partially closed.

We will now proceed to refer to the accompanying drawings, from which the nature of our said invention will be more clearly understood.

The same letters of reference indicate like parts in all the figures.

Figures 1 and 2 are respectively side elevation and vertical section of a flat wick case or holder, gradually curved, so that the upper end assumes a circular shape, while a conical opening is left between the lower part of the side edges, as hereinbefore described. When desired, the upper portion of the side edges may be cut away, as shown in Fig. 2, and the wick case or holder joined at that point. Figs. 3 and 4 are respectively top view and plan of a wick case or holder of a like construction. Fig. 5 is a cross-section of a burner composed

of two similar wick-cases of a circular shape. Fig. 6 is a transverse section of the same. Fig. 7 is a side view of the inner wick case or holder, showing the position of one of the inclined division-plates; and Fig. 8 is a similar view of the inner wick case or holder, with a division-plate, in a more or less upright position, arranged in front of the inclined division-plates.

A A' are the wick cases or holders, and *a* the conical openings between the side edges thereof.

C C are inclined division-plates, of which two or more may be used, and D D are division-plates, which are in some cases arranged, in a more or less upright position, in front of the plates C C. In some cases a plate is arranged a short distance in front of the lower part of the conical opening in the outside wick-case or holder to modify the entrance of air to the air-spaces.

What we claim is—

1. The combination, with a lamp-burner

having two or more wick tubes or cases arranged in substantially parallel positions and provided with openings admitting air within said tubes, of a series of inclined division-plates arranged within the space between said tubes, substantially as set forth.

2. The combination, with a lamp-burner constructed with two or more wick-tubes, substantially circular in form, and having an air-space between the same and openings to said space and to the center of the burner, of division-plates C C, and division-plates D D, arranged upon the tubes on said space and openings, substantially as described.

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