

No. 668,725.

F. T. WILLIAMS.  
LAMP BURNER.

Patented Feb. 26, 1901.

(Application filed Dec. 18, 1900.)

(No Model.)

Fig. 1.

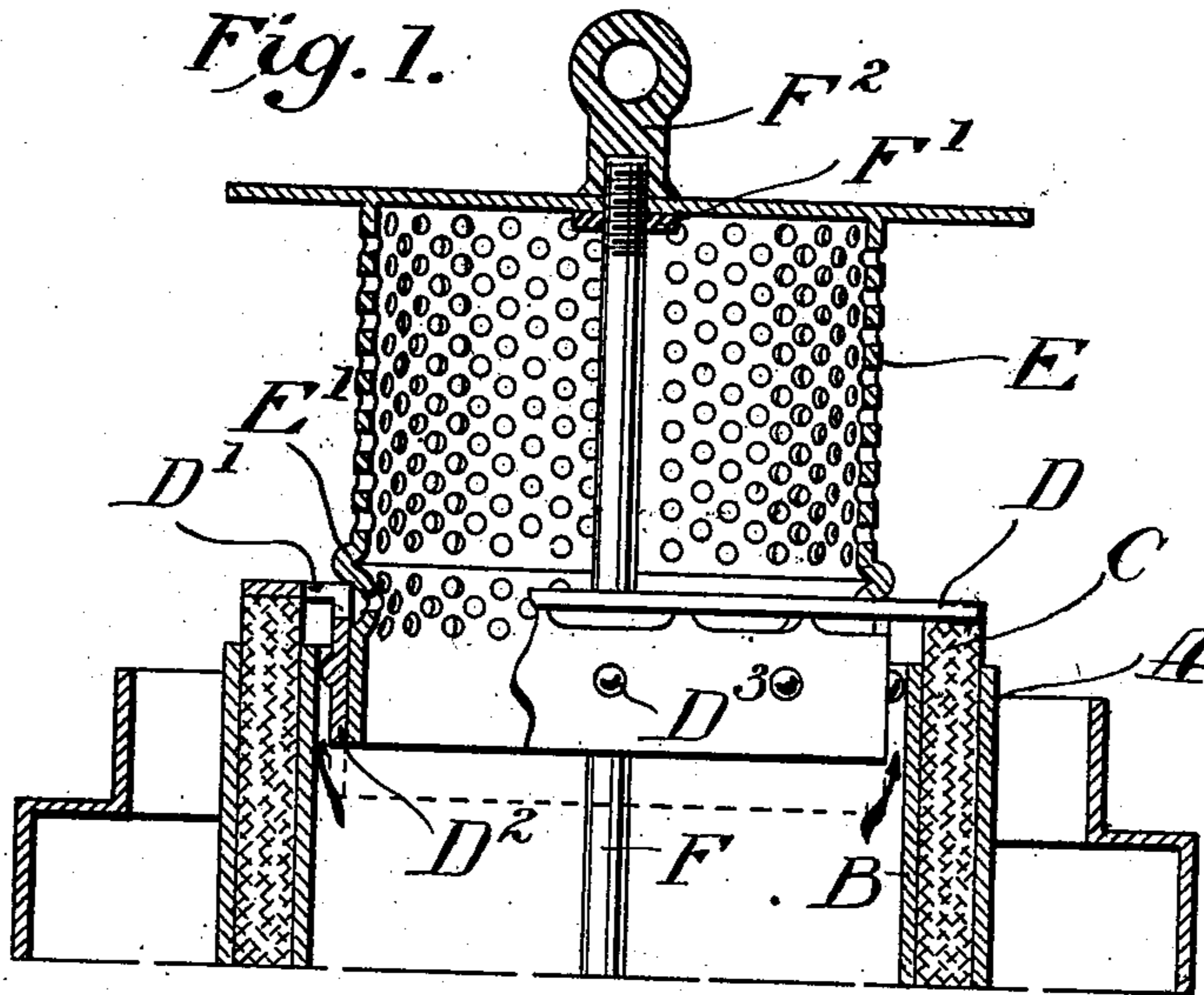


Fig. 2.

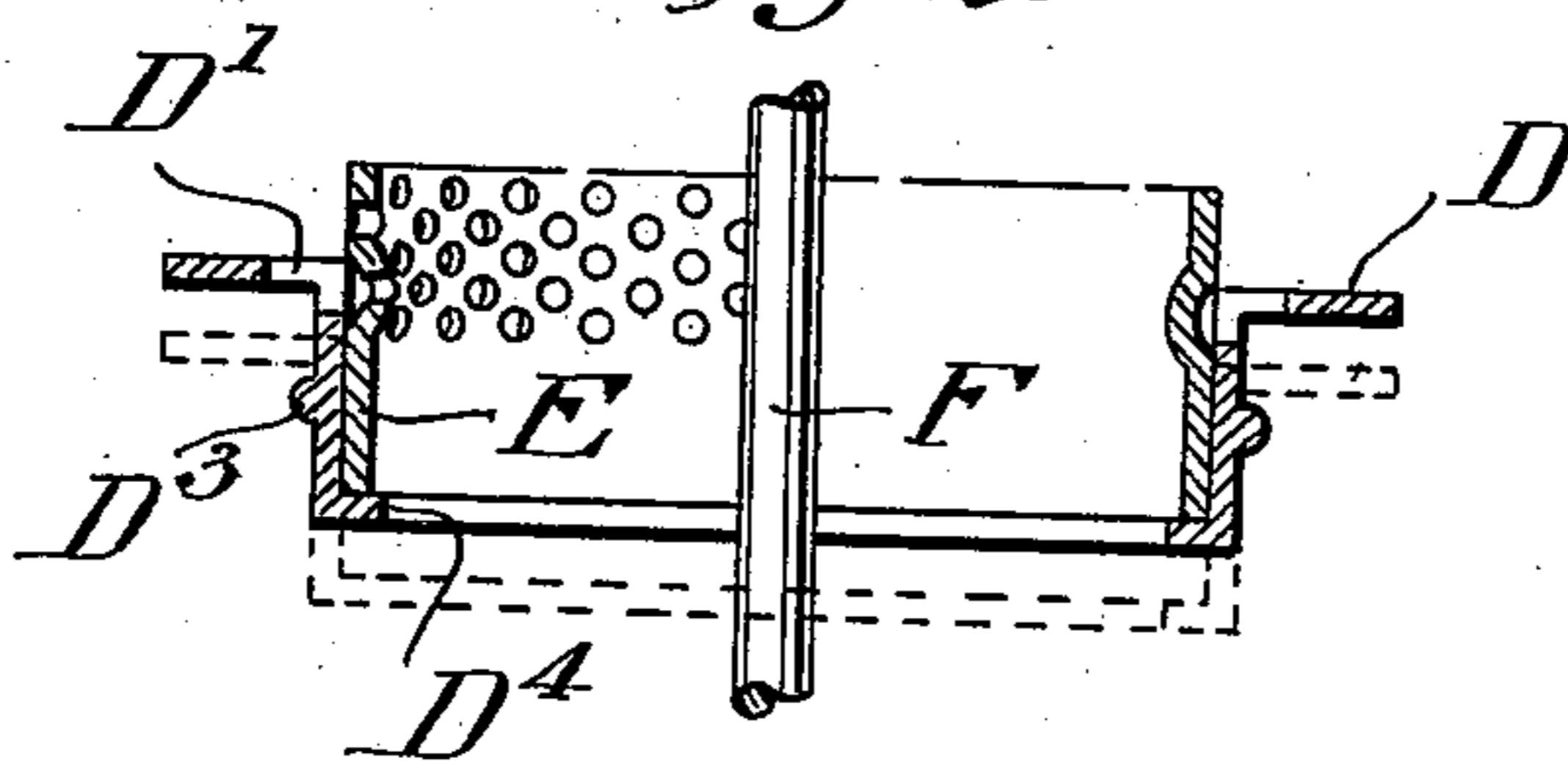
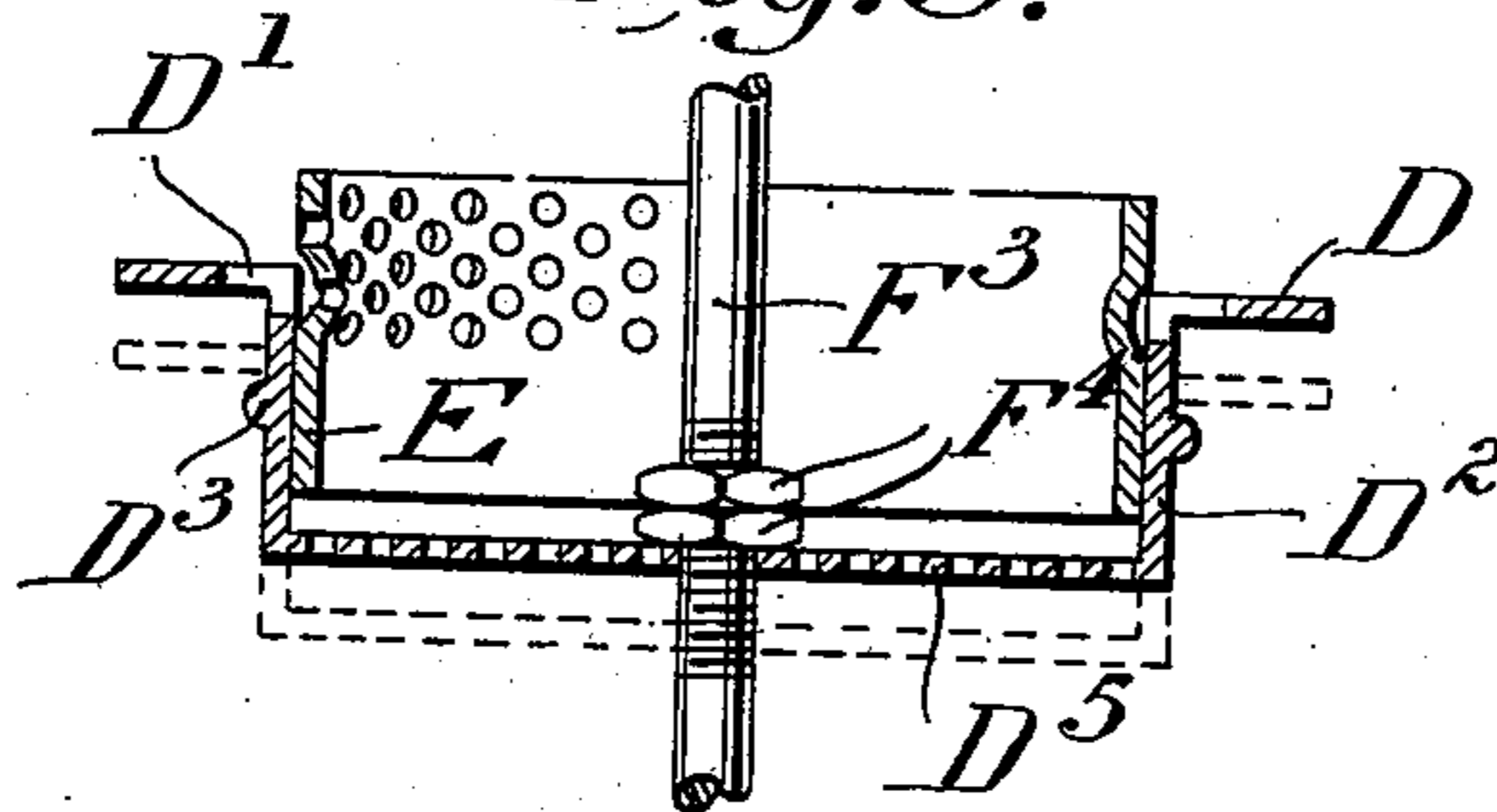


Fig. 3.



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## LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 668,725, dated February 26, 1901.

Application filed December 18, 1900. Serial No. 40,281. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK THEODORE WILLIAMS, a citizen of the United States, residing at Meriden, New Haven county, Connecticut, have invented certain new and useful Improvements in Lamp-Burners, of which the following is a full, clear, and exact description.

My invention relates to oil-lamps of the central-draft type, and particularly to the burner construction thereof.

The chief object of my invention is to prevent unsteadiness or flickering of the flame. This I accomplish by means which cause the products of combustion to be mixed uniformly in the most effective proportions, so that when lighted a flame of steady character is produced of practically uniform height around the burner. Incidentally the construction may be such that the wick cannot be raised to an unnecessary or dangerous height. Another feature of value is that the means employed may be used as an extinguishing device.

In the drawings, Figure 1 is a vertical section and elevation of a lamp-burner of my improved construction. Fig. 2 is a vertical section of a modification. Fig. 3 is a vertical section of another modification.

In the drawings, A is an outer wick-tube. B is an inner wick-tube. C is a wick movable between said tubes, which wick may be raised or lowered by any well-known wick-lift device. (Not shown.)

D is a flange or guard resting upon the top or upper end of the wick C, which flange or guard is perforated or slotted adjacent to the inner side of the wick, as indicated at D'. These perforations are provided to afford a gas passage or space adjacent the inner side of the wick C.

D<sup>2</sup> is a wall depending from the flange D. This wall D<sup>2</sup> is of such a size as to leave an air-passage between its exterior surface and the interior surface of the wick-tube B, so that air flowing through the wick-tube B will pass through said passage, as indicated by the arrows, Fig. 1, and supply air to the root of the flame at the inner side of the wick when the same is raised, as shown. Nibs or bosses D<sup>3</sup> may be provided whereby the cy-

lindrical wall D<sup>2</sup> is centered with respect to the tube B, so that the aforesaid air space or passage will be of substantially uniform size entirely around said wall D<sup>2</sup>. Obviously other centering means might be provided.

E is a stationary spreader perforated to form air-passages. The spreader E may have a suitable support—for example, the center rod F—and it is preferably adjustable thereon, for example, by means of the nuts F' F<sup>2</sup>. The spreader E projects downwardly into the wall D<sup>2</sup> of the guard D; but the size of the lower end of the spreader is such that the guard D is free to move up or down independently thereof. E' is a bead or projection formed in the side of the spreader E, whereby the upward excursion of the guard D may be limited. The point of elevation of these parts may be varied when the spreader is adjustable by raising or lowering the latter on the center rod F.

In Fig. 2 I have shown a modification in which instead of providing a bead or projection E' on the spreader to form a stop to limit the upward excursion of the guard I have formed a ledge D<sup>4</sup> at the lower edge of the wall D<sup>2</sup>, which ledge projects inwardly, so that when the wick is raised, and thereby the guard—say from the position indicated in dotted lines to the position indicated in solid lines, Fig. 2—the ledge D<sup>4</sup> engages with the lower edge of the spreader E, which, being stationary, acts as a stop.

In Fig. 3 I have shown another means to limit the upward excursion of the flange D, and thereby the wick, said means comprising a bridge or skeleton bottom D<sup>5</sup> across the bottom of the wall D<sup>2</sup>, which bottom D<sup>5</sup> has a central opening through which the center post F<sup>3</sup> projects. F<sup>4</sup> is a nut carried by the post F<sup>3</sup>, said nut being larger than the opening in the bottom D<sup>5</sup> through which said post passes. Consequently when the wick is raised, say, from the position indicated in dotted lines to the position indicated in solid lines, Fig. 3, it is prevented from being elevated beyond the point where the bottom D<sup>5</sup> engages with the nut or stop F<sup>4</sup>.

What I claim is—

1. In a device of the character described, in combination, an inner and an outer wick-

tube forming between the same a wick-passage, a guard adapted to substantially cover said wick-passage, perforations in said guard adjacent the inner edge thereof, a wall depending from said guard and projecting downwardly into the central wick-tube but spaced apart therefrom to afford an air-passage to the inner side of the wick, a stationary perforated spreader projecting downwardly and loosely into said depending wall.

2. In a device of the character described, in combination, an inner and an outer wick-tube forming between the same a wick-passage, a guard adapted to substantially cover said wick-passage, perforations in said guard adjacent the inner edge thereof, a wall depending from said guard and projecting downwardly into the central wick-tube but spaced apart therefrom to afford an air-passage to the inner side of the wick, means to center said wall with respect to the inner tube, a stationary perforated spreader projecting downwardly and loosely into said depending wall.

3. In a device of the character described, in combination, an inner and an outer wick-tube forming between the same a wick-passage, a guard adapted to substantially cover said wick-passage, perforations in said guard adjacent the inner edge thereof, a wall de-

pending from said guard and projecting downwardly into the central wick-tube but spaced apart therefrom to afford an air-passage to the inner side of the wick, means carried by said wall to center said wall with respect to the inner tube, a stationary perforated spreader projecting downwardly and loosely into said depending wall.

4. In a device of the character described, in combination, an inner and an outer wick-tube forming between the same a wick-passage, a guard adapted to substantially cover said wick-passage, perforations in said guard adjacent the inner edge thereof, a wall depending from said guard and projecting downwardly into the central wick-tube but spaced apart therefrom to afford an air-passage to the inner side of the wick, a stationary perforated spreader projecting downwardly and loosely into said depending wall, and means to limit the upward excursion of said wick-guard.

Signed at Meriden, Connecticut, this 15th day of December, 1900.

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Witnesses:

I. B. MILLER,  
E. A. VANCE.