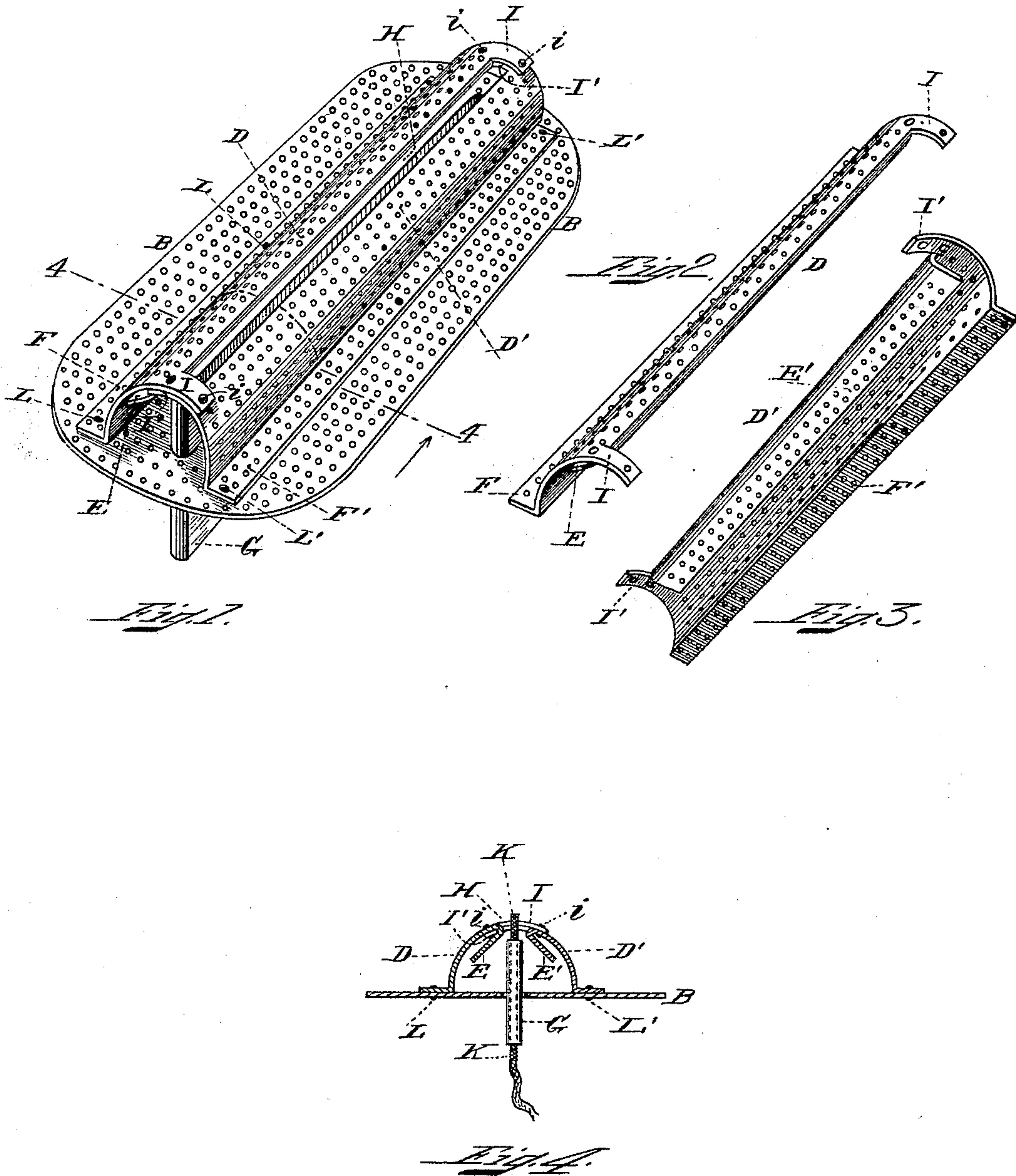


(No Model.)

C. TRENCH.  
OIL BURNER.

No. 497,842.

Patented May 23, 1893.



Witnesses:  
E. Smith  
A. P. Campbell

Inventor:  
Charles Trench



# UNITED STATES PATENT OFFICE

CHARLES TRENCH, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE TRENCH LAMP COMPANY, OF SAME PLACE.

## OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 497,842, dated May 23, 1893.

Application filed January 16, 1892. Serial No. 418,303. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES TRENCH, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Oil-Burners, which will, in connection with the accompanying drawings, be hereinafter described, and pointed out in the appended claims.

My invention relates to improvements in an oil burner, for which Letters Patent of the United States were granted me December 31, 1889, and numbered 418,427. In the invention described in the specification of said patent I employ a perforated metallic platform, which I term an insulator, elevated at a slight distance above the top of the wick-tube, and arranged to intervene between the tube and the flame. The perforated platform serves instead of the top of the wick-tube as the seat of the flame and acts as an insulator in cutting off the flame from the exposed wick and preventing the heat of combustion from descending to the wick-tube. In oil burners in which extremely wide wicks are required—such as those used in oil stoves—the perforated platform or insulator referred to has not sufficient stiffness and stability to resist the action of the excessive heat to which it is exposed, especially at those parts along the edges of the wick slot. Besides this defect there is a tendency in the top of the wick in its passage upward to impinge on the edge of the slot, thereby often rendering the means of raising and lowering the wick inoperative.

The purpose of my present invention is to obviate these defects by improvements in the form and construction of the perforated platform or insulator, which are the novel features of my invention.

In my present improvements, which are especially applicable to oil stove burners, in lieu of the perforated platform or insulator referred to, I prefer a foraminated insulator made in the form of an arch and constructed in two separate parts, which enables me to impart to the entire device the desired stiffness and stability.

In the accompanying drawings Figure 1 represents a perspective view of that portion of an oil stove burner which embodies my improvements. Figs. 2 and 3 are perspective

views of two similar and detached portions of my invention, Fig. 2 being a perspective of the upper side, and Fig. 3 a perspective view of the under side of the same. Fig. 4 is a transverse section on line 4 Fig. 1 showing the peculiar form of the device in relation to the wick and wick-tube of a common oil stove burner.

In Figs. 1, 2, 3, and 4 D D' represent the device which I term an insulator, made of perforated sheet brass or iron and firmly secured to a foraminated plate or diaphragm B of common form.

E E' are oblique flanges which bent downward serve to strengthen by reinforcing the device along the wick-slot H, and also serve as guides to facilitate the passage of the wick K upward through the wick-slot H, as clearly shown in Fig. 4.

F F' are horizontal flanges which strengthen the base of the insulator D D' and also strengthen the foraminated plate B to which said flanges are firmly secured by rivets L L'. Upon each of the separate parts D D' are projections I I' as shown in Figs. 2 and 3. The projections on one of these parts are lapped over and fastened by rivets i, i' to the projections I, I' of the corresponding part, thereby forming the reinforced slot H for the passage of the wick K.

A principal feature in my invention is the manner of constructing the insulator D D' in two similar and separate parts as shown in Figs. 2 and 3. By this method I am enabled, at a comparatively small cost, to provide flanges E E' of sufficient width to amply stiffen the longitudinal edges of the wick-slot H, and also to render the same flanges E E' serviceable as guides to facilitate the passage of the top of the wick K through the slot H, as clearly shown in Fig. 4.

Another advantage derived from constructing the insulator D D' in two parts is that the projections I I' of one part being lapped over the projections of the corresponding part, serve to strengthen the device by a double thickness of metal at each end of the slot H, where there is much need of strength and stability.

I am aware that foraminated cones and other curved and perforated devices have been em-



employed before in relation to burners for lamps and oil stoves. My invention is essentially different from any of these, and I make no claim to anything shown or described therein.

5 What I claim is—

1. In a two-part foraminous cone for oil burners provided with end projections adapted to unite said parts, the wick slot H, provided with longitudinal flanges forming an  
10 integral part of each half of said cone to reinforce the said slot and prevent recurvation of the cone after assemblage as described.

2. In the foraminated insulator D D' the combination of the part D with the part D'  
15 each provided with projections I I' and riv-

eted firmly together, substantially as and for the purpose specified.

3. In an oil burner, the herein described cone parts separably constructed, each of said parts provided with projections I, I', and reinforcing oblique flanges E and E', the horizontal base flanges F, and F', thereof; adapted to support said cones upon the diaphragm B with which it is arranged constructed and combined to operate, substantially as and for  
25 the purpose set forth.

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Witnesses:

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