(Model.)

C. F. THUMM.

ATTACHMENT FOR COAL OIL LAMP BURNERS.

No. 245,891. Patented Aug. 16, 1881.

Fig. 1.

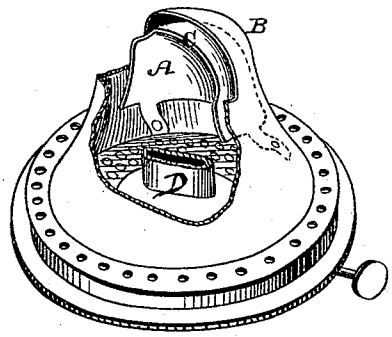


Fig. 2.

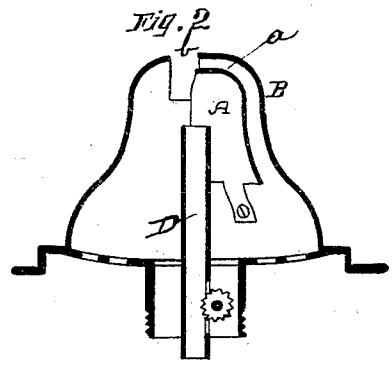


Fig. 3.

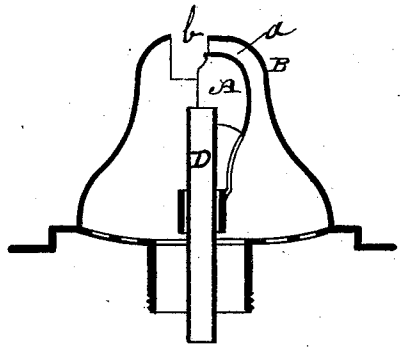


Fig. 5.

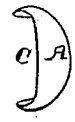
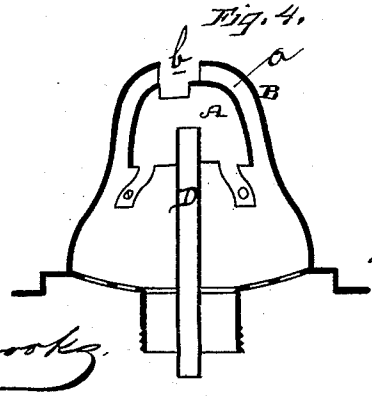


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES F. THUMM, OF SAN FRANCISCO, CALIFORNIA.

ATTACHMENTS FOR COAL-OIL-LAMP BURNERS.

SPECIFICATION forming part of Letters Patent No. 245,891, dated August 16, 1881.

Application filed April 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. THUMM, of the city and county of San Francisco, State of California, have invented an Attachment for Coal-Oil-Lamp Burners; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to lamp-burners which are provided with a deflecting device located wholly or partially in the passage of the flame.

The object of my invention is to produce a more perfect combustion of the oil from the wick, and thereby consume the smoke, so that a bright clean light emanates from the burner.

My invention consists in a deflecting-plate located within the cone of the lamp and projecting on one side of the wick-tube slightly beyond the edge of the opening for the flame, and approximately closer to the flame-opening than to the end of the wick-tube.

Referring to the accompanying drawings, making part of this specification, Figure 1 is a perspective view of the burner, a portion of the cone being cut away to show the interior arrangement. Fig. 2 is a vertical sectional view. Figs. 3 and 4 are modifications. Fig. 5 is a plan view of the deflector.

Heretofore deflectors have been placed in the line of the flame in hydrocarbon burners, both above and within the cone. Those above the cone have simply projected into the edge of one side of the flame. Those arranged within the cone have projected into the line of the flame on both sides of the wick-tube.

I have discovered that the deflectors above the cone do not so materially aid the combustion as to entirely prevent smoking, and that those below the cone and within it, when projected into the line of the flame on both sides of the wick-tube, are, when heavy oils are used, a positive detriment to the combustion.

The disadvantages named are overcome by my invention, and even in the use of heavy petroleum-oils produced on the Pacific slope of the United States the smoke is all consumed.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, B is the lamp-cone, made as ordinarily desired, and D is the wick-tube. Within the cone is secured a deflecting-plate, A, which in the drawings conforms generally to the conformation of the top of the cone, and is so arranged that an air passage or space, *a*, is between the said deflecting-plate and cone. The edge of the deflecting-plate projects on one side beyond the vertical line of the edge of the flame-opening *b*. As the flame passes out of the cone one side of it impinges against the edge of plate A and the flame is broken or spread, and at the same time the air-current from passage *a* is mingled with it and a higher combustion ensues, which consumes all the smoke and gases. The air to support the combustion at the wick passes beneath the deflecting-plate to the end of the wick-tube.

In Fig. 3 is shown a modification wherein the deflecting-plate is secured by means of a collar surrounding the wick-tube. This collar may be made movable and adjustable, if desired.

In Fig. 4 is shown a modification wherein the deflecting-plate surrounds the wick-tube, but projects beyond the edge of the flame-opening only on one side.

I have by actual experiment found that the burner constructed precisely as I have described it will substantially eradicate any smoke or smells from a lamp burning a hydrocarbon oil, be the oil a light or heavy one.

I am aware that heretofore lamps have been made wherein deflecting-plates have been used above dual burners, the edges of the plates projecting into one side of the flame of each burner, the effect of which is to throw the two flames together.

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

The deflecting-plate A, arranged, as described, within the cone B, so as to provide the air-passage *a*, and having its edge *c* projecting beyond one edge of the flame-opening *b*, and into one side of the path of the flame, as and for the purpose set forth.

In witness whereof I have hereunto set my hand.

CHARLES F. THUMM.

Witnesses:

S. H. NOURSE,

FRANK A. BROOKS.