L. FISCHER.

Vapor Burner.

No. 88,287. Patented March 30, 1869.

Fig. 1

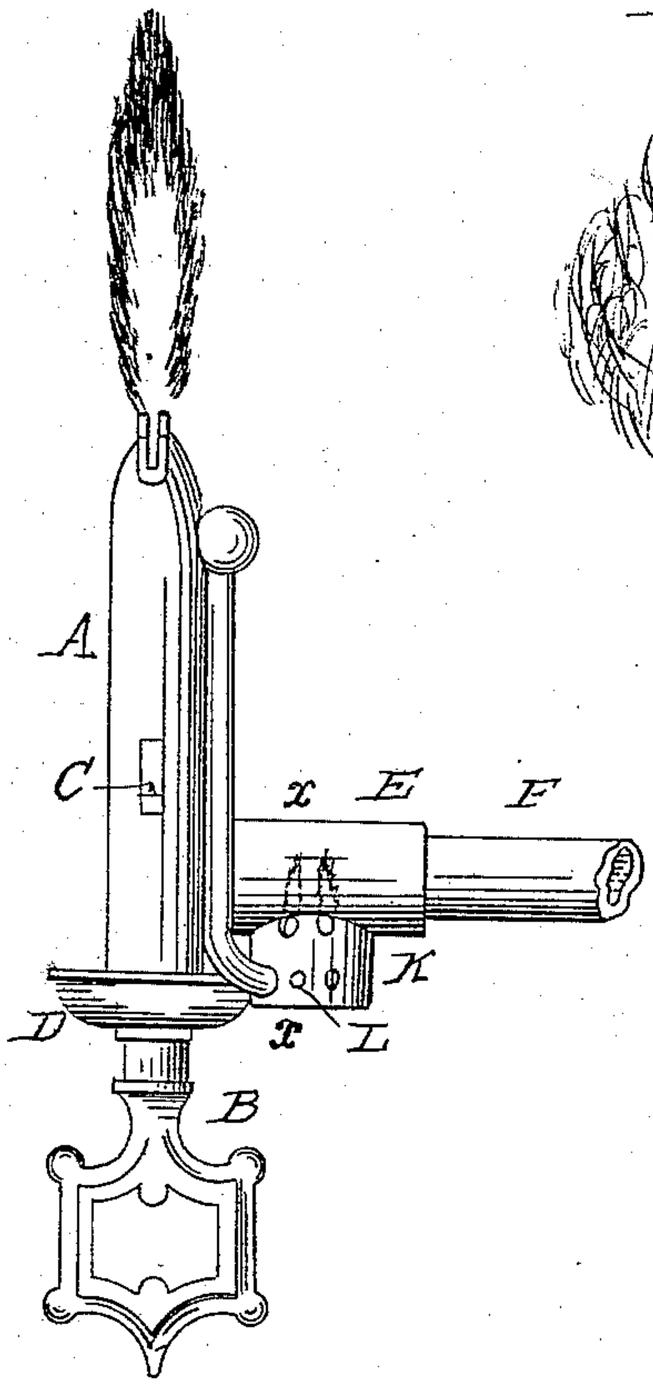

Fig. 3

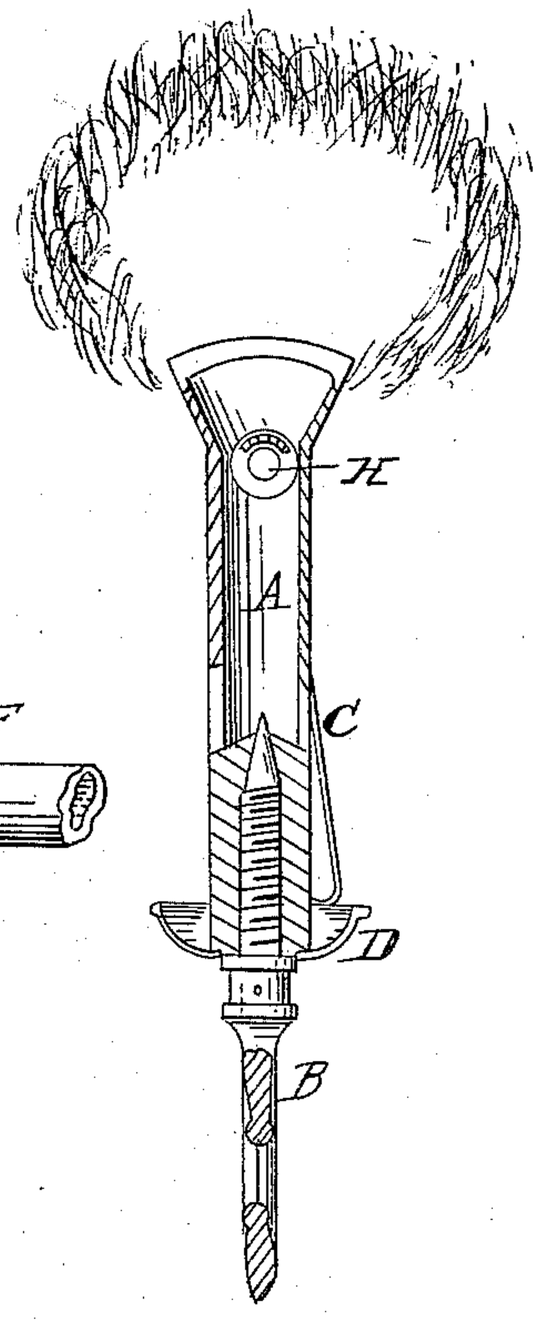

Fig. 2

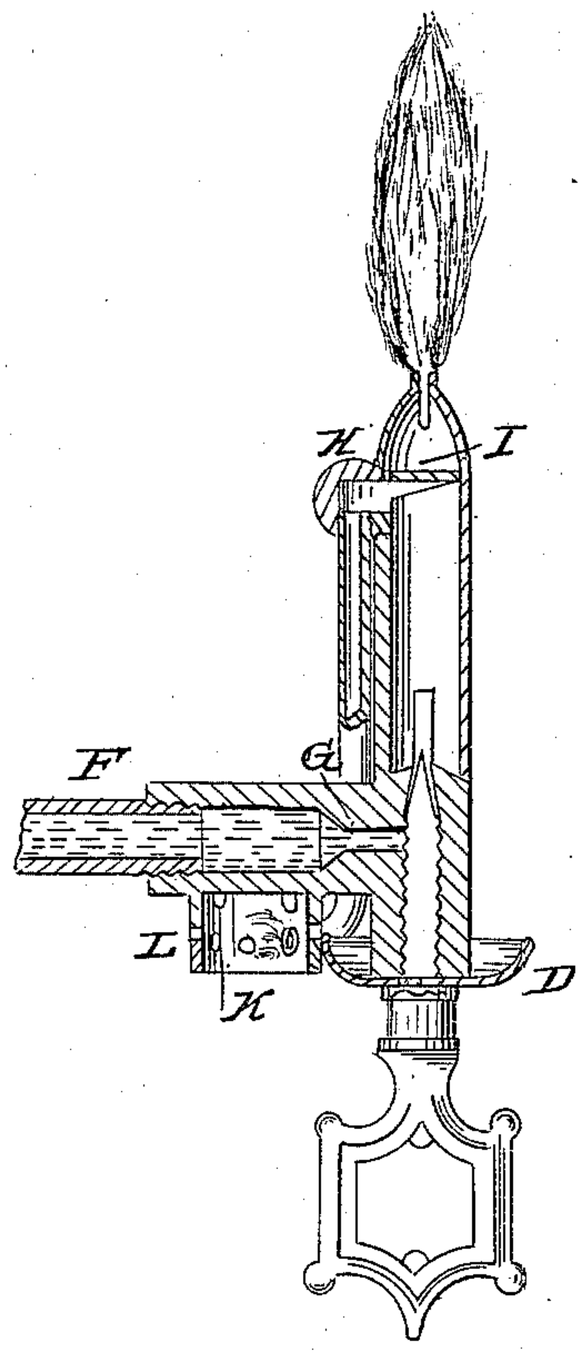

Fig. 4

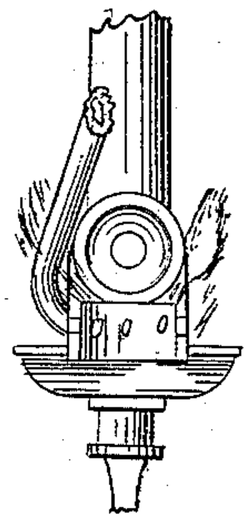

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

LOUIS FISCHER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. **88,287**, dated March 30, 1869.

To all whom it may concern:

Be it known that I, LOUIS FISCHER, of the city of Brooklyn, in the county of Kings and State of New York, have made certain new and useful Improvements in Gas-Generating Burners; 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 part of this specification, in which—

Figure 1 represents a side elevation of my improved burner. Fig. 2 is a longitudinal vertical section of the same; Fig. 3, a vertical central section through the burner-tube of the same. Fig. 4 is a cross-section of the same, the plane of section being taken in the line *x x*, Fig. 1. Fig. 5 is a detached view, in perspective, of the shield I and passage H of the same.

This invention relates to the gas-burners which are adapted to generate the gas direct from oil as it is consumed by the burner.

With the many attempts made heretofore in these burners, the leading result of producing the actual equivalent—large and brilliant flame—as from the ordinary non-generating gas-burners, has never been obtained to satisfaction.

In most of the attempts heretofore made the result failed, either on account of not properly evaporating or not generating and supplying sufficient gas for the required consumption of such flame, or on account of employing means for generating, obstructing the light objectionably.

My invention consists in the peculiar construction and arrangement of parts for passing a small current of gas from the upper part of the burner down under the generating-chamber, and heating thereby the generating-chamber effectually.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

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

A represents the usual burner-tube, provided with the slotted tip end for the gas-discharge on its upper extremity, while the lower part is furnished with the usual valve-screw B, through which the gas enters, and by which its flow is regulated, and with the usual air-supply passages C C and the waste-cup D.

E represents the gas-generator or generating-chamber, to which the oil is furnished from the oil-basin through the feed-pipe F, and the vapors are conducted from the generator to the valve B through the passage G.

Now, instead of employing means to impart extra heat to the upper part of the burner-tube, and in that manner conducting and imparting heat through the metal to the generating-chamber, I provide the passage H from the upper portion of the burner-tube A, leading down under the generating-chamber; and in order to conduct the vapors with more certainty into the said passage H from the burner-tube, I employ a shield or cross-partition, I, covering a portion of the passage through the burner-tube at the entrance of the said passage.

With the discharge of the passage H a gas-jet under the generating-chamber is obtained, for the proper protection and distribution of heat therefrom.

I provide the generating-chamber with the heating-chamber K, projecting downward and surrounding the said gas-jet, and made with small openings L L for the proper supply of air to this jet.

When the burner is used, the same is first heated, in the usual way, from the waste-cup. The gas-jet under the generator will light itself from the waste-cup, and soon after a brilliant gas-flame issues from the burner.

It will be seen that by means of the direct heating of the generating-chamber sufficient gas-vapors are produced to furnish a large flame, while, at the same time, the passage H is no objectionable obstruction to the light; and by these means oil of heavier gravity can be used in such lamps, whereby less danger of accidents encountered with the use of lamps with light oils is risked.

Having fully described my invention, what I claim therein, and desire to secure by Letters Patent, is—

In combination with the burner-tube A, the shield I, passage H, and heating-chamber K, when constructed and arranged to operate substantially as described.

LOUIS FISCHER.

Witnesses:
R. BOEKLEN,
J. DE LA MAR.