

F. A. SAWYER.  
Vapor Burners.

No. 152,420.

Patented June 23, 1874.

Fig: 1.

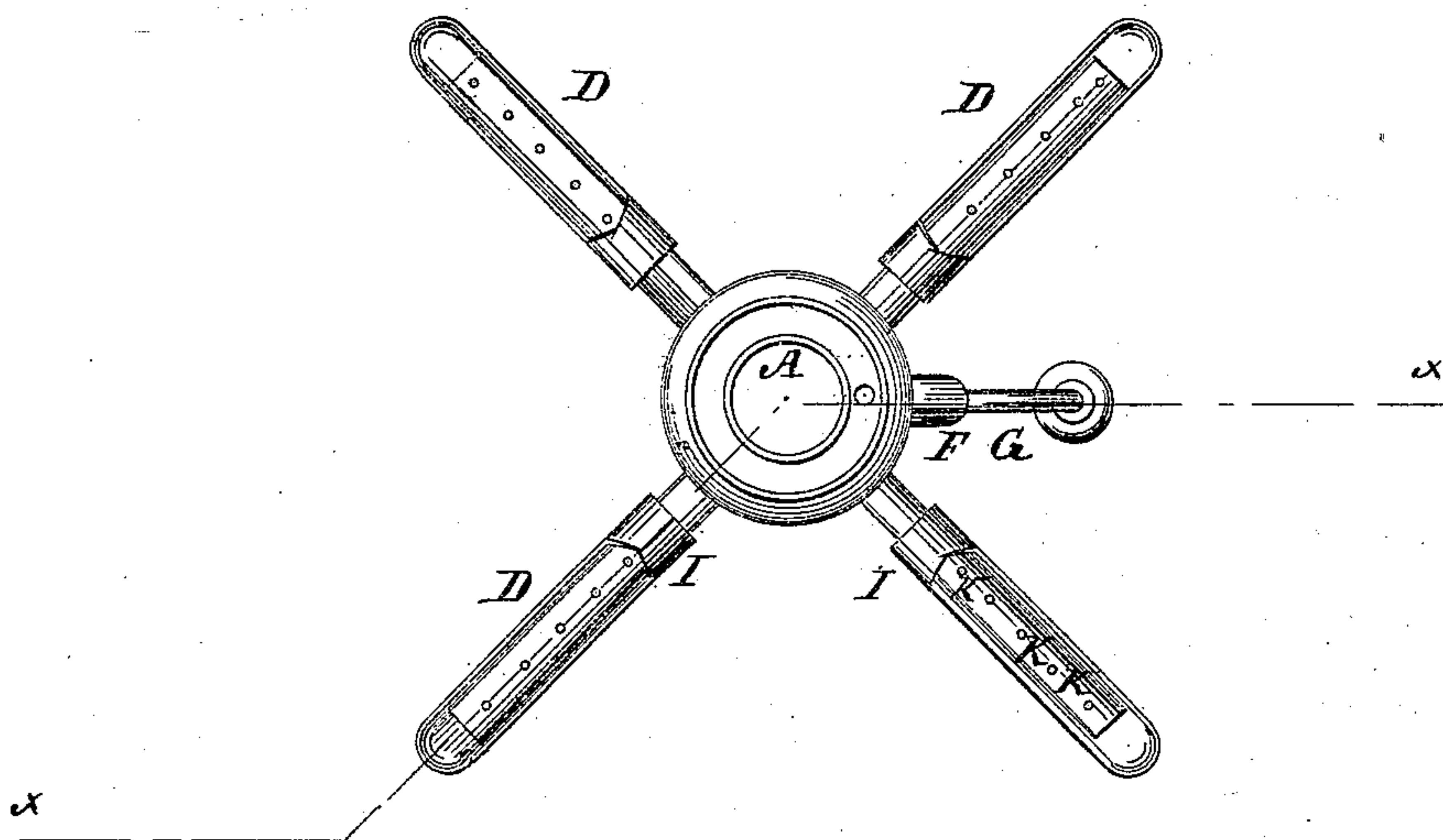
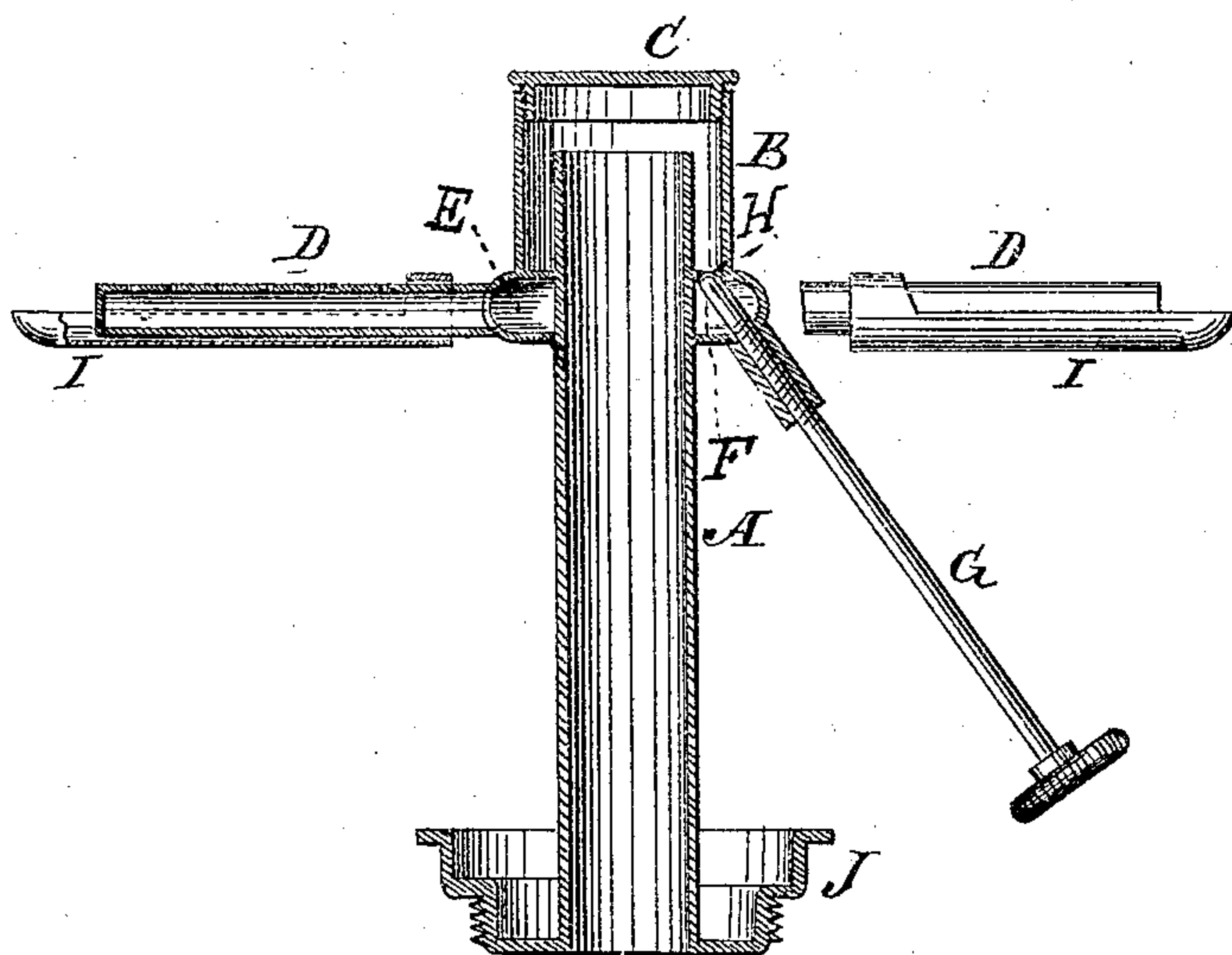


Fig: 2.



WITNESSES.

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INVENTOR.

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# UNITED STATES PATENT OFFICE.

FREDERICK A. SAWYER, OF HOUSTON, TEXAS, ASSIGNOR TO HIMSELF AND  
ADDISON H. BALDWIN, OF SAME PLACE.

## IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. **152,420**, dated June 23, 1874; application filed  
April 4, 1874.

*To all whom it may concern:*

Be it known that I, FREDERICK A. SAWYER, of Houston, in the county of Harris and State of Texas, have invented a new and useful Improvement in Self-Generating Gas-Burners, of which the following is a specification:

The invention relates to the construction and arrangement of the parts composing the burner, as hereinafter described, and specifically indicated in the claims.

In the accompanying drawing, Figure 1 is a top or plan view of the burner. Fig. 2 is a vertical section of Fig. 1, taken on the line *x x*.

Similar letters of reference indicate corresponding parts.

A is a wick-tube, through which the oil is carried to the reservoir B. This reservoir is closed by the cap C, which screws on, as seen in Fig. 2. D are the burner-tubes, one or more of which may be used. These burners are simple perforated tubes, radiating from the center, but in communication with the annular generating-chamber E, which forms the base of the reservoir. The flow of oil to the chamber E is regulated by means of the valve F, operated by the rod G. The orifice H is opened and closed by screwing or unscrewing the valve. The burner-tubes are closed at their outer ends, as seen in the drawing. I are pans to catch the drip from the burner-tubes. J is a socket-flange, arranged to screw into a common lamp.

The liquid consumed may be any of the light hydrocarbons, as gasoline, naphtha, &c., and is carried up to the reservoir B by capillary attraction, and is converted into vapor as it enters the burners by the high temperature caused by the flames.

The burner-tubes may be of any form or design to suit.

K are the gas-jet perforations in the burner-tubes.

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

1. In combination with the horizontal perforated tubes D of the burner, the pans I, constructed and made removable as shown and described, for the purpose specified.

2. The reservoir B, applied over the end of the tube A, and the valve F, operated by rod G to open or close the discharge-orifice in the bottom of reservoir B, the annular chamber E, and radiating perforated burner-tubes D, all combined, constructed, and arranged as shown and described, for the purpose specified.

FREDERICK A. SAWYER.

Witnesses:

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