

E. F. ROGERS.
VAPOR-BURNER.

No. 187,236.

Patented Feb. 13, 1877.

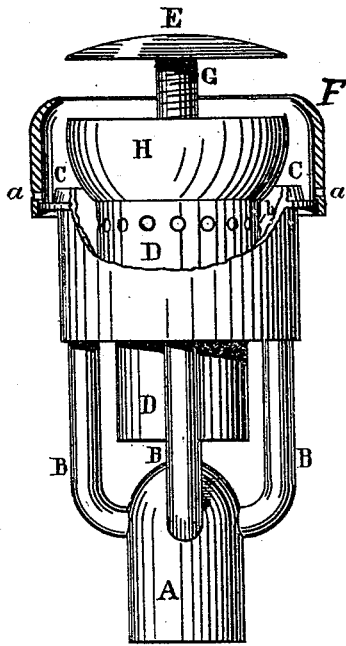


FIG. 1.

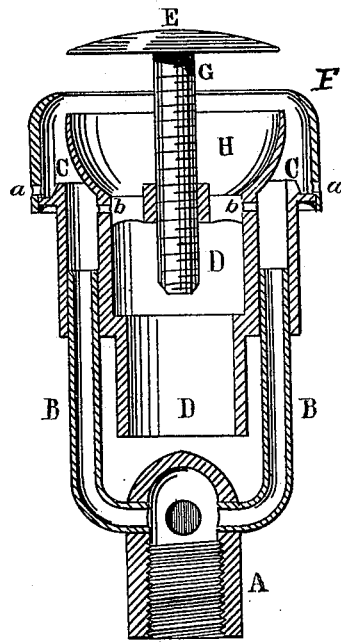


FIG. 2.

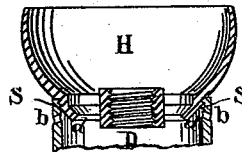


FIG. 3.

WITNESSES

Frankl. Parker
C. W. Lunt

INVENTOR

E. F. Rogers
by *J. H. Adams*
Atty.

UNITED STATES PATENT OFFICE.

EDWARD F. ROGERS, OF CHELSEA, MASSACHUSETTS.

IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. **187,236**, dated February 13, 1877; application filed December 26, 1876.

To all whom it may concern:

Be it known that I, EDWARD F. ROGERS, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Vapor-Burners, of which the following is a specification:

My invention is designed as an improvement upon a burner for which I have already made application for Letters Patent.

The object of my present invention is to increase the heating and illuminating power of the said burner, which I effect by combining with the same a cup placed on the inside, and having its lower edge arranged immediately over the openings through which the air passes to the vapor-channel, by means of which, in connection with the cone and the adjustable button, the amount of oxygen required for effecting complete combustion will be equally supplied to the burner.

Referring to the drawings, Figure 1 represents an elevation of a burner embodying my invention, with a portion of the outer casing broken away to show the cup. Fig. 2 is a vertical section of the same, and Fig. 3 is a vertical section of the cup.

A is the supply-pipe through which the fluid passes to the burner, and is to be connected with any conducting-pipe. B B are branch pipes leading from the supply-pipe A to the chamber C, which constitutes the vapor-generator. D is a tube or chamber, open at the bottom, for the supply of air, which passes through the openings *b b* into the chamber C. F is the cone or cover, provided with apertures *a a*, around its lower edge, and resting upon a projecting rim extending around on the outside of the chamber C. E is an adjustable button for adjusting the opening between its edges and the upper edge of the cone.

To the upper portion of the open chamber

D is attached the cup H, the upper edge of which extends nearly to the upper edge of the cone F, leaving a narrow opening all around between the two edges. The lower edge of the cup H is designed to extend downward and project inward to a point on a level with the lower edges of the openings *b*, as shown at *d*, in Fig. 3.

The cup H may also be made separate from the chamber D, and provided at its lower end with a screw-thread at *s*, so as to screw into the top of chamber D, and thus admit of the opening between the upper edge of the cup and that of the cone to be increased or diminished, according to the requirements of the burner.

The air entering the open chamber D passes upward, a portion going through the cup H, and also passing out through the openings *b*, being deflected by the projection *d*, at the bottom of the cup H. (Shown in Fig. 3.) By this means an additional amount of oxygen is supplied to the burner, so as to effect a more complete combustion of the vapor generated in the chamber C, and thus a greater heating and illuminating power is attained.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the open chamber D, of the cup H, substantially as and for the purpose set forth.

2. The combination of the cup H with the open chamber D, the cone F, and the adjustable button E, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDW. F. ROGERS.

Witnesses:

J. H. ADAMS,
THOMAS F. MCALOON.