(No Model.)

W. A. SCHAUER.

VAPOR BURNER.

No. 454,119. Patented June 16, 1891.

Fig. 1.

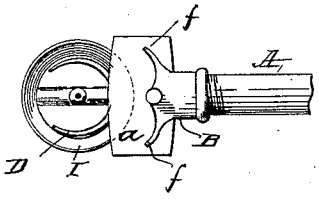


Fig. 2.

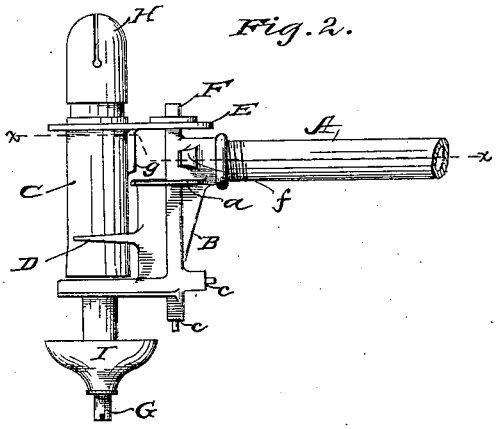


Fig. 4.

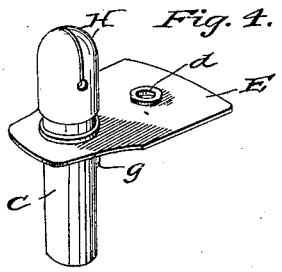


Fig. 3.

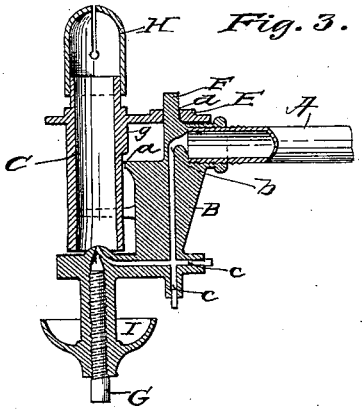
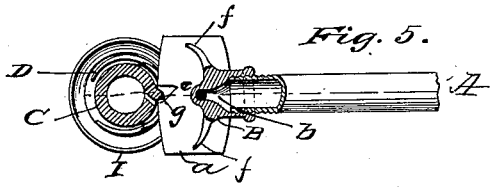


Fig. 5.



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WILLIAM A. SCHAUER, OF CANTON, OHIO.

VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 454,119, dated June 16, 1891.

Application filed January 12, 1891. Serial No. 377,481. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. SCHAUER, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Vapor-Burners; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a view of a portion of the supply-pipe, showing the mixing-chamber removed. Fig. 2 is a side elevation. Fig. 3 is a longitudinal section. Fig. 4 is a detached view of the removable mixing-chamber, showing its plate attached thereto. Fig. 5 is a sectional view through line *x x*, Fig. 2.

The present invention has relation to vapor-burners; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the supply-pipe, which is attached to the burner proper in the ordinary manner.

The frame B is substantially of the form shown in the drawings, and is provided with the fixed plate *a*, which is located substantially as shown in Fig. 2. The frame B is provided with the supply-passage *b*, which passage leads from the supply-pipe to the upper end of the regulating-needle casing, substantially as illustrated in Fig. 3. The supply-passage *b* is formed by drilling through the frame B from the points *c c*, which points or openings are closed in the ordinary manner.

The mixing-chamber C is removably attached to the frame B by means of the clamping-arms D, the plate E, and the post F, which post passes through the aperture *d* in the plate E.

For the purpose of providing sub-jets the apertures *e* are provided, which are located substantially as illustrated in Figs. 2, 3, and 5, and, as shown in Fig. 5, said apertures extend from the mixing-chamber through its casing.

The clamping-arms D are formed integral with the frame B, and are located substantially as illustrated in Fig. 2, and are bent around the mixing-chamber C, so as to securely hold said mixing-chamber in proper position.

It will be understood that when the mixing-chamber is properly attached to the frame B the plates *a* and E will be located one above the other, and for the purpose of providing a hood the arms *f* are provided, which arms are located between the plates *a* and E.

The mixing-chamber C is provided with the rib *g*, which is formed integral with said mixing-chamber, and is for the purpose hereinafter described.

In use gasoline or other fluid is fed to the burner proper through the supply-pipe A and the passage *b*, and for the purpose of regulating the amount of fluid to be fed to the mixing-chamber C the regulating-needle G is provided, which is operated in the ordinary manner. It will be understood that as the fluid burns from the sub-jets *e* the plates *a* and F will become heated, thereby heating the mixing-chamber C, which heating converts the gasoline into vapor or gas, which vapor or gas is burned from the tip H. The rib *g* is for the purpose of dividing the flame which emanates from the sub-jets *e*, thereby providing two separate and distinct sub-burners. It will also be understood that by providing the plates *a* and E and the arms *f* the sub-lights will be protected from the wind, and thereby lessen the liability of said sub-lights being extinguished, and by providing the rib it will be impossible to extinguish both of the sub lights or flames. In the event the light or flame emanating from the tip or burner H should be extinguished, and at the same time one of the sub lights or flames, the remaining sub-light would ignite the gas escaping from the tip H, thereby preventing the possibility of the light being extinguished.

The bottom or lower portion of the frame B is provided with the cup I, which cup is for the purpose of receiving the drippings. The apertures or sub-jets *e* diverge from the mixing-chamber, so as to bring their openings upon each side of the rib *g*.

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

1. The combination of the frame B, the plates *a* and E, one located above the other, the arm *f*, located between the plates *a* and E, the mixing-chamber C, the sub-jets *e*, and the rib *g*, located between the sub-jets *e*, substantially as and for the purpose specified.

2. The combination of the removable mixing-chamber C, provided with the plate E and the aperture *d*, the post F, the frame B, provided with the passage *b*, the regulating-needle G, and the clamping-arms D, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM A. SCHAUER.

Witnesses:
C. A. SCHAUER,
F. W. BOND.