A. C. VAUGHAN.

Lamp Burner.

No. 59,518. Patented Nov. 6, 1866.

Fig. 1.

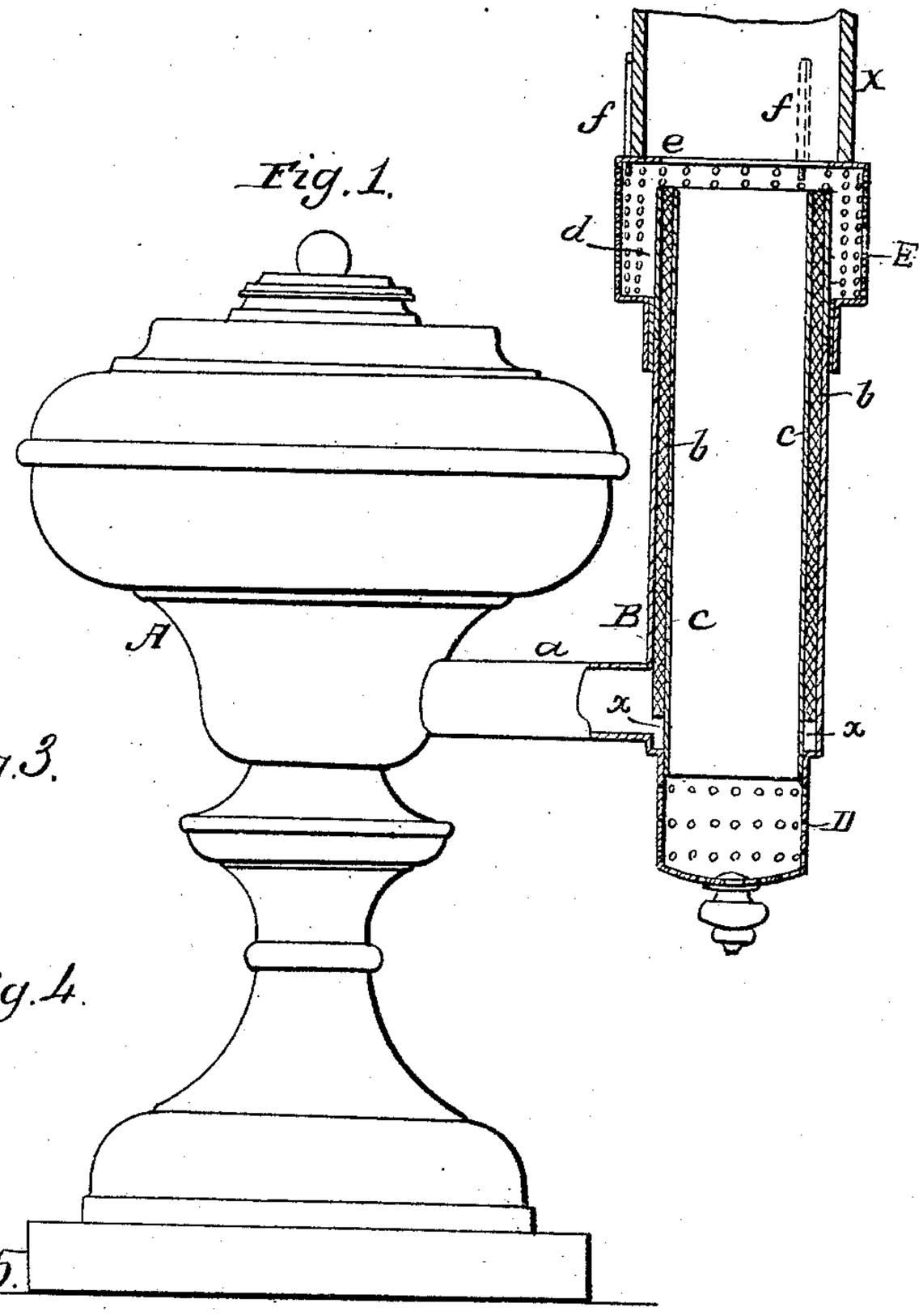


Fig. 3.

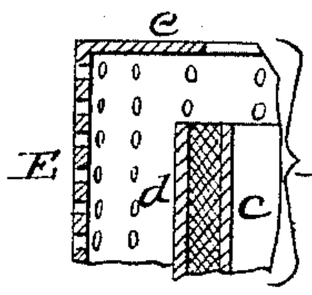


Fig. 4.

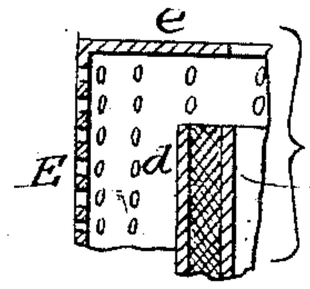


Fig. 5.

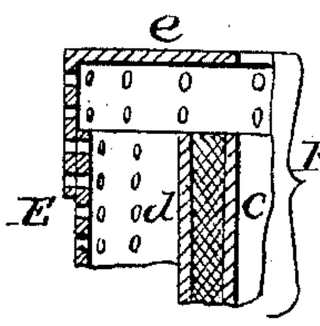
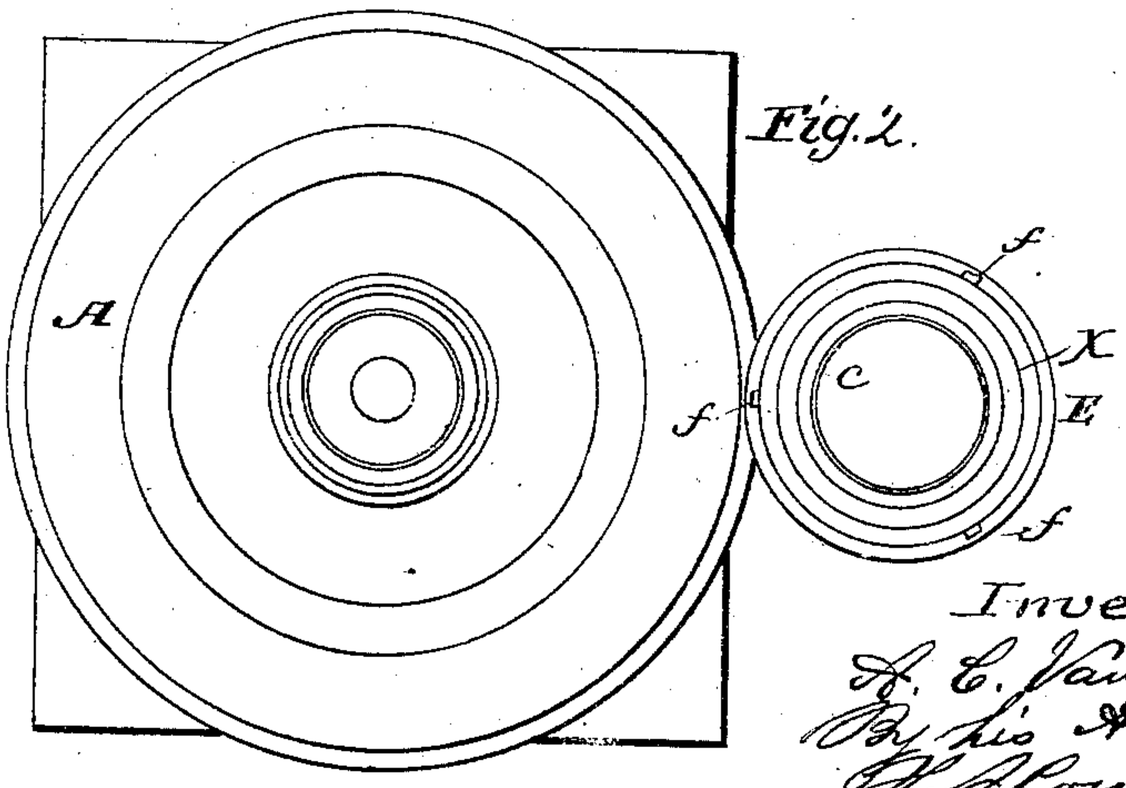


Fig. 2.



Witnesses

Alex. Bittinger

John Parker.

Inventor:

A. C. Vaughan

By his Attys,

F. A. Lowson

UNITED STATES PATENT OFFICE.

AARON C. VAUGHAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND R. W. PARK, OF SAME PLACE.

IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. **59,518**, dated November 6, 1866.

To all whom it may concern:

Be it known that I, AARON C. VAUGHAN, of Philadelphia, Pennsylvania, have invented an Improved Lamp-Burner; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a tubular wick, through which the air can pass, a perforated casing, and a flange, the whole being arranged substantially as described hereinafter, so as to produce from ordinary coal-oil a most brilliant flame.

My invention further consists in making the said flange adjustable, so as to regulate the extent of or entirely extinguish the flame; also, in making part of the wick-tube detachable, so that the adjustment of the wick may be readily effected.

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

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a sectional elevation of my improved lamp-burner; Fig. 2, a plan view of Fig. 1; and Figs. 3, 4, and 5, illustrative diagrams.

A is an oil-reservoir, which is supported on a suitable stand, and which communicates through a pipe, *a*, with a burner consisting of two concentric tubes, B C, having an annular space, *x*, between them.

The tubes B C extend above the reservoir, and in the annular space *x*, which is closed at the lower end, fits a tubular wick, *b*.

A section, *d*, of the upper portion of the tube B is detachable; and below the tube C is a perforated casing, D, through which air can pass into the interior of the tube.

The upper end of the burner is surrounded by a perforated casing, E, which is considerably larger in diameter than the tube B, and is adjustable vertically thereon; and at the upper end of the casing is an annular flange, *e*, the inner edge of which is above the wick-tube, or rather projects beyond the same, as seen in Fig. 3; or it may even project to the extent seen in Fig. 4.

On the flange *e* are pins or projections *f*, which serve to retain in its place a glass chimney, X.

The reservoir A is filled with ordinary illuminating coal-oil. The wick *b* is thoroughly saturated and trimmed so that its upper edge shall be even, or thereabout, with the upper edge of the burner. A light is then applied to the wick, and the casing E is adjusted until the flange *e* is a quarter of an inch, or thereabout, above the top of the burner.

The size of the flame may be varied by adjusting the casing E so as to raise or lower the flange *e*, thereby increasing or diminishing the supply of air to the flame, and the latter may be extinguished by lowering the casing until the flange rests on the top of the burner.

I have found by repeated careful experiments that by the use of a tubular wick, combined with the perforated casing and flange *e*, in the manner described, a most brilliant flame may be produced from ordinary illuminating coal-oil.

It is not necessary that the entire perforated casing E should be adjustable; in fact the casing itself may be permanent, and the flange *e* so arranged as to be adjustable. (See Fig. 5.) Nor is it necessary that the wick and wick-tubes should be cylindrical, as they may be made of an oval form without impairing the quality of the flame.

The object of the detachable section is to afford facilities for the adjustment of the wick to and the withdrawal of the same from its place, this manipulation of the wick being easily accomplished after the section *d* has been detached.

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

1. The combination of the tubular wick with the perforated casing E and flange *e*, the whole being arranged substantially as and for the purpose described.

2. The wick-tubes B and C, with their tubular wick, in combination with the flange *e*, rendered adjustable to and from the top of the wick-tubes, substantially as described.

3. The detachable continuation *d* of the wick-tube B, for the purpose described.

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

AARON C. VAUGHAN.

Witnesses:

CHAS. E. FOSTER,

JOHN WHITE.