O. F. MORRILL.

Vapor Burner.

No. 20,289. Patented May 18, 1858.

Fig. 1.

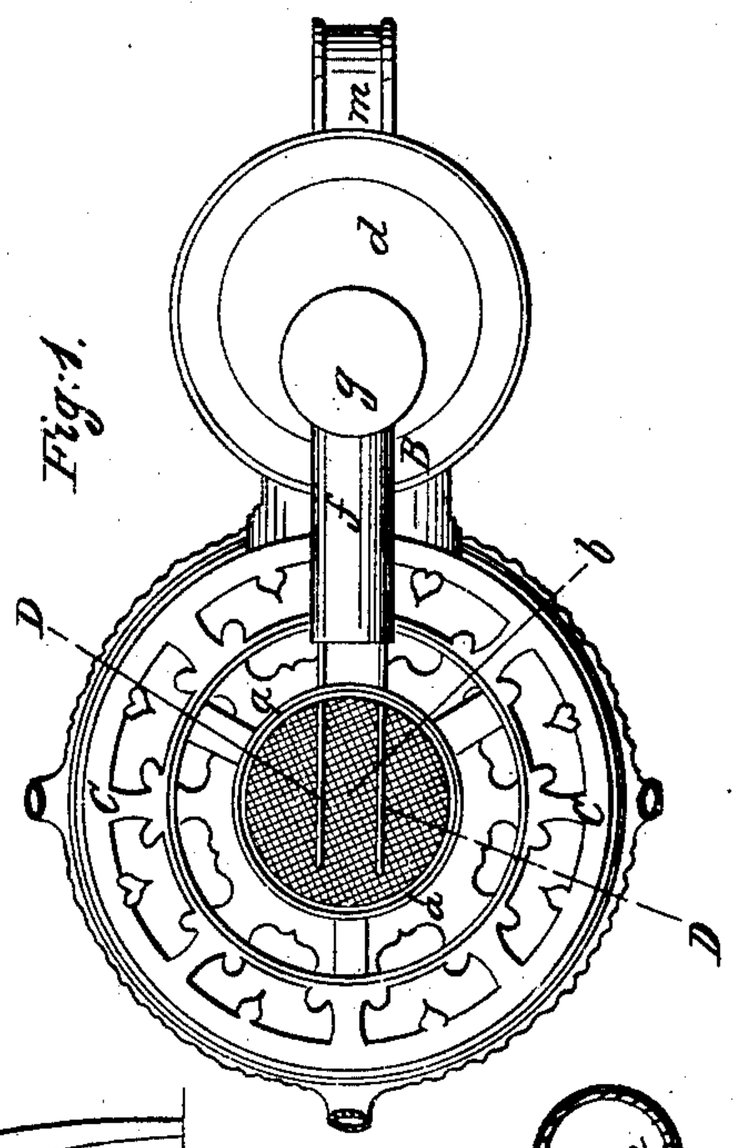


Fig. 2.

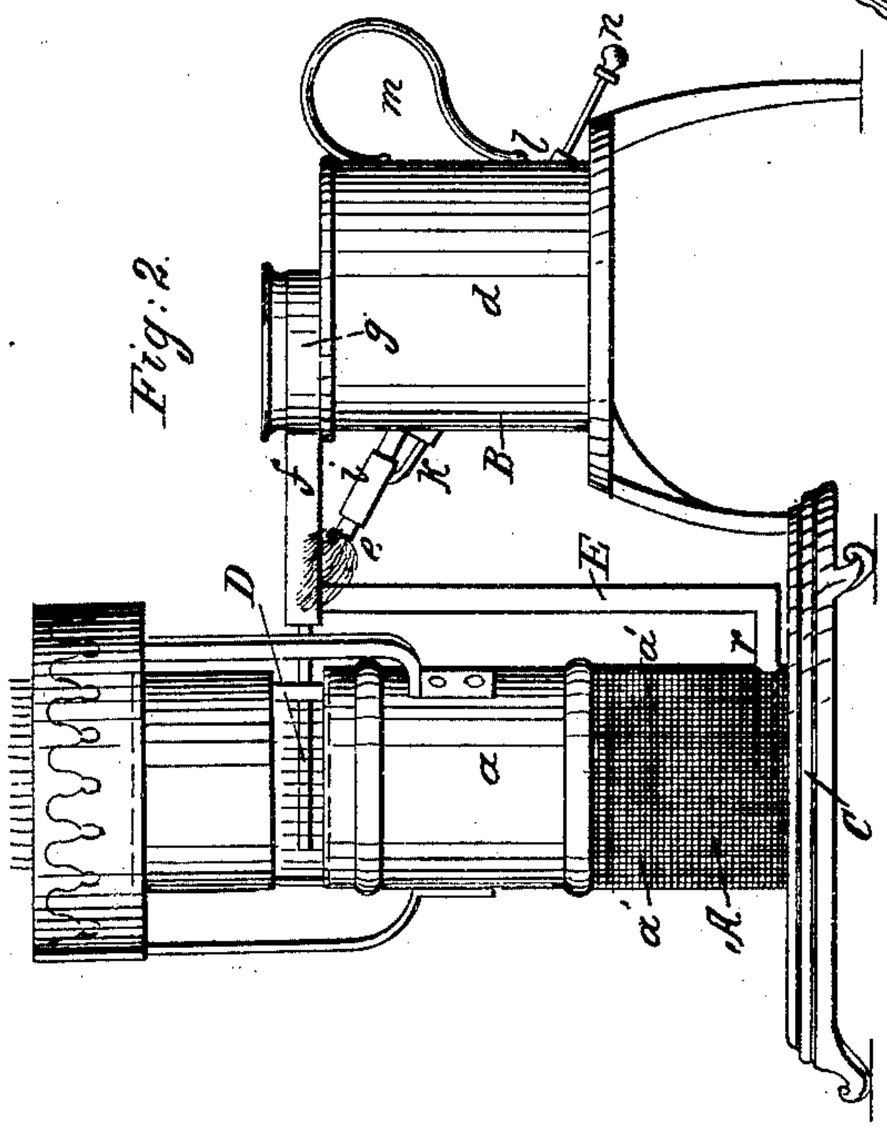
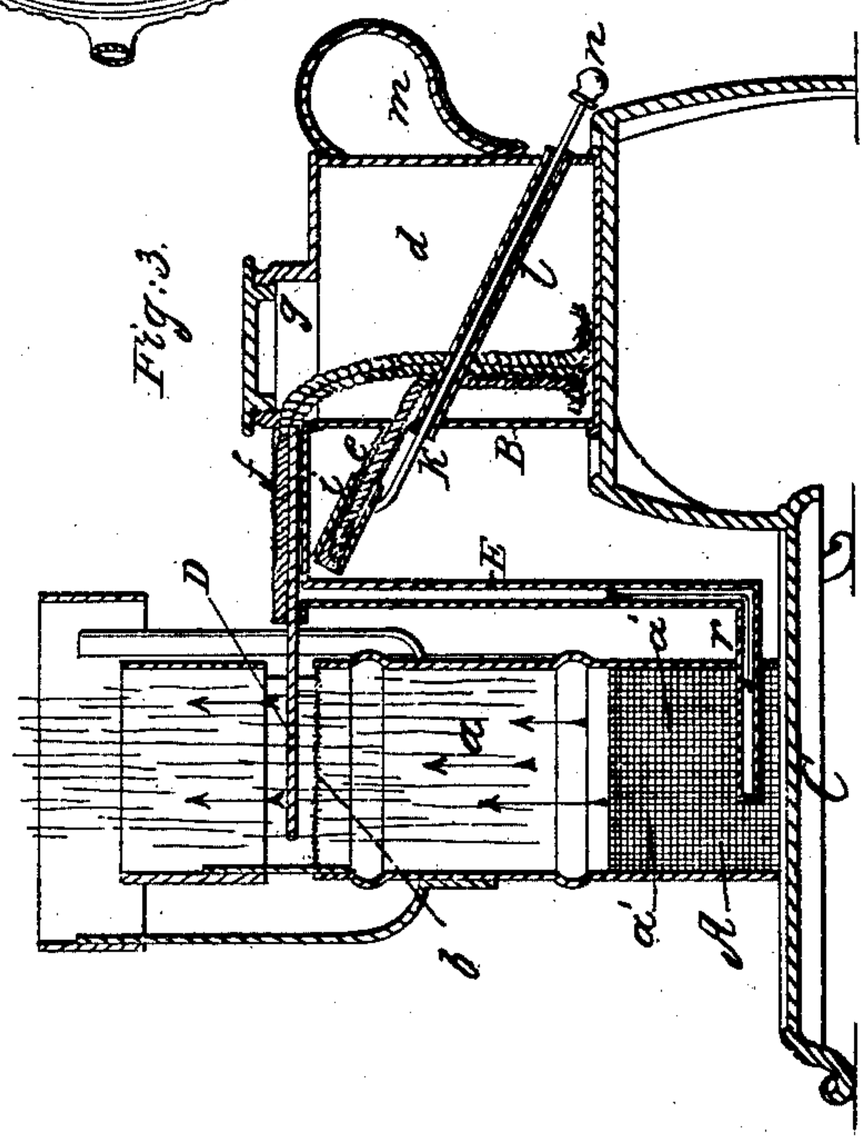


Fig. 3.



UNITED STATES PATENT OFFICE.

OSCAR F. MORRILL, OF BOSTON, MASSACHUSETTS.

AEROVAPOR-BURNER FOR LAMPS.

Specification of Letters Patent No. 20,289, dated May 18, 1858.

To all whom it may concern:

Be it known that I, OSCAR F. MORRILL, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Aerovapor or Erovapor Burners; and I do hereby declare the same to be fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1, exhibits a top view, Fig. 2, a side elevation, and Fig. 3, a vertical, central and longitudinal section of an aerovapor burner containing my invention.

The particular object of my invention or improvements is to enable a person to use the aerovapor or erovapor burner to good advantage in a stove or furnace and easily regulate the amount of the production of hydrocarbon vapor as circumstances may require.

On the 20th day of October, A. D. 1857, Letters Patent of the United States of America, (numbered 18,465) were granted to me on an air and vapor burner, or what may be termed an "aerovapor or erovapor burner" in contradistinction to an aerogas or erogas burner, or one for mixing and burning air and common olefiant gas.

My present invention has special reference to such aerovapor burner and is for the object or purpose above stated.

In the drawings, A, denotes the mixer, and B, the vapor generator of an aerovapor burner they being arranged on a stand C. The mixer consists of a tube or chimney *a* open at its lower end (or formed with a series of openings *a'*, *a'*, *a'*, for the admission of air into it) and having a wire gauze cap or disseminator *b*. The vapor generator as shown in the drawings, consists of a fluid reservoir, vessel or can *d*, provided with main and auxiliary wick tubes *e*, *f*, arranged as shown in the drawings; the main wick tube being sealed at its outer end and made at its inner end to open into the neck, *g*, of the fluid reservoir *d*. The auxiliary wick tube *f*, is placed underneath the main wick tube and projects from the side of the reservoir *d*, as shown in Figs. 2, and 3. It carries a small concentric tube, *i*, which is applied so as to be capable of sliding longitudinally on it. Such tube is attached to a rod *k*, which passes through a tube *l*, which extends entirely through the reservoir and at its lower end comes out or terminates below the handle *m*, of such reservoir. The tube is soldered at its two ends to the sides of the reservoir so as to completely insulate the rod *k*, from the interior or contents of the reservoir. On the lower extremity of the rod, *k*, a button or handle, *n*, is fixed. By force applied to the button the regulating slider, *i*, may be moved either forward or backward on the auxiliary wick tube, and wick so as either to wholly or partially extinguish the flame of the wick of such wick tube.

The above mode of arranging and applying the rod of the slider with respect to the auxiliary wick tube and the reservoir renders it very convenient to operate the slider from the rear of the reservoir particularly when the mixer is placed within a stove.

From the outer end of the main wick tube one or more wires or rods D, are extended horizontally as, shown in Figs. 1, 2, and 3. If desirable these wires may also be carried backward into the wick tube so as to enter the wick. The said wires, D, are to project over the wire gauze disseminator of the burner and very near to the same. From the main wick tube, a vapor conducting tube E, is carried downward and bent at a right angle and passed through a hole, *r*, made in the side of the mixer, the tube E opening at its lower end into the mixer, and at its upper end into the main wick tube of the vapor generator.

By means of the rods or heat conductors D, and the bent tube E, we have the means not only of conducting heat from the flame of the mixer, into the main wick tube, but of conveying hydrocarbon vapors from such wick into the mixer, as by simply moving the vapor generator on its stand either toward or away from its mixer when flame is on its disseminator, we have an easy method of regulating the amount of vapor produced. The flame of the auxiliary wick is intended merely for heating the main wick tube in order to vaporize the liquid of the wick sufficiently to cause a sufficient amount of vapor to pass into the mixer to enable a person to produce flame on the disseminator, the subsequent production of vapor being effected by the action of such flame on the conductors D, D, and the transmission of heat by them into the vaporizer or main wick tube of the generator.

I make no claim to a spur to extend down into the wick of a hydrocarbon vapor lamp and convey heat from the flame to the wick

and for the purpose of vaporizing a liquid contained in the wick, but

What I claim is—

1. The arrangement and application of the bent tube E, with the wick holder or vaporizer provided with one or more heat conductors or equivalent devices; the same being to enable the production of vapor to be regulated in manner and conducted into the mixer as specified.

2. I also claim the mode of applying the rod of the wick tube slider to the generator, viz, by carrying it through a tube extending through the reservoir of the generator as set forth.

In testimony whereof, I have hereunto set my signature.

OSCAR F. MORRILL.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.