

D. R. FLETCHER.

Vapor Burner.

No. 104,009.

Patented June 7, 1870.

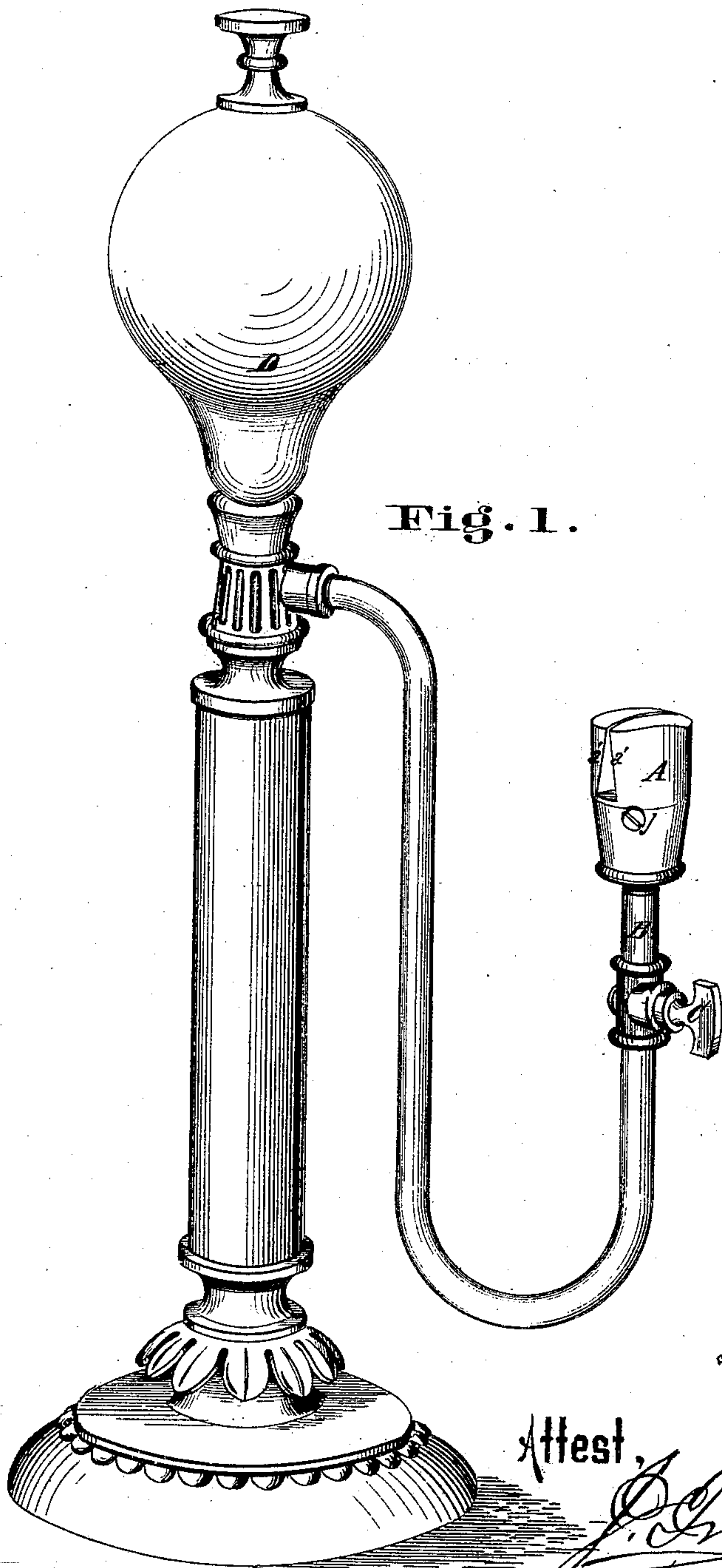


Fig. 1.

Fig. 2.

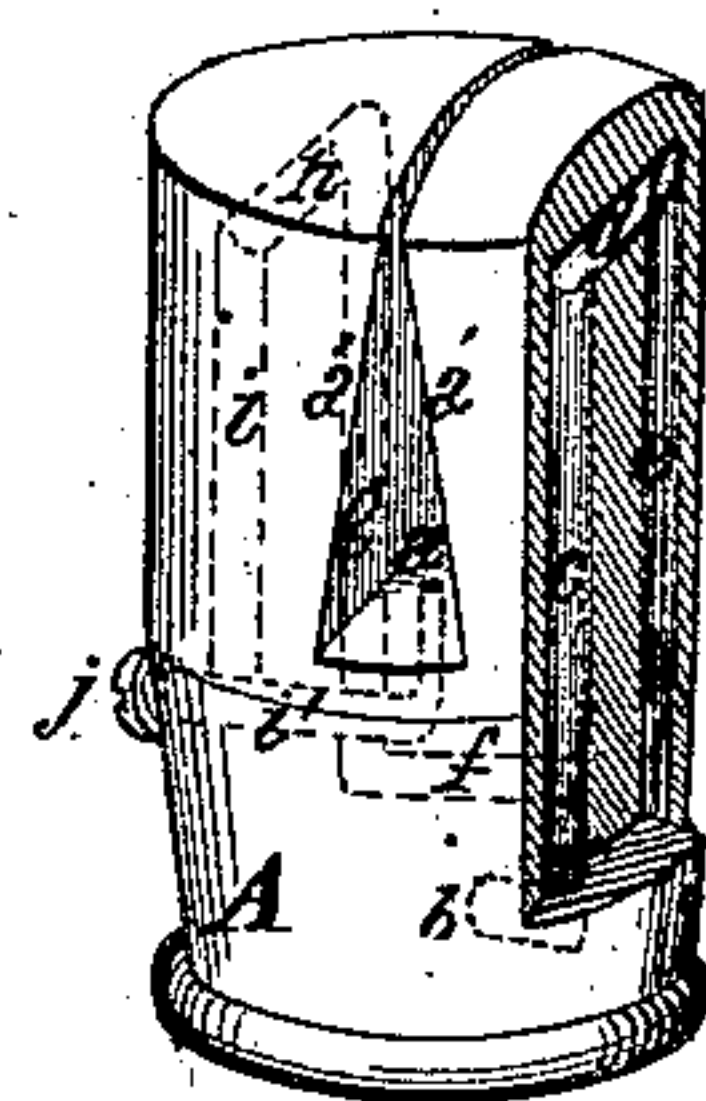
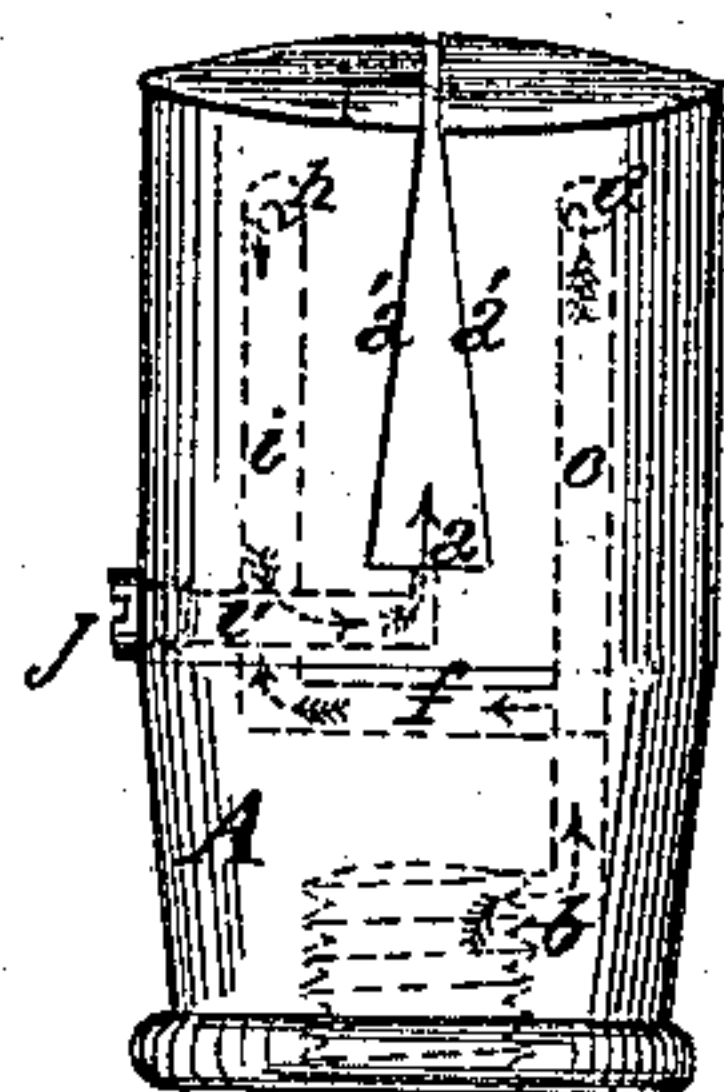


Fig. 3.



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UNITED STATES PATENT OFFICE.

DAVID R. FLETCHER, OF COVINGTON, KENTUCKY, ASSIGNOR TO HIMSELF
AND SAMUEL T. HARRISON, OF SAME PLACE.

IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. 104,009, dated June 7, 1870.

To all whom it may concern:

Be it known that I, DAVID R. FLETCHER, of Covington, Kenton County, State of Kentucky, have invented certain new and useful Improvements in Gas-Generating Burners for Gasoline and Light Oils; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawing, making part of this specification.

Nature and Objects of Invention.

This invention relates to a gas-generating burner; and my improvement consists in constructing such a burner with an inwardly-flaring flame-aperture, the sides of which come in contact with a portion of the flame, and are constructed with channels, in which the oil, in flowing through, is vaporized by the heat of the flame, as will be more fully set forth hereinafter.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of a lamp with my improved burner attached. Fig. 2 is a perspective view of the burner detached, with one side partly sectionized to exhibit the interior construction. Fig. 3 is a side elevation or exterior view of the burner, showing the passages in the body of the burner in dotted lines, the arrows representing the direction of the current of fluid and gas.

General Description.

A is the body of the burner, attached to the pipe B in the manner shown, a cock, C, intervening between the burner and fluid-reservoir D. The gas, as it is generated, in the manner hereinafter described, escapes at the aperture *a*, and the sides *a' a'* of the flame-aperture, which spread and form the jet, flare inward, as shown, so as to project over the aperture *a*, for the purpose of enabling the body of the burner to absorb and conduct to the fluid passing through it a sufficient amount of heat to convert the passing fluid into gas

rapidly. The fluid enters the burner from the pipe B through the hole *b*, and passes up the port *c*, across the port *d*, down the port *e*, across the port *f*, to the other side of the burner, up the port *g*, across the port *h*, down the port *i*, and across the port *i'*, to the aperture *a*.

In order to provide for the cleaning of the burner, the screw-plug *j* is inserted in the port *i'*, which, when removed, permits of the insertion of a needle or wire.

All the ports of the burner are constructed out of the solid metal, by drilling in the required direction from the outside, and afterward plugging the holes in the exterior.

Operation.

When it is necessary to ignite the jet, the cock C is opened for a sufficient length of time to enable the passages to fill with fluid, and then closed. It is then ignited, and, during the time the quantity contained in the passages of the burner is being consumed, the body of the burner becomes hot, partly in consequence of the flaring inward of the sides *a' a'*, and gas is rapidly generated, and the jet assumes its required form and steadiness. The cock is then opened, and owing to the length of surface over which the fluid has to pass, and the peculiar impeding character of the ports, while it is at the same time submitted to the heat of the body of the burner, the fluid is rapidly converted into gas before it is permitted to escape.

Claim.

The gas-generating burner A, herein described, constructed with circulating-ports *b c d e f g h i i'* and inwardly-flaring sides *a' a'* for the flame-aperture, substantially as and for the purpose set forth.

In testimony of which invention I hereunto set my hand.

DAVID R. FLETCHER.

Witnesses:

FRANK MILLWARD,
HENRY MILLWARD.