

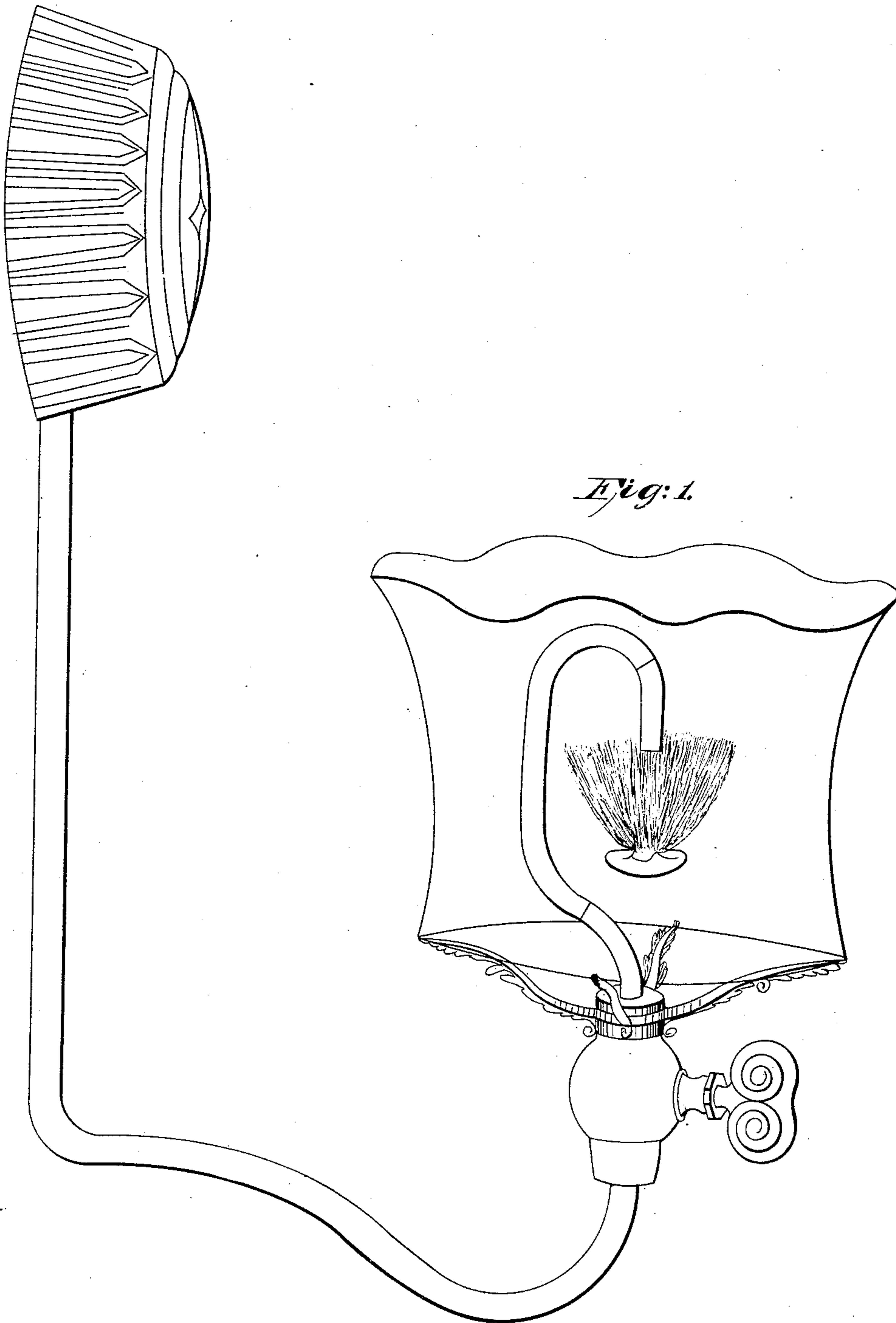
2 Sheets—Sheet 1.

A. M. MACE.

Vapor Lamp Burner.

No. 20,648.

Patented June 22, 1858.

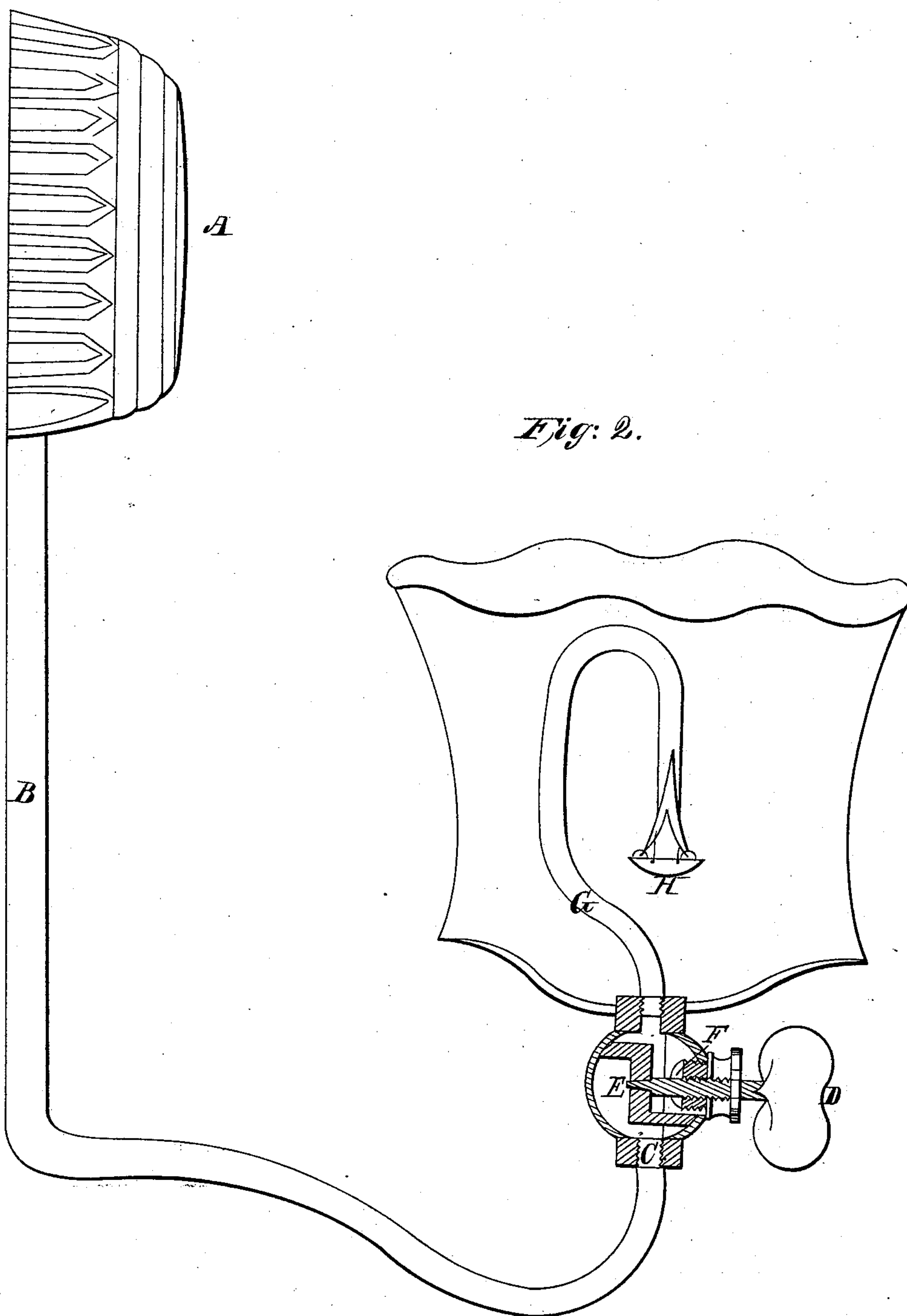


A. M. MACE.
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2 Sheets—Sheet 2.

No. 20,648.

Patented June 22, 1858.



UNITED STATES PATENT OFFICE.

A. M. MACE, OF SPRINGFIELD, MASSACHUSETTS.

VAPOR-LAMP BURNER.

Specification of Letters Patent No. 20,648, dated June 22, 1858.

To all whom it may concern:

Be it known that I, ALONZO M. MACE, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and improved portable gas-generator for the purpose of converting liquid hydrocarbons into a very high degree of vaporization or gas for illumination or other purposes; and I do hereby declare that the following is a full description thereof, reference being had to the accompanying drawings (in which Figure 1 is a perspective and Fig. 2 is a sectional view) and letters of reference marked thereon.

In these drawings A exhibits the fountain which may be placed in the upper part of the buildings to be lighted or any other elevation so that the bottom of said fountain shall be at least six inches above the level of the highest light used, with the pipes B leading from it in the same manner as would be run from the meter in the use of coal or any other gas. The usual brackets, pendants and gas fixtures can be used provided they are tight enough to hold the liquid. The valve C will screw on when the usual gas burner is taken off. This valve is made like the common steam valve with its spindle D, packing box F, except the seat E which is made nearly straight where the spindle D passes through the diaphragm in order to regulate the flow of the liquid in the most minute quantity that may be wanted for the light.

The vaporizing tube or retort G may be bent in any convenient form so as to bring it over in contact with or directly through the jet or jets of gas from the burner H. This tube is loosely packed with asbestos in order that while said asbestos shall sufficiently diffuse the liquid forced into it by head or

pressure its property of non-conducting heat shall not only preserve it from destruction but shall enable the heat of the flame to be more readily taken up by the liquid hydrocarbon contained in said packing than would be the case were the packing composed of either cotton or wire cloth or its equivalent, my improvement in this particular application of asbestos effecting new and useful results in comparison to what would follow from the use of a different packing as stated.

I do not claim a conducting pipe and faucet or a pipe applied to a burner for the purpose of supplying such with a hydrocarbon fluid neither do I claim a combination of cotton and wire cloth nor wicking as employed in a tube as shown and described in the patent of Isaih Jennings dated October 12th, 1844—neither do I claim the vaporizing tube heated by secondary jets, or by heat absorbed from the head of a burner—neither do I claim asbestos when used as a wick to draw up the fluid by capillary attraction. But

What I do claim and wish to secure by Letters Patent is—

1. The use of asbestos as a vaporizer loosely packed in the vaporizing tube when used under hydrostatic pressure.

2. I also claim heating the vaporizing tube with the direct heat from the primary burner either by passing the tube over or directly in contact with the flame of said burner.

I do not mean to limit myself to this particular form of burner as I have used the argand fishtail and batwing both single and double with the same results.

ALONZO M. MACE.

Witnesses:

R. B. HILDRETH,
J. S. MILLER.