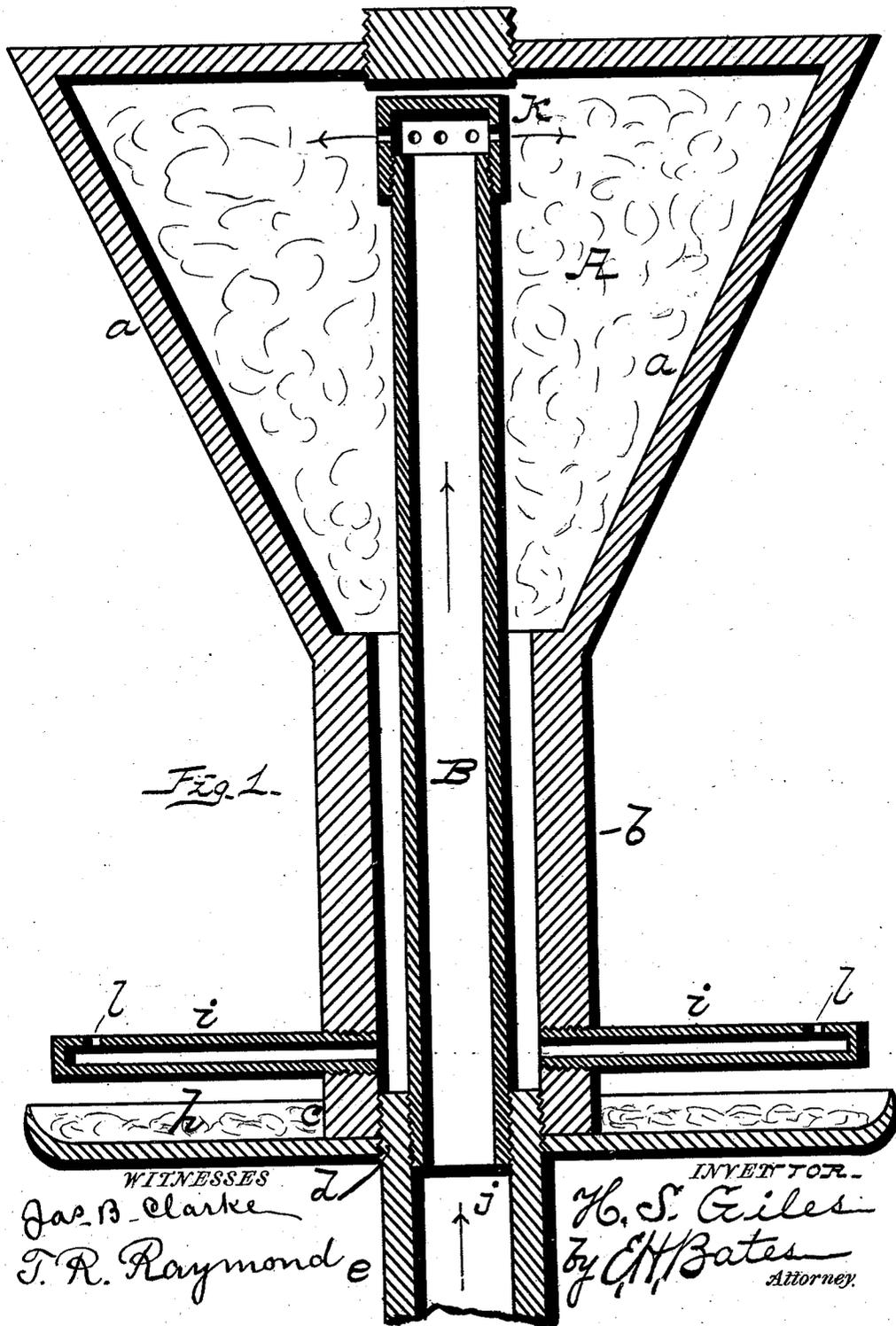


H. S. GILES.  
VAPOR BURNER.

No. 534,040.

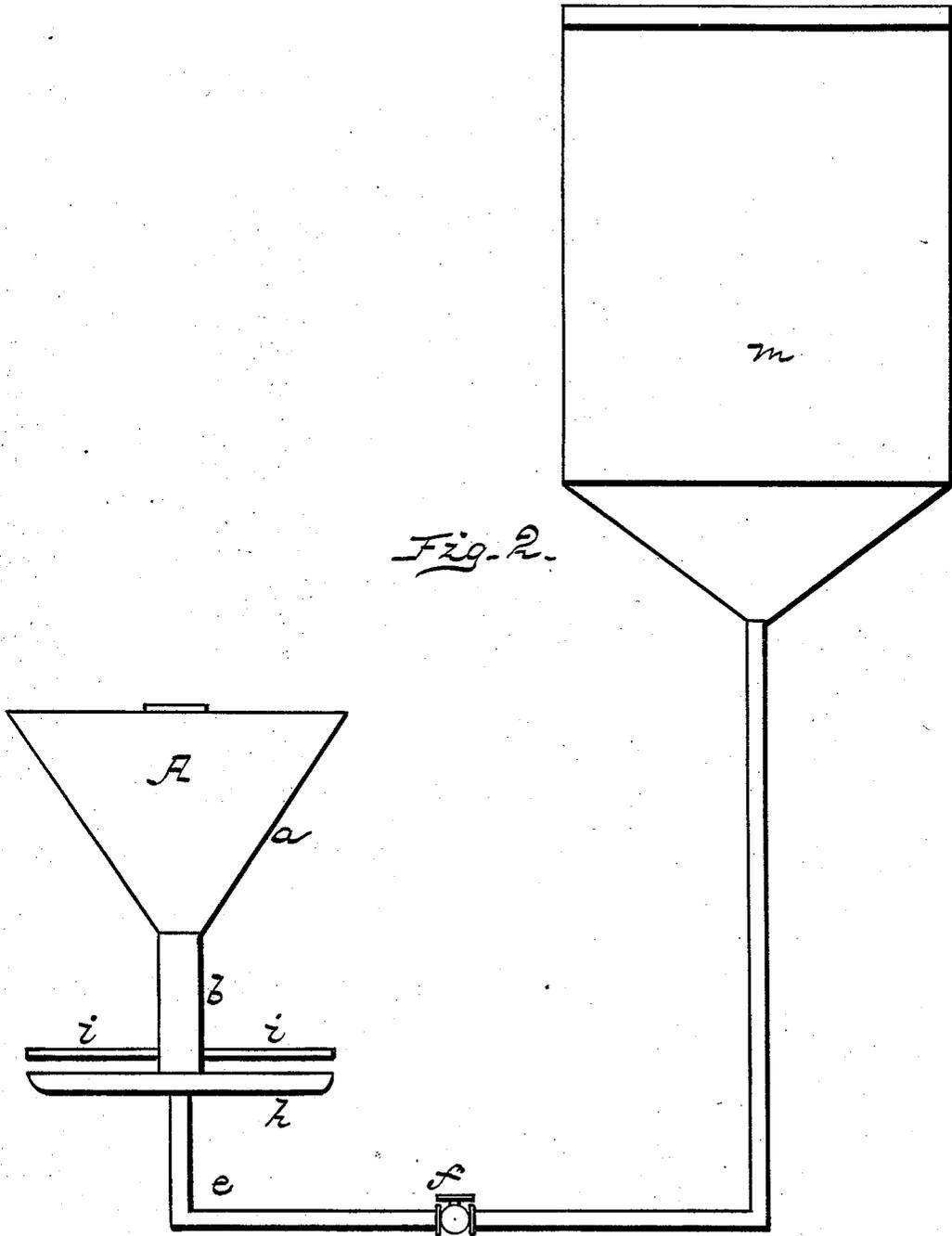
Patented Feb. 12, 1895.



H. S. GILES.  
VAPOR BURNER.

No. 534,040.

Patented Feb. 12, 1895.



*Fig. 2.*

WITNESSES  
 *Jas. B. Clarke*  
 *T. R. Raymond*

INVENTOR  
 *H. S. Giles*  
 by  *E. H. Bates* Attorney

# UNITED STATES PATENT OFFICE.

HARRY S. GILES, OF PHILADELPHIA, PENNSYLVANIA.

## VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 534,040, dated February 12, 1895.

Application filed July 23, 1894. Serial No. 518,340. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY S. GILES, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Vapor-Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in vapor burners and it is an improvement on Letters Patent granted to me on the 20th day of September, 1892, and numbered 482,920, and it consists in providing a central feed tube and a perforated cap or sprayer therefor, all as will be hereinafter fully explained and particularly pointed out in the appended claim.

The annexed drawings, to which reference is made, fully illustrate my invention, in which—

Figure 1 represents a vertical sectional view of my device, and Fig. 2 is a side view of the same.

Referring by letter to the accompanying drawings A, designates the oil receptacle or chamber having the flaring interior and exterior walls *a*, a vertical pipe *b* formed integral therewith, the lower end *c* of which is female screw threaded to receive the male threads *d* on the end of the oil pipe *e*, which latter has a shut off valve *f* whereby the flow of oil is regulated from the tank *g*. To this pipe *e*, is secured the drip saucer or pan *h*, beneath the burners or arms *i*, which latter are connected to the pipe or nipple *b* by the male threads on the inner end thereof engaging female threads in the lower portion of the pipe *b* aforesaid.

B, represents the oil feed pipe, the lower end of which screws into the end *j* of the pipe *e* and forms an extension or continuous feed for the oil up to or near the roof on the inside of said chamber. The upper end of this vertical feed pipe B, has male screw threads, to which is screwed a sprayer or perforated cap *k*,—whereby when the oil is permitted to flow into the chamber it will leave the pipe B, in the form of a spray and be equally distributed in that form about the inside of the

chamber. A plug *n* is screwed into an opening in the top of this chamber and when removed permits access to the interior thereof and to the removable cap. Within this chamber is placed asbestos or other suitable material for the purpose of taking up sediment or foreign matter in the oil. It will thus be seen from the above description and by reference to the annexed drawings that in operation, the valve is turned, permitting the oil to flow from the tank and into the chamber through the perforated cap or sprayer thus spraying the oil in every direction against the inside wall of the chamber, greatly hastening vaporizing and an equalization of the outpour of oil into the chamber.

In starting the flame, the oil is permitted to flow from the tank *m* and into the chamber, down the pipe *b* and out the jet opening *l*, into the saucer or pan *h*, saturating some asbestos laid within said pan. Then the flow of oil is shut off, and a flame from said asbestos causes the chamber above to become heated, and the oil is again turned on. The oil is then sprayed in said chamber and becomes immediately and uniformly vaporized, passing down the pipe *b* and out of the jet openings *l* in the arms *i* into a flame. The valve should be turned on sufficiently to give a small quantity of oil to the chamber, thus continuing the vaporizing, and the interior walls of the chamber being on a slant or flaring, serve to greatly increase the vapor, which strikes the sides uniformly in the shape of a spray. The flow of oil as well as the flame can be regulated or entirely cut off by the valve, and the cap *k* being removable permits access to the pipe B, for cleaning the same as well as the interior of the cap and a vapor burner as herein described is durable, easily and quickly operated.

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

The vapor burner herein described consisting of the chamber having flaring walls terminating in a vertical pipe having a screw threaded end to connect with the screw threads of the valved supply pipe having the drip pan, the burner being connected to the vertical pipe of the chamber, the feed pipe vertically arranged in the chamber and its

pipe, said feed pipe extending near to the top of said chamber in connection with the plug thereof, the feed pipe being provided with a screw threaded lower and upper end, the former of which connects with the screw threads of the supply pipe—a removable perforated screw threaded cap connected to the screw threaded upper end of said pipe, whereby the flow of oil through said cap is sprayed against the flaring wall of the chamber to better regulate vaporization, as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY S. GILES.

Witnesses:

R. KENNEDY,  
PORTER M. WILSON.