(No Model.) 2 Sheets—Sheet 1.

H. S. GILES.

VAPOR BURNER.

No. 482,920. Patented Sept. 20, 1892.

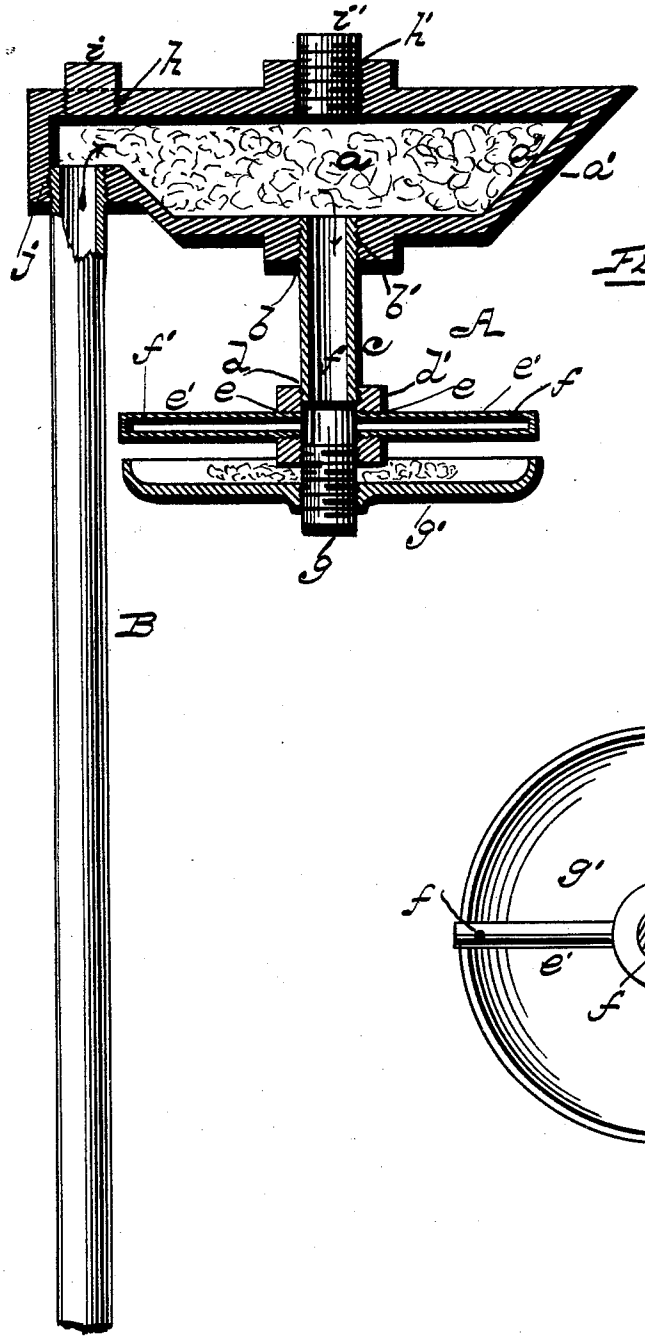

Fig. 2.

WITNESSES

Jas. B Clarke

M. M. Mason

INVENTOR.

H. S. Giles

By E. H. Bates Attorney

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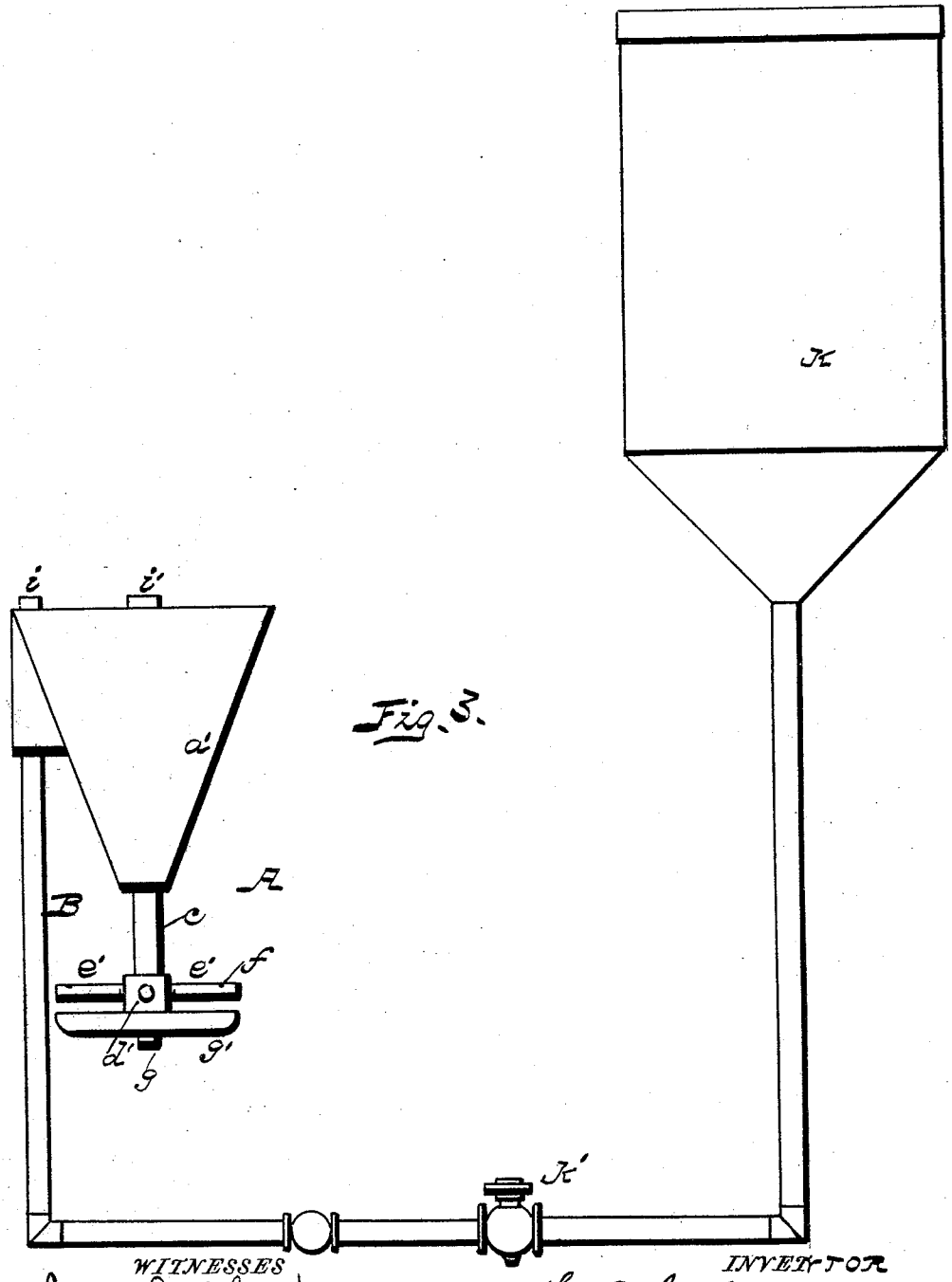

Fig. 3.

WITNESSES

Jas. B. Clarke

M. M. Mason

INVENTOR

H. S. Giles

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UNITED STATES PATENT OFFICE.

HARRY S. GILES, OF PHILADELPHIA, PENNSYLVANIA.

VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 482,920, dated September 20, 1892.

Application filed October 31, 1891. Serial No. 410,417. (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 consists in the novel construction and arrangement of the same, all as will be hereinafter fully explained.

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

Figure 1 represents a vertical longitudinal sectional view of my improved vapor-burner. Fig. 2 is a horizontal sectional view of the same, and Fig. 3 is a side view.

Referring by letter to the accompanying drawings, A designates the vapor-burner, consisting of the chamber *a*, preferably of circular form, the interior and exterior side walls *a'* of which are inclined or flaring, and in the floor thereof is made an opening *b*, having female screw-threads *b'* to receive the upper end of a vertical pipe *c*, that has male screw-threads, whereby said pipe is attached to the chamber-floor. This pipe *c* is also provided with a screw end *d*, which connects with the coupling or head *d'* at the top thereof, as shown in Fig. 1 of the drawings. This coupling has openings *e* on the side, having female screw-threads, which receive the inner end of the arms *e'*, which latter, being hollow, communicate with the passage *f* of the vertical pipe *c* and also with the vaporizing-chamber *a*, and said arms are each provided with a small opening *f'*, while the outer end thereof is closed, as shown.

A screw-threaded plug *g* is inserted into the lower portion or floor of the coupling aforesaid, which plug supports a drip saucer or pan *g'* beneath the burners or arms *e'*.

In the top or roof of the chamber openings *h h'* are provided, the same being female screw-threaded to receive plugs *i i'*, which have male screw-threads to engage said openings.

B represents an oil-feed pipe the upper end of which screws into an opening *j* made in the side wall of the chamber. This feed-pipe extends from the chamber *a* to an oil receptacle or tank *k*, and said pipe is provided with shut-off valve *k'*, whereby the flow of oil, as well as the flame from the openings *f'*, can be regulated or cut off entirely. Within this chamber *a* is placed asbestus or other suitable material for the purpose of taking up sediment or foreign matter in the oil. At the same time it serves to give a regular and steady blow to the flame.

It will be observed 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 *a*, down the pipe *c*, and out the jet-openings *f'* into the saucer *g'*, saturating some asbestus laid within said saucer. Then the flow of oil is shut off, and a flame from said asbestus causes the chamber above to be heated, and the oil is again turned on. The oil in said chamber becomes vaporized, passing down the pipe *c* and out at *f'* 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 *a* being on a slant or flaring, serves to greatly increase the vapor, which strikes the sides thereof.

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

The combination, with a retort having the usual supply-pipe and a discharge-pipe leading from the bottom thereof, of a burner connected with said discharge-pipe and consisting of a tubular portion provided with laterally-extended tubes having perforations which are adapted to discharge upward toward the retort and a plug bearing a drip-cup and secured into the lower end of the tubular portion, substantially as described.

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

HARRY S GILES.

Witnesses:
HENRY M. BOYD,
P. M. WILSON,
F. B. WRIGHT.