

SAMUEL J. WHITING.

Improvement in Apparatus for Vaporizing and Burning
Hydrocarbons.

No. 124,993.

Patented March 26, 1872.

Fig. 1.

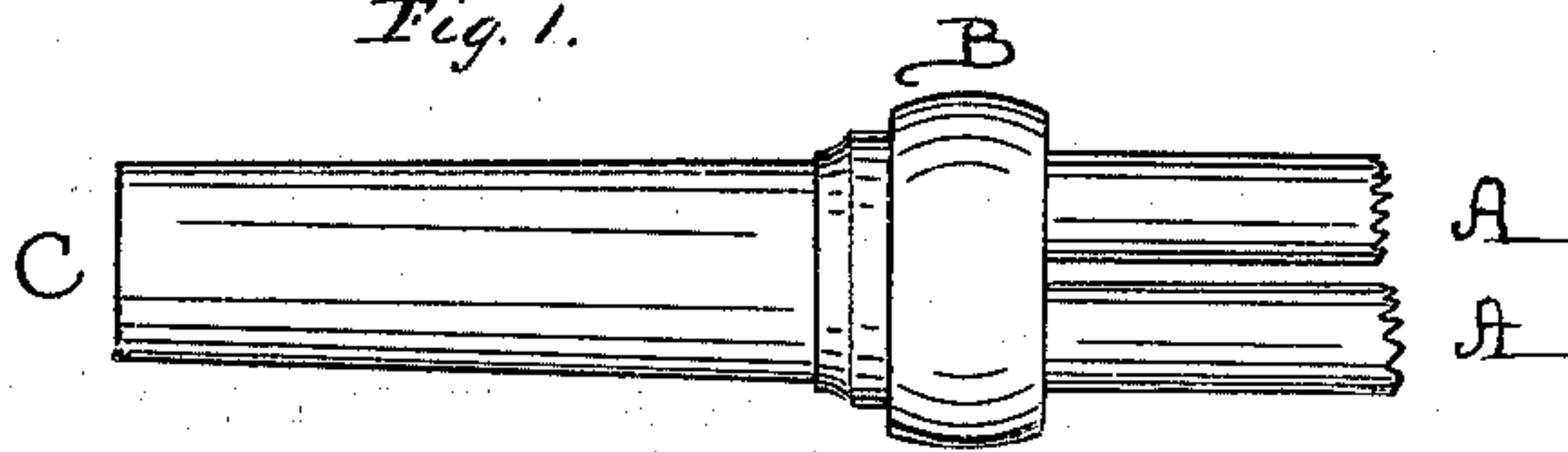


Fig. 2.

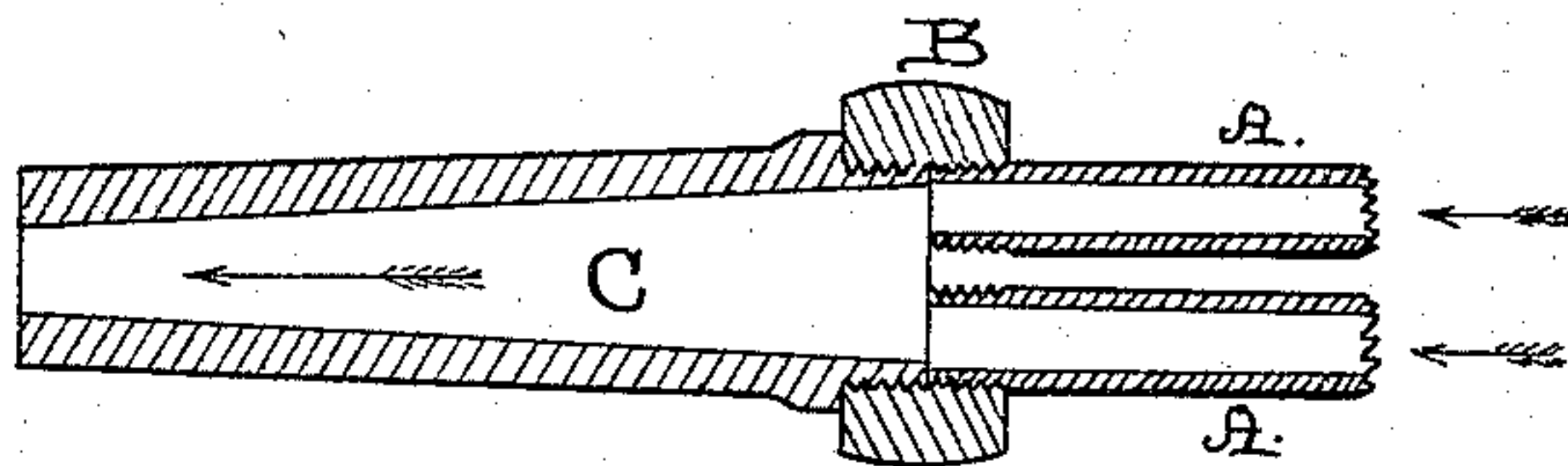


Fig. 3.

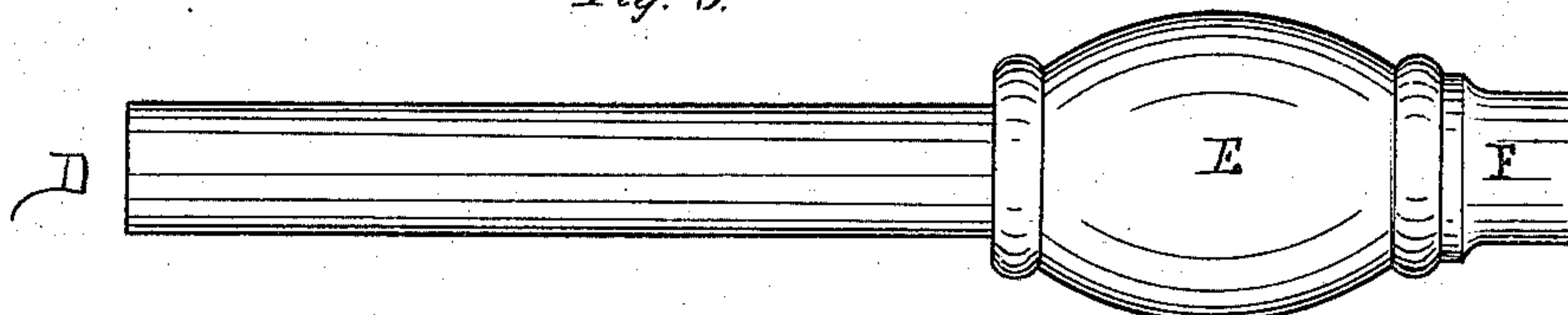
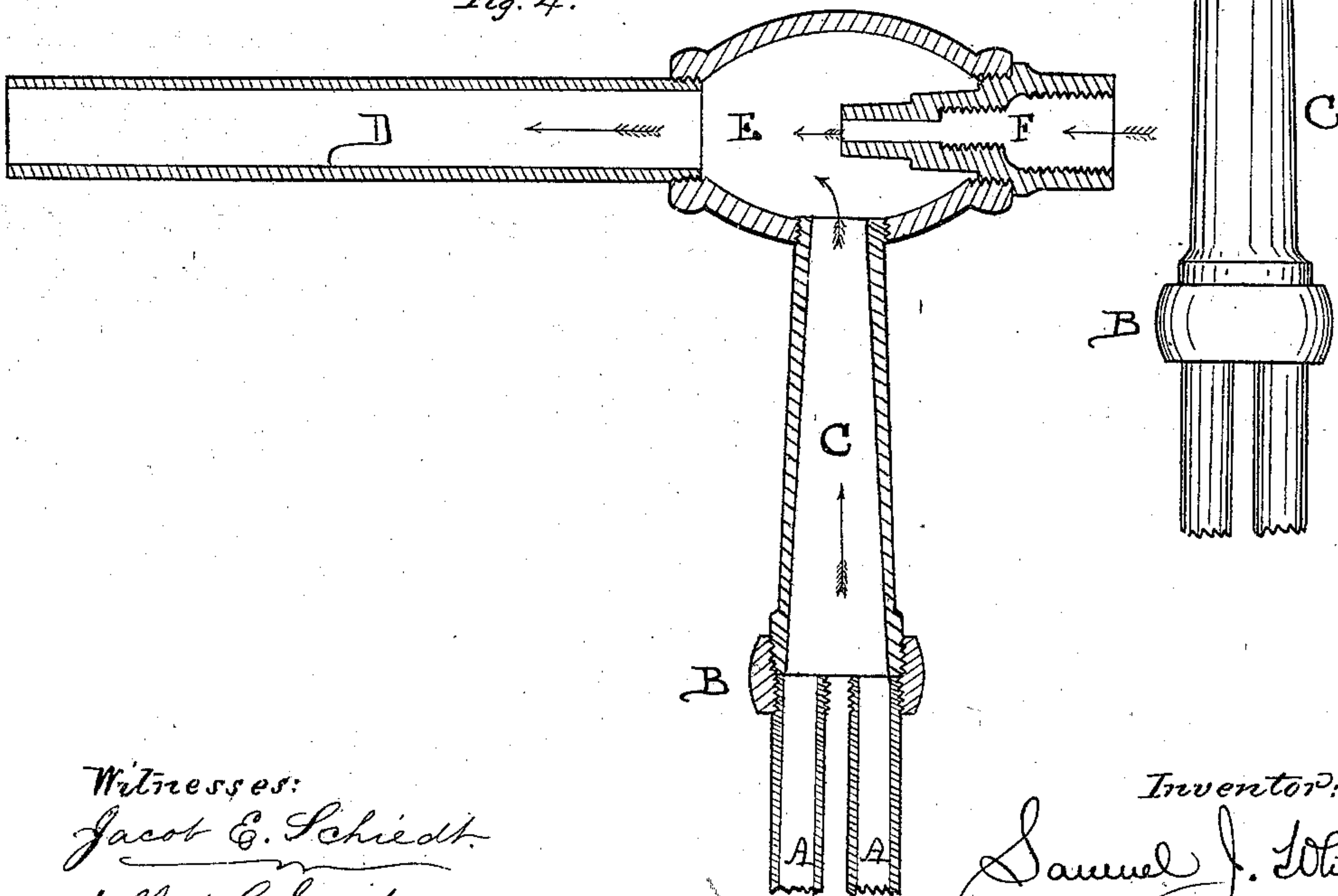


Fig. 4.



Witnesses:
Jacob E. Schiedt.
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Inventor:

Samuel J. Whiting.
By John A. Biedersheim.
Att'y.

UNITED STATES PATENT OFFICE.

SAMUEL J. WHITING, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR VAPORIZING AND BURNING HYDROCARBONS.

Specification forming part of Letters Patent No. 124,993, dated March 26, 1872.

To all whom it may concern:

Be it known that I, SAMUEL J. WHITING, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Vaporizing Hydrocarbons; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand and use the same, reference being had to the accompanying drawing making part of this specification, in which—

Figures 1 and 3 are side views of the device illustrating my invention. Figs. 2 and 4 are central longitudinal sections thereof.

Similar letters of reference indicate corresponding parts in the several figures.

This invention pertains to that class of hydrocarbon vaporizers wherein an oil-pipe and a steam-pipe communicate with each other for vaporizing the hydrocarbon fluid; and it consists in an auxiliary pipe for the union of a jet of steam with the vapor passing from the generator, so as to further dilute the vapor by commingling steam therewith and thus form a more perfect vapor. By this invention I am also enabled to vaporize heavy oils and overcome their tendency to settle or carbonize.

Referring to the drawing, A A represent the oil and steam pipes, which may be formed with or united to a cap, B, by which the pipes are connected to a generator, C. This generator consists of a suitably-formed tube or pipe, open at both ends, so that as the oil and steam

are admitted at one end the former will be vaporized in the generator and the vapor pass out at the other end of the pipe. To the generator C I attach an auxiliary pipe, D, for the passage of a jet of steam, which shall combine with the vapor passing from the generator. The steam enters an enlargement, E, of the pipe D by means of a pipe, F.

It will be seen that as the vapor passes from the generator C it enters chamber E, where steam from pipe F acts upon it, so that the vapor is diluted by the commingling or union of the steam and is improved thereby, besides, being more forcibly ejected from the pipe D, is adapted to be directed to any locality, however remote from the generator, and readily enter a small opening in the furnace or furnace-door. I am also enabled to vaporize the heavy oils and overcome their tendency to settle or carbonize.

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

In that class of hydrocarbon vaporizers wherein an oil-pipe and steam-pipe communicate with each other, the auxiliary pipe for the union of a jet of steam with the vapor passing from the generator, substantially as and for the purpose set forth.

The above signed by me this 28th day of November, 1871.

SAML. J. WHITING.

Witnesses.

JOHN A. WIEDERSHEIM,
ALFRED C. SAVIDGE.