SAMUEL J. WHITING.

Improvement in Apparatus for Vaporizing and Burning Hydrocarbons.

No. 127,723. Patented June 11, 1872.

Fig. 1.

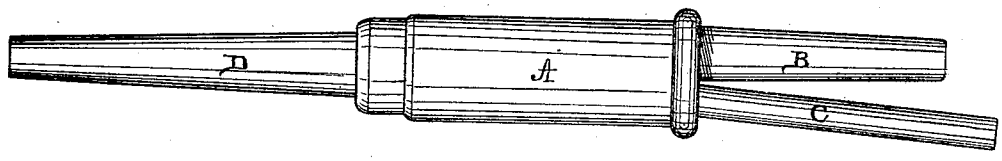
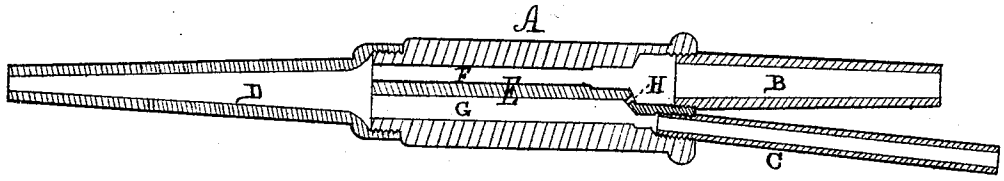


Fig. 2.



Witnesses:
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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. 127,723, dated June 11, 1872.

To all whom it may concern:

Be it known that I, SAMUEL J. WHITING, of 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, make, and use the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a side view of the device, illustrating my invention. Fig. 2 is a central longitudinal section thereof.

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

This invention relates to apparatus for vaporizing hydrocarbons. It consists in the combination and construction of the parts of the apparatus whereby a portion of steam from one pipe acts as an injector, and another portion thereof acts as an auxiliary jet.

Referring to the drawing, A represents the body of the apparatus, to the rear end of which are attached the steam-pipe B and oil-pipe C, and having at the front end the exit-nozzle D. The body A is constructed with an internal longitudinal partition, E, forming distinct passages, F G, and in said partition, near its rear end, is an opening, H.

The oil-pipe communicates with the passage G, which I denominate the generator; and the steam-pipe communicates with the passage F, which I denominate the auxiliary steam-pipe or jet. The opening H in the partition E is so located that the steam-pipe B will also communicate with the generator or passage G. Steam is admitted to the apparatus through pipe B, and a portion of it passes into the passage F, and another portion enters the generator G through the opening H. Oil is directed to the generator through the pipe C. The steam which is injected into the generator acts on the oil therein. The vapor formed thereby is directed to the nozzle D, where the portion of the steam which passes through the passage F comes in contact with said vapor and dilutes it, whereby the vapor is perfected or improved, and forcibly ejected from the apparatus, and thereby adapted to be directed to localities remote from the generator.

By my invention the usual tendency of hydrocarbons to carbonize is overcome, and heavy oils may be vaporized.

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

1. The steam-pipe, body, and oil-pipe, constructed and combined so that a portion of the steam acts as an injector, and another portion thereof acts as an auxiliary jet, as set forth.

2. The body A having a longitudinal partition E, forming two passages, F G, in connection with the opening H in said partition, the oil-pipe C, and the steam-pipe B, communicating with the two passages, substantially as and for the purpose described.

The above specification of my invention signed by me this 3d day of April, 1872.

SAML. J. WHITING.

Witnesses:

JOHN A. WIEDERSHEIM,

ALFRED C. SAVIDGE.