

P. H. WILLIAMS.
VAPORIZER AND BURNER.
APPLICATION FILED APR. 18, 1912.

1,052,635.

Patented Feb. 11, 1913.

Fig. 1.

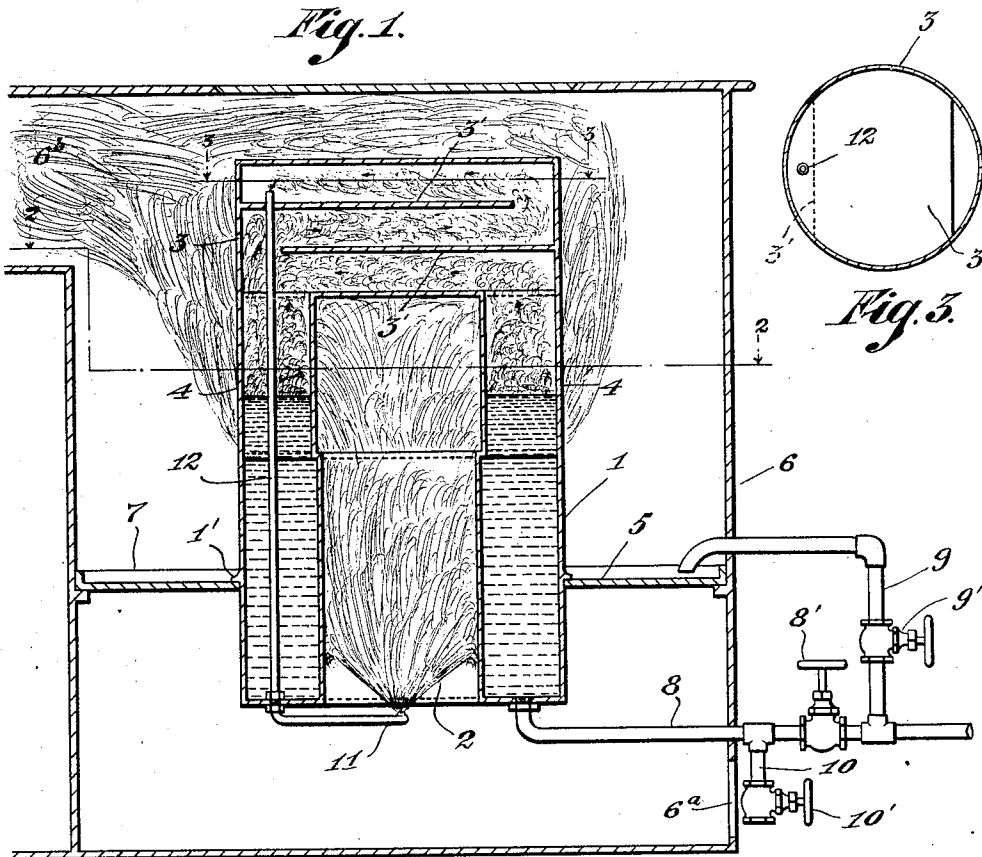
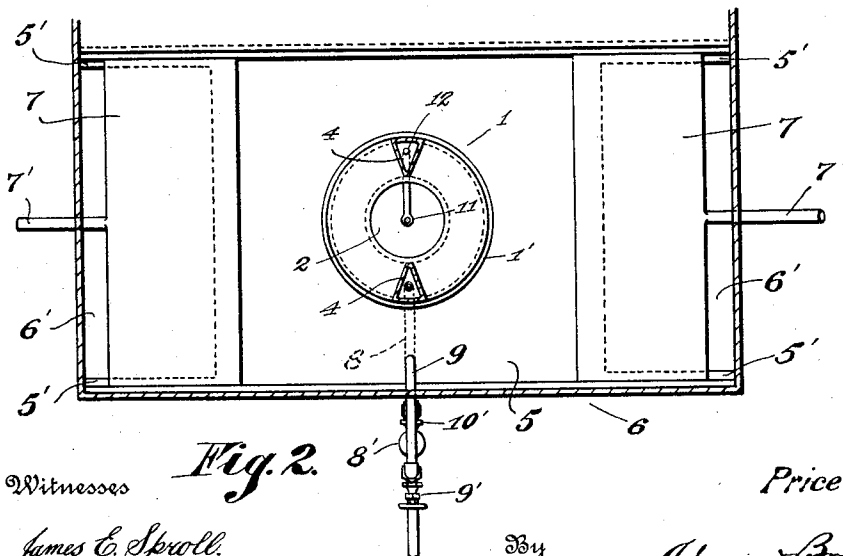
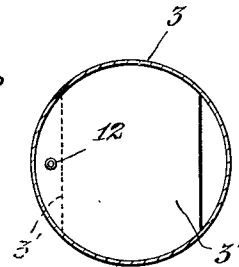


Fig. 3.



Inventor

Price H. Williams.

Witnesses

James C. Spruell.
Blara A. Harm.

334

Adams & Brooks

Attorneys

UNITED STATES PATENT OFFICE.

PRICE H. WILLIAMS, OF SEATTLE, WASHINGTON.

VAPORIZER AND BURNER.

1,052,635.

Specification of Letters Patent.

Patented Feb. 11, 1913.

Application filed April 18, 1912. Serial No. 691,645.

To all whom it may concern:

Be it known that I, PRICE H. WILLIAMS, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Vaporizers and Burners, of which the following is a specification.

The present invention pertains to an improved vapor generator and burner primarily devised for vaporizing petroleum and burning the vapor or gas, and it consists in the novel features and combinations of parts as set forth in the following description and succinctly defined in my annexed claims.

With reference to the accompanying drawing wherein similar reference characters designate corresponding parts throughout the several views: Figure 1 is a fragmentary vertical section of a stove equipped with a vaporizer and burner embodying the features of my invention. Fig. 2 is a horizontal section on line 2—2 of Fig. 1, and Fig. 3 is a similar section on line 3—3 of Fig. 1.

My improved vaporizer and burner comprises an oil chamber 1 provided with a through passage or flue 2, an elevated dome 3 over said passage provided with vertically spaced horizontal baffle plates 3' arranged to provide a tortuous path for the vapors, and intermediate tubes 4, 4, preferably triangular in cross section, connected with chamber 1 and dome 3. Chamber 1, as shown, extends through a suitable aperture in a firing pan 5 which is suitably supported in the fire box 6 between the draft opening 6^a and exit flue 6^b and engages a peripheral shoulder 1' of chamber 1 to support the latter. In this connection it will be observed that pan 5 is provided with end extensions or guides 5' for slide plates 7 which serve as dampers for passages 6' and are provided with stems 7' extending through apertures in the end walls of box 6.

Connected with the lower portion of chamber 1 is an oil supply pipe 8 provided with a shut-off valve 8' and connected at opposite sides of said valve are branch pipes 9, 10 having normally closed shut-off valves 9', 10'. Pipe 9, which extends into the upper portion of box 6, is utilized to direct a supply of oil to pan 5 for starting the burner, as will be later understood, while pipe 10 is

utilized as an outlet when desired to draw off residue from chamber 1.

Reference numeral 11 indicates a suitable vapor burner positioned beneath passage 2 and connected with a pipe 12 which extends upwardly into communication with dome 3 above the upper deflectors 3'. The oil for supplying chamber 1 is preferably contained in an elevated tank, not shown, connected with pipe 8.

To start the device in its operation, oil is admitted to pan 5, through valve 9' in suitable quantity and ignited to effect primary heating of chamber 1, following which valve 8' is opened. Oil now entering chamber 1 will be vaporized and the resultant vapor finding egress from dome 3 through pipe 12 is delivered to burner 11. Discharging from burner 11, the vapor is ignited through contact with the heated walls of passage 2.

Having thus described my invention what I claim as new, and desire to secure by Letters Patent of the United States of America, is:—

1. A device of the character described comprising a liquid chamber having a through passage, a dome extending over the passage of said chamber, tubes establishing communication between said chamber and said dome, baffle plates in said dome arranged to provide a tortuous passage for the vapor, a delivery pipe communicating with said dome and passing through said liquid chamber, and a burner connected with said delivery pipe and arranged beneath the passage of said chamber.

2. A device of the character described comprising a liquid fuel chamber, said chamber having a through passage, a dome arranged over the passage of said chamber, a tube connected with said dome and chamber, and a delivery pipe communicating with said dome and passing through the tube and chamber.

3. A device of the character described comprising a liquid fuel chamber having a through passage, a support for said chamber having an aperture through which said chamber extends, said support being in the form of a pan, an external shoulder on said chamber engaging said support, liquid fuel supply pipes extending into communication with said support and said chamber respectively, a dome disposed over the passage of

said chamber, tubes at the sides of the pas-
sage of said chamber establishing communi-
cation between the latter and said dome, a
burner at the lower side of said chamber,
5 and a supply pipe for said burner commu-
nicating with the upper portion of said
dome.

Signed at Seattle, Washington this 13th
day of April 1912.

PRICE H. WILLIAMS.

Witnesses:

STEPHEN A. BROOKS,

CLARA A. HARM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
