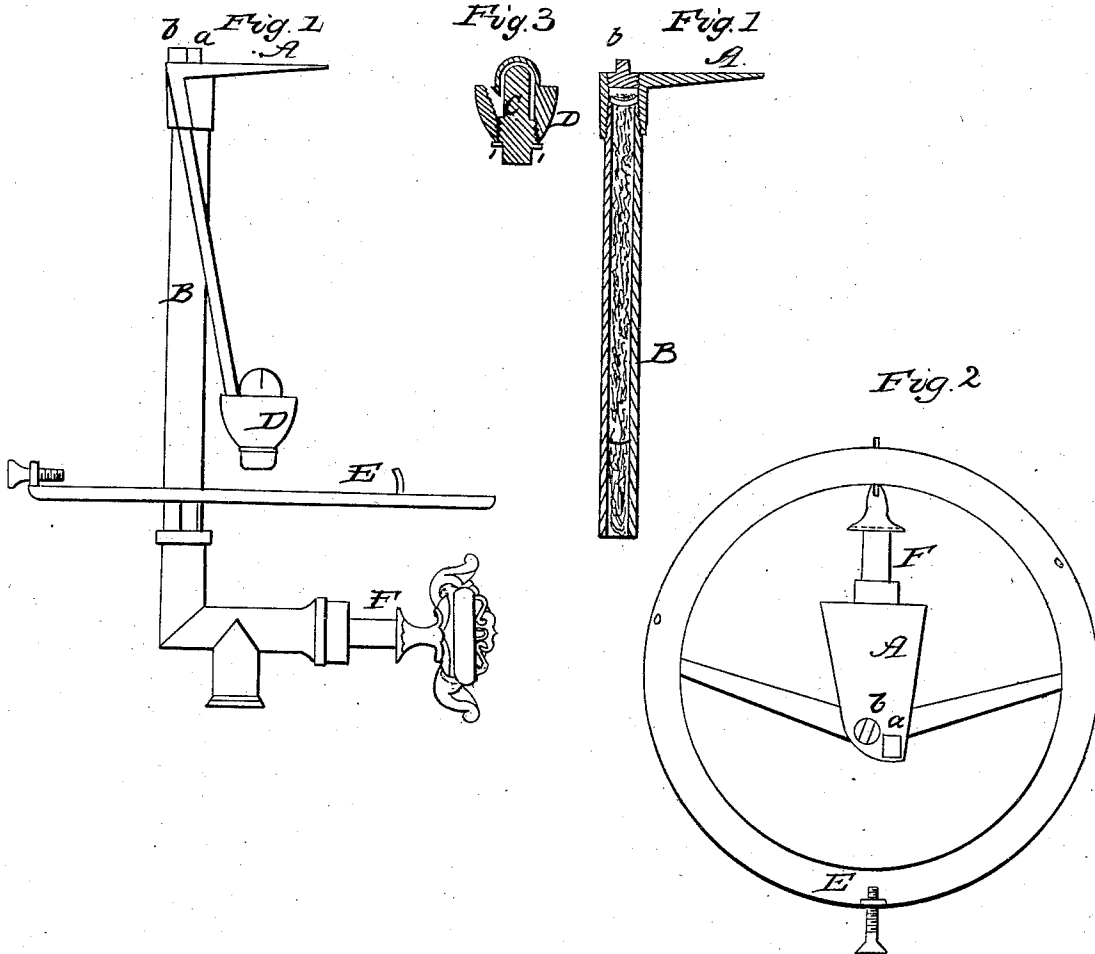


H. JOHNSON.

Vapor Lamp.

No. 27,293.

Patented Feb. 28, 1860.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY JOHNSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

VAPOR-LAMP.

Specification of Letters Patent No. 27,293, dated February 28, 1860.

To all whom it may concern:

Be it known that I, HENRY JOHNSON, of the city of Washington, in the District of Columbia, have invented a new and useful
5 Portable or Stationary Self-Generating Fluid-Gas Apparatus; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the characters of reference marked thereon.
10

Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 is a vertical section of the burner. Fig. 4 is a section of the generator and fluid pipe.

15 I will describe my improvements or invention, in order that others may be enabled to make and use it.

The nature of my invention consists in constructing my apparatus with all its pipes and passages straight, so as to avoid the difficulty in cleaning consequent on curved pipes or passages—a result as yet unaccomplished; also in constructing the generator without any cavity or chamber immediately over the flame, so as more speedily to conduct the heat to the pipes; also in placing the screw plugs of the generator immediately over and in a direct line with the fluid and gas pipes, for the purpose of cleaning more easily and effectually; also in making the burner with a flange on its standpost for making a ground-joint to prevent leakage, and in making said standpost nearly fill the cavity of the burner, for the purposes
35 hereinafter set forth.

In the drawings A is the generator, B the fluid pipe, C the gas pipe, D the burner, E the shade holder, F the key, *a* screw-plug of gas pipe, *b* the screw-plug of fluid pipe, *c* standpost of burner, *l* flange of burner.
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It will be seen that the general principle and design of this invention is similar to the invention patented by me April 12th, 1859, but is more simply and effectually attained.
45

In the construction of my generator I first cast it in one solid piece, without any cavity. I then drill in its thick rear end two holes, one at right angles with the thin part of the generator, for the reception of fluid pipe B and screw-plug *b*; the other at such an angle (for the reception of the gas pipe C and screw-plug *a*) as that when the burner is in its proper place under the generator a straight line drawn through the gas pipe, if continued, would pass through
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both generator and burner. I then make a connection between these holes by drilling a small hole leading from one to the other.

I do not confine myself to the precise form of the generator herein set forth. Its form may be varied according to fancy without materially altering the result.
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My fluid and gas pipes B and C I make straight without any curves—the one leading in a straight line from the generator to the supply pipe and the other also in a straight line from the generator to the burner, a result never before accomplished.
65

In my burner it will be seen, that it is first cast solid. It is then bored for the reception of the standpost *c*, and is then slitted. This standpost has a flange *l* which being screwed up tight against the burner forms a ground joint to prevent gas leakage. This standpost it will also be seen is so constructed as that when screwed in it entirely fills the cavity of the burner with the exception of a thin space between it and the shell of the burner. The advantages of this peculiar construction of my burner are,—in case of overflow the fluid is sooner consumed and less deposit made, the gas or vapor is produced quicker, is kept at a better temperature, and at a proper pressure. I then drill
70 a hole in my burner at such an angle as that when the burner is in proper position gas pipe C will pass into it in a straight line as above described.
75

By constructing my generator, fluid and gas pipes and burner in the manner above described I am enabled to clean the apparatus with the greatest possible ease and efficacy.
80

The key F for regulating the flow of fluid is the same as is represented in my former application. The general mode of operation is also the same.
85

When my apparatus requires cleaning, I take out screw-plugs *b* and *a* and standpost *c*. I then remove the old packing, clean out the pipes and burner, put in new packing, and replace the plugs and standpost.
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Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:
95

1. The use of straight pipes B, and C, for conveying the fluid to the heater, or generator, A, and for conveying the vapor, or gas, from heater A, to burner D, in vapor gas burners, operating as described, and for purposes set forth.
100
110

2. I claim the heater, or generator A, constructed as described, for conveying the heat to the fluid in rear of the flame, operating as set forth, and described.

5 3. I claim placing the screw plugs b, and a, above and in right lines, with the pipes B, and C, as described.

4. The burner D constructed and operating as set forth, and described, for the use of vapor gas generators.

HENRY JOHNSON.

In presence of—

CHAS. B. BURCH,
JOS. C. CLAYTON.