

H. JOHNSON.

Self Generating Fluid Gas Apparatus.

No. 27,912.

Patented April 17, 1860.

Fig. 1.

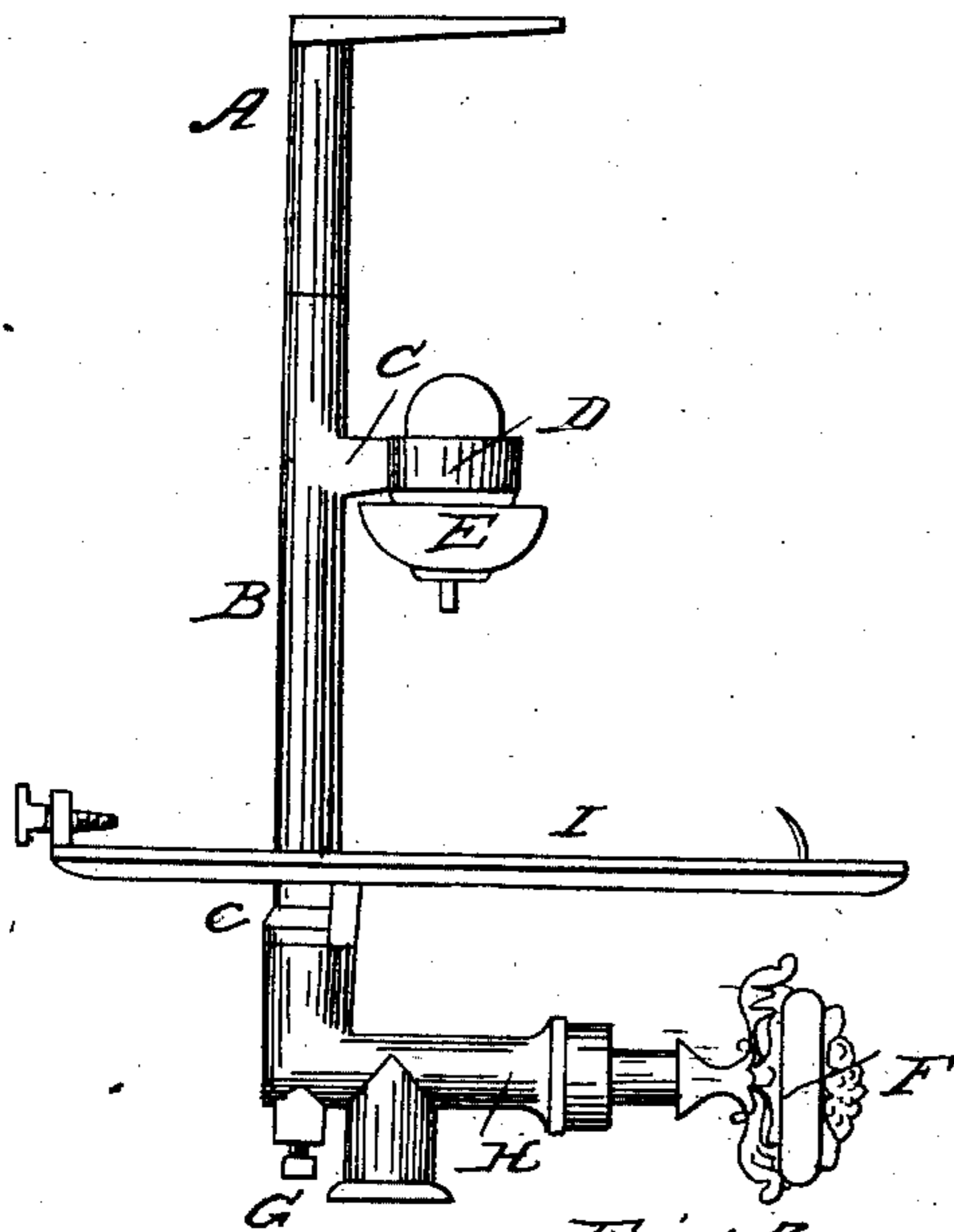


Fig. 2.

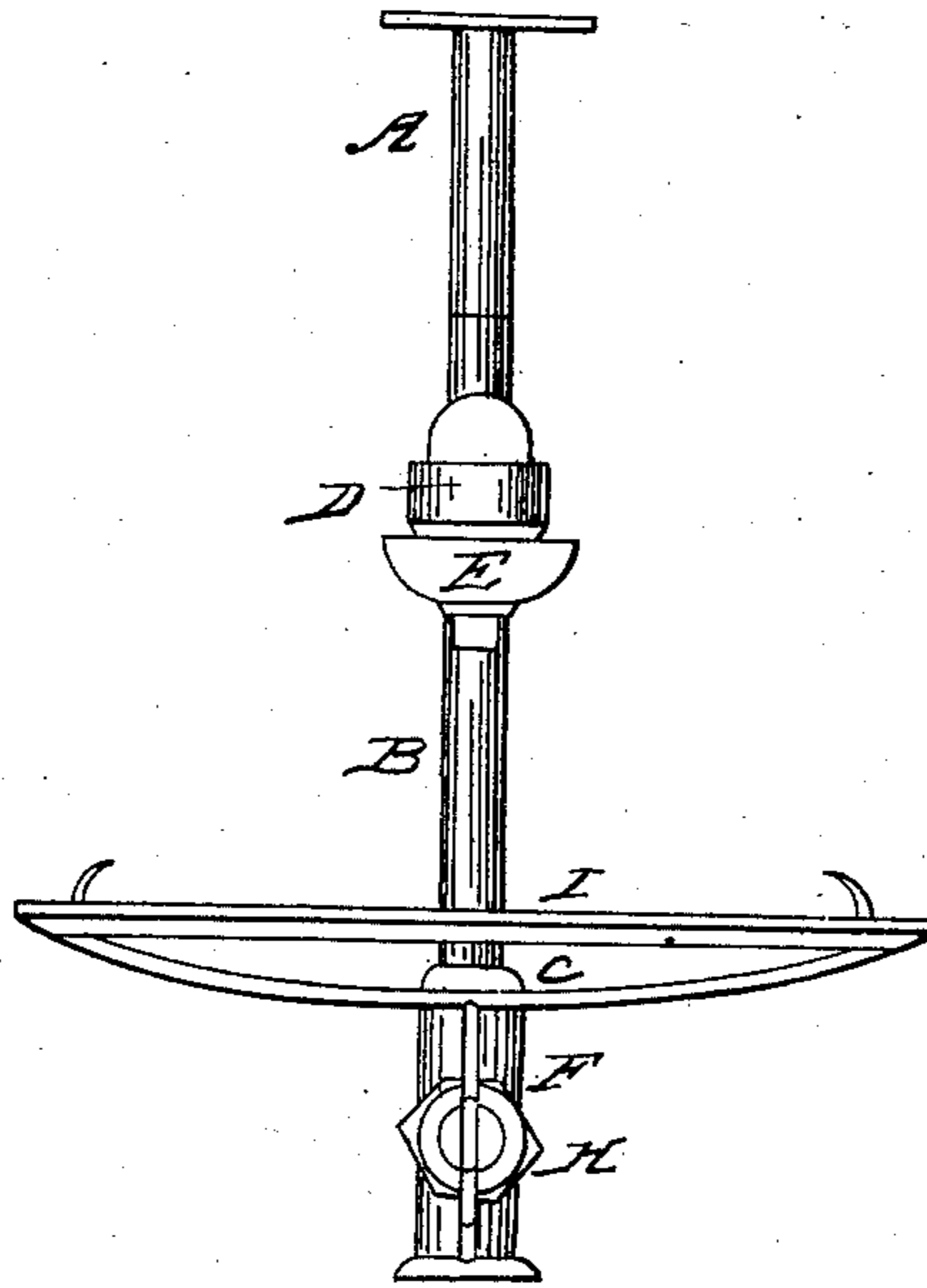


Fig. 3.

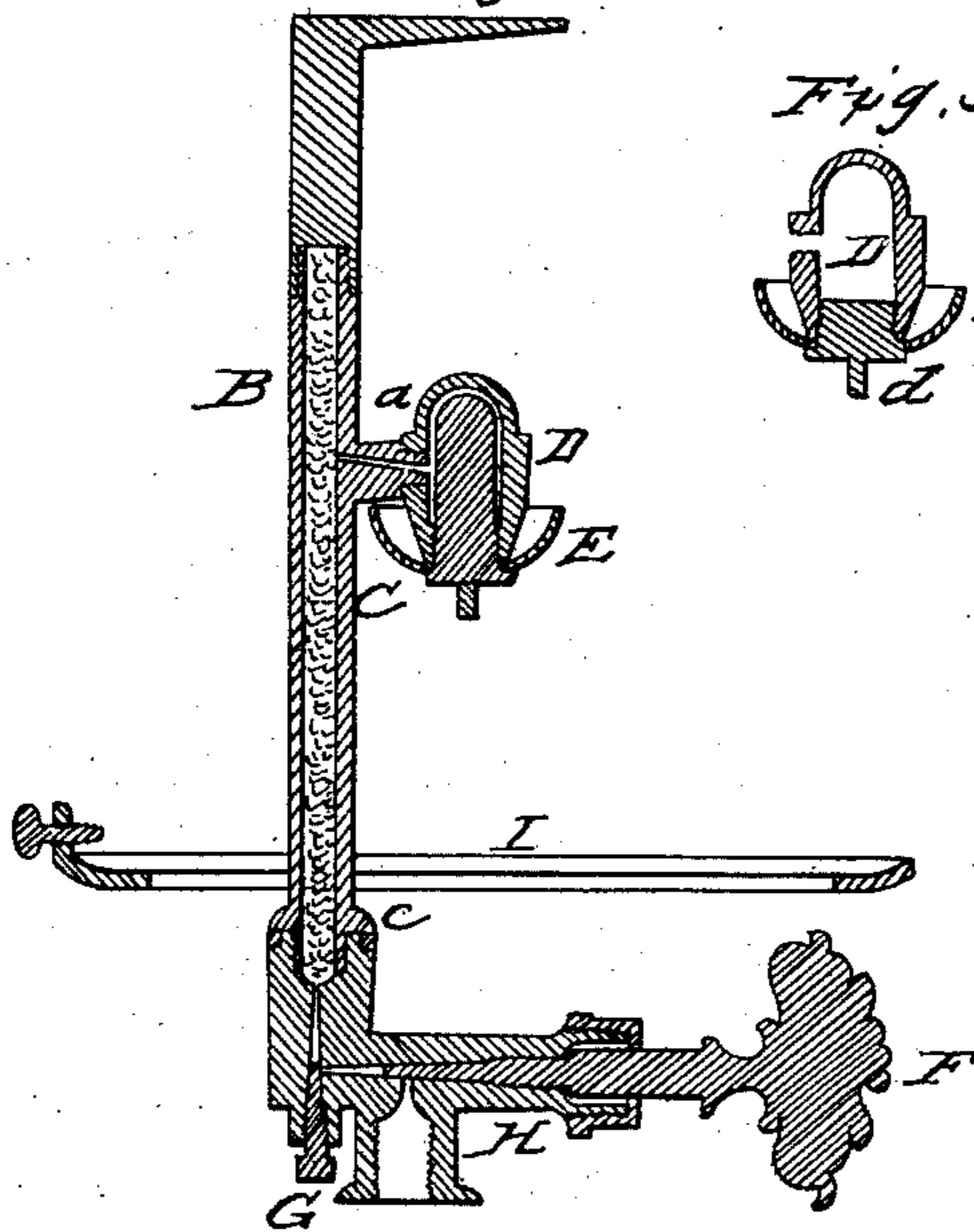


Fig. 5.

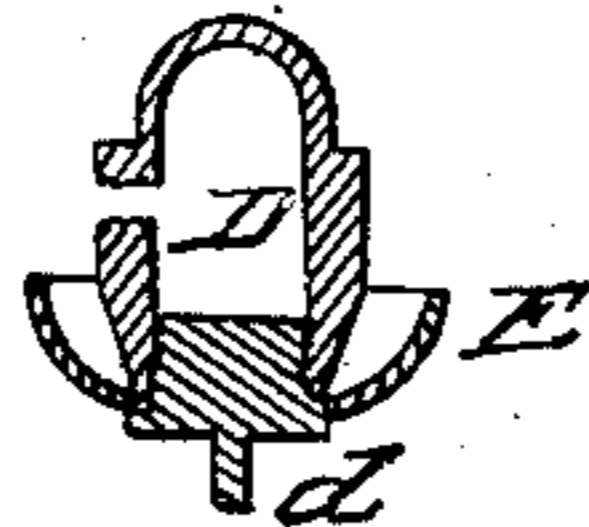
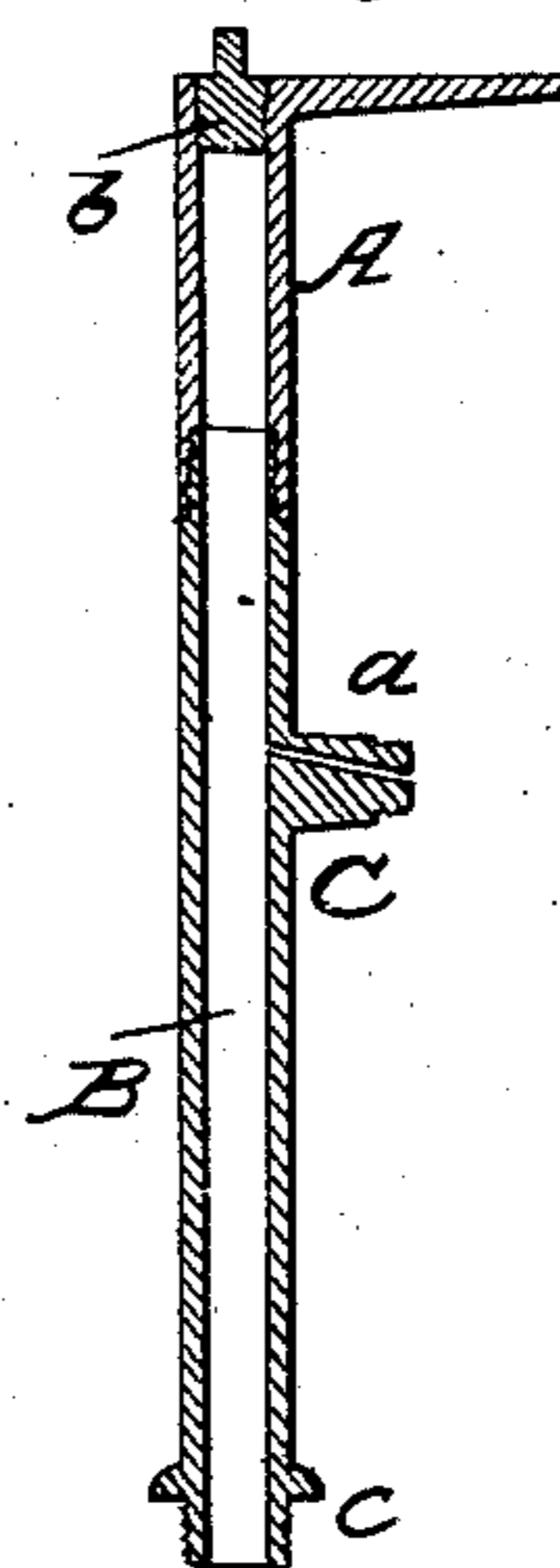


Fig. 4.



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

HENRY JOHNSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

VAPOR-LAMP.

Specification of Letters Patent No. 27,912, dated April 17, 1860.

To all whom it may concern:

Be it known that I, HENRY JOHNSON, of Washington city, in the District of Columbia, have invented certain new and useful
5 Improvements in 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 letters of
10 reference marked thereon.

In Figure 1, is a side elevation. Fig. 2, is a front elevation. Fig. 3, is a vertical section. Fig. 4, is a vertical section of pipes and heater. Fig. 5, is a section of the
15 burner without a stand post.

In order that those skilled in the art may make and use my invention, I will describe its construction and operation.

In the drawings, A is the solid heater, or
20 generator; B, the fluid pipe; C, the nib or stud projecting from fluid pipe for the attachment of the burner D, and having a passage *a* drilled through it, forming the connection between the burner and the fluid
25 pipe; E, the igniting cup; F, the regulating key; G, the regulating set-screw; H, the packing box; I, the shade holder.

In the construction of my invention it will be seen that the heater A is made of a
30 solid piece of metal of suitable shape, and is attached to the fluid pipe B, permanently in general, but may be so attached as to be removable. I generally make my heater or generator with a solid shank as represented
35 in Fig. 3, but I may make it as represented in Fig. 4, *i. e.* with the shank drilled through, and the upper end closed with the screw-plug *b*. In this invention it will be seen, that the gas pipe leading from the
40 heater or generator, (as in other fluid gas apparatus,) is dispensed with; instead of such device I use the hollow nib C, which is a projection of the pipe B. The hollow-nib C has the burner fastened on it by a screw.
45 The fluid-pipe B has a flange *c* at the bottom or lower end of it, for the purpose of preventing leakage, by forming a tight-joint. The burner D has attached to it an igniting cup E, which may be done by the flange on
50 the screw-plug *d*, or it may be turned out of the same piece of metal with the burner. It will be seen that the regulating screw G, is placed at such a point between the fluid pipe and supply, as to regulate the proper
55 flow of the fluid; and is intended to permit no more fluid to pass than can be consumed;

I do not confine myself to the precise location set forth, for it may be placed at almost any point between the fluid pipe and the reservoir. The key F regulates and dimin- 60
ishes the flame by lessening the quantity of fluid capable of reaching the fluid pipe. In Fig. 5, the burner has a simple solid screw plug *d*, without stand post. In the operation of my invention, the regulating 65
set-screw G is set in such a manner as to permit the fluid to pass into the fluid pipe just as fast, and no faster, than it can be consumed at the burner; the key F, which acts in conjunction with the set-screw G, is 70
then opened, and the igniting cup E filled, either by the overflow of fluid from the fluid pipe, or by a portable oil or fluid-can. A light then being applied, the fluid in the cup becomes ignited, and the generator or 75
heater becomes heated. The heat communicated by the heater to the fluid pipe so vaporizes the fluid in the packing (shown in red) as that the vapor must escape at the first vent; which is the passage *a* into the 80
burner; the vaporization, also, is further aided by the heat conveyed from the burner by means of projecting nib C, to the fluid pipe; the great heat at the passage *a* further assists in the forcible escape of the vapor or 85
gas. The pipe B acts at the same time as a fluid pipe, as a generator, and, when connected with nib C, as a gas pipe. I do not confine myself to the use of the burner shown in Fig. 3, for I can almost equally 90
well use the burner shown in Fig. 5, or the burner used in my patent of April 12th 1859. The ordinary apparatuses for similar purposes gum up, (obstructing flow of fluid and vapor;) that is, the impurities of 95
the fluid and the charring of the packing, render the upper portion of the packing so dense as to keep the fluid from passing through it; but in this case, all that portion of the packing above the passage *a* may be- 100
come gummed up, charred, and perfectly dense, before there is any necessity for cleaning. Because this portion which may become dense without affecting the light is so great, so very much larger than has yet 105
been used, I am enabled to burn this light a much longer time without cleaning than has ever before been done.

Having thus described my invention, what I claim as new and useful and desire to se- 110
cure by Letters Patent, is;—

1. The pipe B when used as a fluid-pipe

and generator or vaporizer, and also when
used as a gas-pipe in connection with nib
C, for the conveyance of fluid from the sup-
ply pipe, for generating or vaporizing, and
5 for conveyance of gas or vapor to the burner.

2. The combination of the two regulating
set-screws or keys G and F, operating sub-

stantially as set forth, and for the purposes
described.

HENRY JOHNSON.

Witnesses:

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