No. 880,110. PATENTED FEB. 25, 1908.

L. SUSSMAN.

ACETYLENE GAS GENERATOR.

APPLICATION FILED APR. 28, 1906.

Fig. 1.

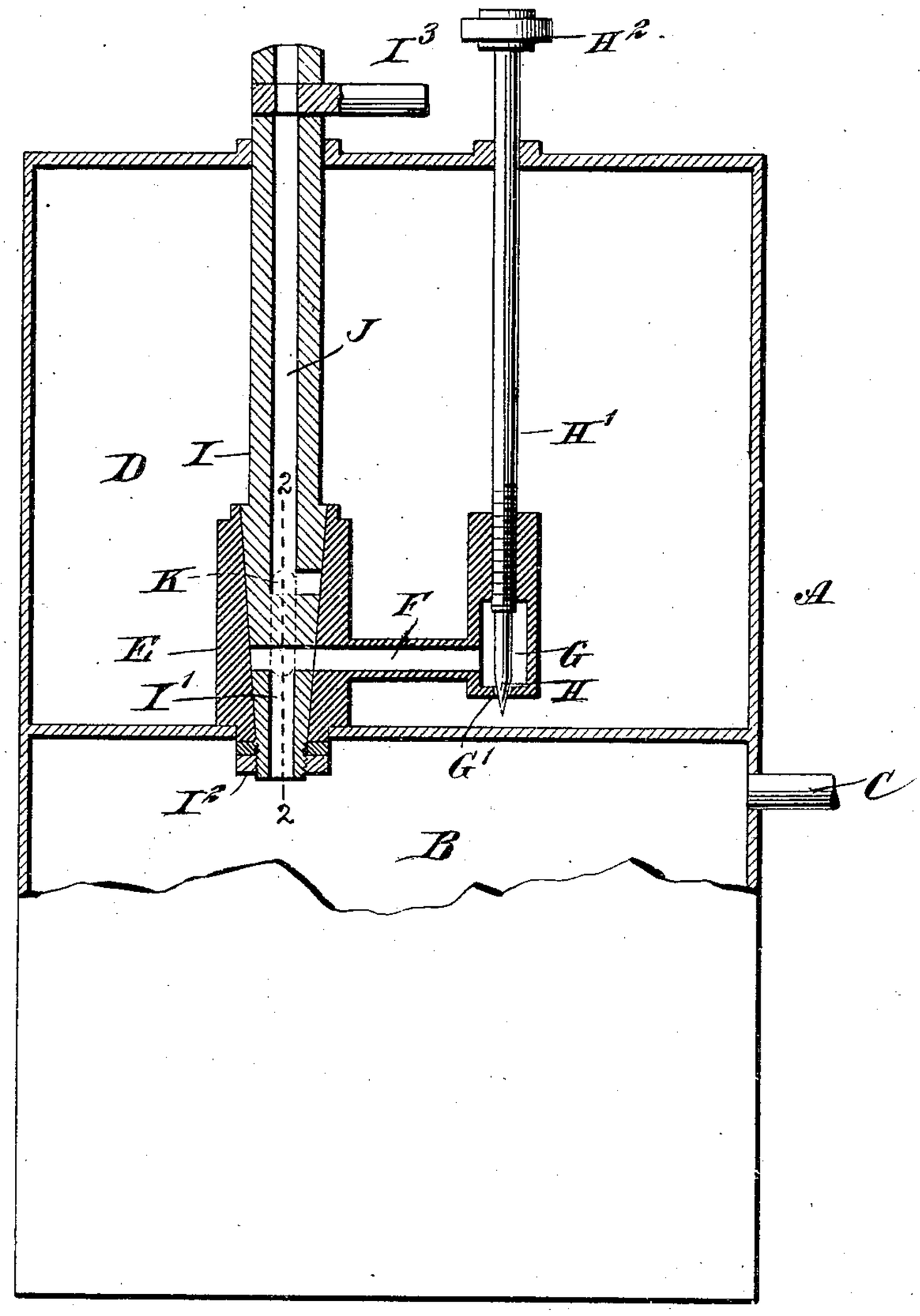
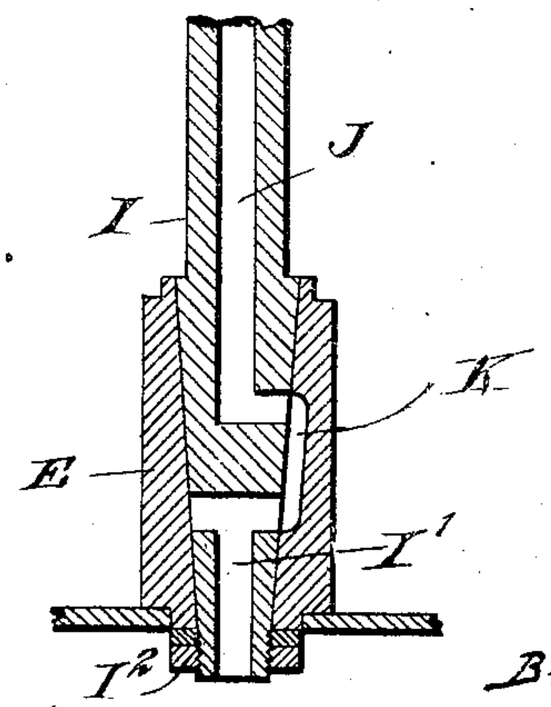


Fig. 2.



WITNESSES

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ACETYLENE-GAS GENERATOR.

No. 880,110. Specification of Letters Patent. Patented Feb. 25, 1908.

Application filed April 28,1906. Serial No. 314,114.

To all whom it may concern:

Be it known that I, LEON SUSSMAN, a citizen of the United States, and a resident of Bayonne, Hudson county, and State of New Jersey, have invented certain new and useful Improvements in Acetylene-Gas Generators, of which the following is a specification.

My invention relates to acetylene gas generators and has for its object to provide such generators with a device for preventing explosion.

Other objects of my invention will appear from the annexed description and the feature of novelty will be pointed out in the appended claims.

Reference is to be had to the accompanying drawings in which

Figure 1 is a central vertical section of a generator with my device applied thereto and Fig. 2 is a section thereof on line 2—2 of Fig. 1.

A represents the generator which is provided with the usual chamber B for containing the carbid and which is connected as by a pipe C with the place of consumption of the gas.

D is a chamber for containing water which is not connected with the chamber B excepting as hereinafter specified.

E is a valve casing which is connected by a passage or channel F with the chamber G, having an opening G′ controlled by a needle valve H. The stem H′ of this needle valve extends to the outside of the generator and is provided with an operating knob H^2.

I is a safety valve which is seated in the casing E and which is provided with a passage or channel I′ which extends into the chamber B and which at certain times is adapted to register with passage or channel F. The valve I is further provided with a second passage or channel J which extends above the generator into the outer air for the purpose to be described hereinafter. The member E is provided with a recess K which is adapted under certain conditions to throw the passage or channel J into communication with the passage or channel I′ as will be more fully brought out hereinafter. The valve I is secured in position by means of a nut I^2.

In operation when the parts are in the position shown in Fig. 1 of the drawing, water will flow up through the opening G′ into the chamber G and through the passages or channels F and I′ into the chamber B where it will contact with the carbid and generate the gas which will pass through the pipe C to the point of consumption. The flow of water may be controlled by means of the needle valve H. Assuming that a sufficient pressure of gas has been obtained at the point of consumption, and it is desired to prevent any greater pressure, the valve I is turned by means of the handle I^3 until the passages or channels I′ and J communicate with the recess K and thus with each other. This operation closes the passage or channel F and prevents any more water from reaching the carbid and at the same time permits the gas which may be generated by the water already in contact with the carbid to escape through the passages or channels I′, K and J to the outer air. Suitable devices may be arranged at the top of the generator to indicate the exact position of the valve I and H. With my device excessive pressure of gas is thus prevented and the danger of explosion from such pressure is thus obviated.

Various modifications may be made without departing from the nature of my invention as defined in the claims.

I claim:

1. In an acetylene gas generator, a carbid chamber and a water chamber, a valve which in one position establishes communication between the two chambers and which in another position throws the carbid chamber into communication with the outer air, and another valve located in the connection between the water chamber and the first-named valve and provided with a stem which extends outside of said chamber for regulating the flow of water to the carbid chamber.

2. In an actylene gas generator, a carbid chamber and a water chamber, a valve casing having connection with both chambers and provided with a recess, a valve mounted to turn in said casing and provided with two longitudinal channels disconnected from each other, one of which is adapted to admit water to the carbid chamber and the other of which always communicates with the outer air, said longitudinal channels being adapted to be brought into connection with each other through the medium of the recess in the valve casing when the valve is in one of its positions.

3. In an acetylene gas generator, a carbid

chamber and a water chamber, a valve casing having connections both with the water chamber and with the carbid chamber, a valve located in the water chamber and controlling the passage of water into the valve casing, and an independent valve also located in said water chamber and having two channels, one for controlling the passage of water from said casing to the carbid chamber, and the other for connecting the carbid chamber with the outside air when the said water supply channel is closed.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

LEON SUSSMAN.

Witnesses:
JOHN LOTKA,
JOHN A. KEHLENBECK.