No. 611,002. Patented Sept. 20, 1898.

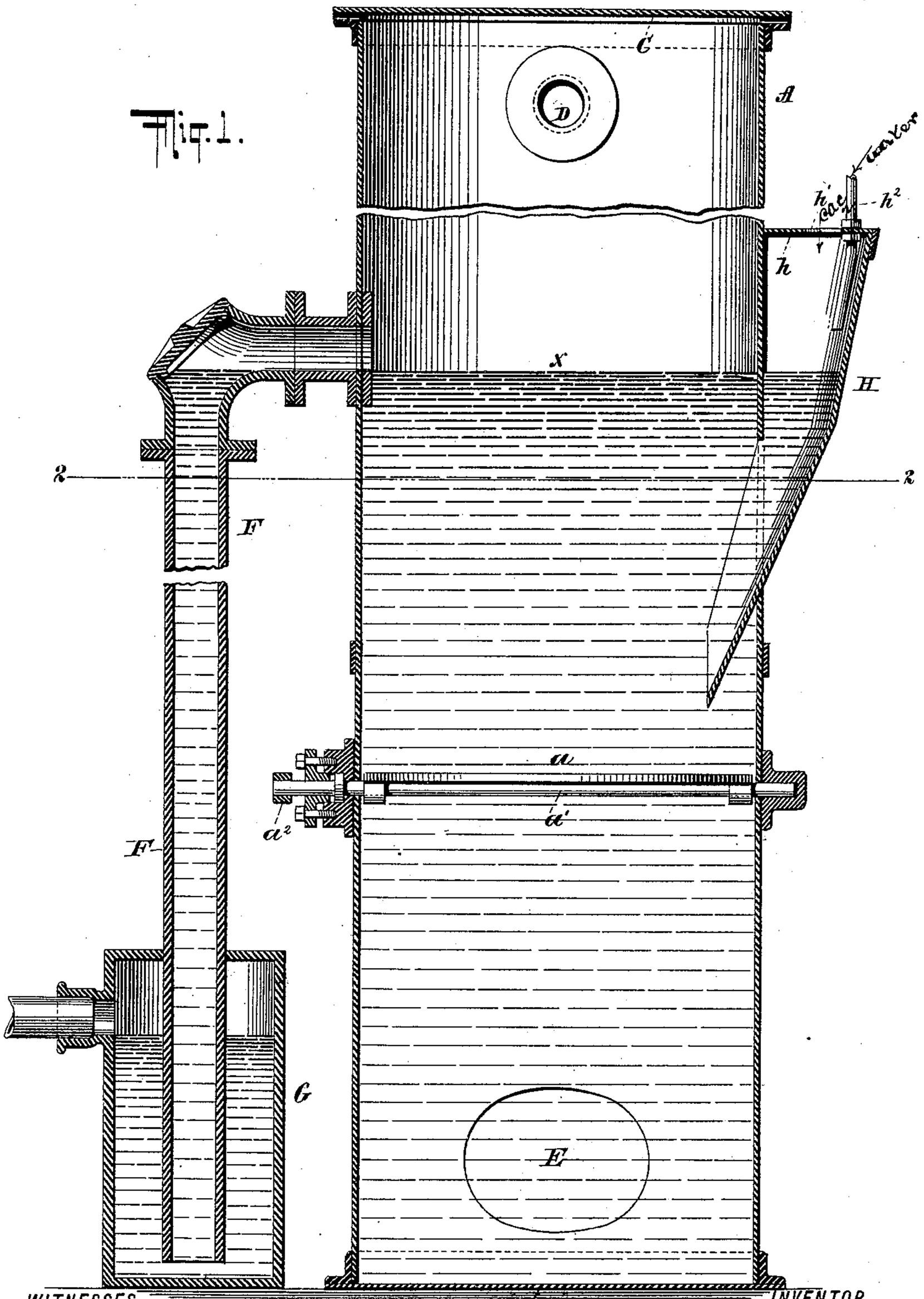
R. PINTSCH.

ACETYLENE GAS GENERATOR.

(Application filed Oct. 30, 1896.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



WITNESSES

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Fred. C. Howard

INVENTOR

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Fig. 2.

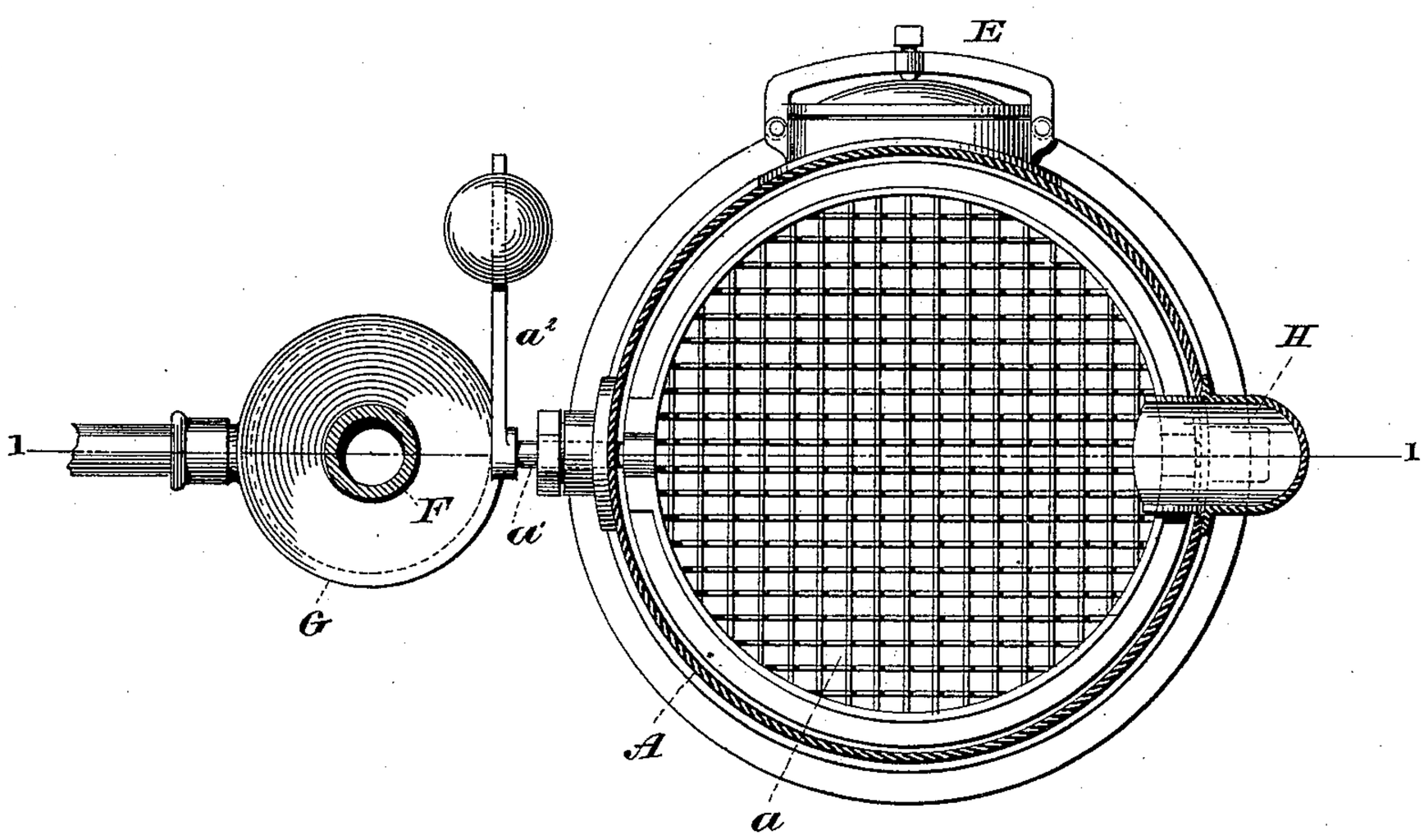
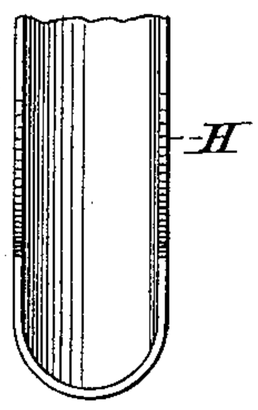


Fig. 3.



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UNITED STATES PATENT OFFICE.

RICHARD PINTSCH, OF BERLIN, GERMANY, ASSIGNOR TO THE SAFETY CAR HEATING AND LIGHTING COMPANY, OF NEW YORK, N. Y.

ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 611,002, dated September 20, 1898.

Application filed October 30, 1896. Serial No. 610,542. (No model.) Patented in Switzerland September 19, 1896, No. 12,865, and in England October 31, 1896, No. 20,602.

To all whom it may concern:

Be it known that I, RICHARD PINTSCH, a resident of Berlin, Germany, have invented Improvements in Acetylene-Generators, (for which British Letters Patent No. 20,602, dated October 31, 1896, and Swiss Patent No. 12,865, dated September 19, 1896, have been obtained,) of which the following is a specification.

My invention relates to acetylene-generators, and has for its object to produce an acetylene-generator of simple construction in which large quantities of acetylene may be generated without danger to life or property.

In acetylene-generators as at present constructed carbid is used in a comminuted form in the generator, and owing to the heat thereby produced the apparatus is dangerous and has to be cooled by water-jackets or analogous coolers.

The essence of my invention is an acetylene-generator in which lumps of calcium carbid are suspended under water, so that the heat occasioned by the decomposition of the water will be conducted away rapidly and will also be limited in degree to the temperature of boiling water, as will be obvious.

My invention will be understood by referring to the accompanying drawings, in which—

Figure 1 is a sectional elevation of an apparatus embodying my invention. Fig. 2 is a horizontal section therethrough, the section being taken on the line 2 2 of Fig. 1; and Fig. 3 is a detail view of the end of the carbid chute or funnel.

In the drawings, A is the body portion of the generator, which is shown as a cylindrical vessel closed at both ends by heads B C. At or near the top of this generator an exit-pipe D is provided, through which pipe the acetylene may be drawn off. At or near the bottom I have shown a manhole E, through which the residue from the operation may be removed. At or about the middle of the cylindrical body I have shown a water-draw-off pipe F, by which the water-level is maintained constant and which dips into a water seal G. Located within the cylindrical body A at some distance below the level of the upper end of the pipe F is a grate *a*, which is movable, being here shown as turning on an axle *a'*, which is manipulated by a handle a^2. This grate, however, may have movements other than rotary movements—such, for instance, as a sliding or swinging movement, this movement being for the purpose of changing the position of the grate to enable it to be cleaned. In the side of the body A and communicating with its interior is a chute or funnel H, having a cover *h*, provided with an aperture *h'*, through which the lumps of carbid may be dropped, and with a water-pipe h^2, through which water is introduced into the apparatus, the particular advantage of introducing the water at this point being that it will fall upon the chute or funnel and act upon any carbid-dust that may be in the funnel.

The operation of my apparatus is as follows: Water is introduced into the body A through the pipe h^2 and is continuously supplied to said body by the said pipe. As soon as the water-level has risen to the line *x* water begins to flow off through the pipe F, which pipe serves to maintain the water-level constant. Calcium carbid is introduced into the apparatus through the aperture *h'* and falls down the chute onto the grate *a*, which is at a considerable distance below the water-line. There the carbid decomposes the water and acetylene is formed, which rises through the water and occupies the free space above the water-line in the body A, from which it may be drawn off through the exit-opening D.

What I claim, and desire to secure by Letters Patent, is—

1. In an acetylene-generator, the combination of a hollow liquid-containing body, a grate movably mounted therein, means for introducing carbid into the hollow body and conducting the same to the grate and means for maintaining the grate constantly immersed, whereby the carbid which rests upon the grate may be constantly immersed in a body of water.

2. In an acetylene-generator, the combination of a hollow liquid-containing body, a grate reversibly mounted therein, means for introducing carbid into the hollow body and

conducting the same to the grate and means for maintaining the movable grate constantly immersed, whereby the carbid which rests upon the grate may be constantly immersed in a body of water.

3. In an acetylene-generator, the combination of a hollow body A, a grate *a* mounted therein, a funnel or chute H for introducing carbid into the apparatus, a water-inlet pipe h^2 and a water-outlet pipe F arranged to maintain the water-level in the apparatus at a greater height than the position of the grate, and means for removing the acetylene from the apparatus.

4. An apparatus for producing acetylene gas, comprising a closed receptacle having therein a pivoted horizontal grating, a lever located outside of the casing and connected to the grating so as to rotate the same on its pivot, an overflow-pipe F for maintaining a constant water-level dipping into a water seal G and a laterally-charging hopper or chute H, the said parts being combined and operating, substantially as herein described.

RICHARD PINTSCH.

Witnesses:
W. HAUPT,
HENRY HASPER.