

No. 640,646.

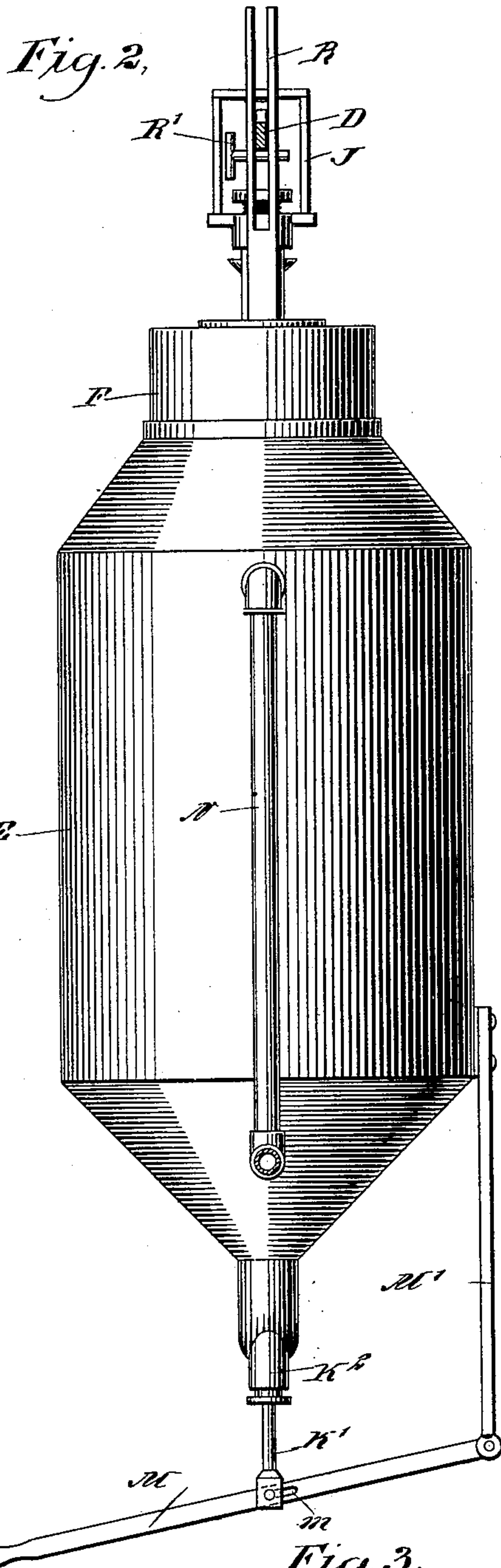
Patented Jan. 2, 1900.

A. F. GAIENNIE.
ACETYLENE GAS APPARATUS.

(Application filed Jan. 13, 1899.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:
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Fig. 3.

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UNITED STATES PATENT OFFICE.

ALPHONSE FLORESTAN GAIENNIE, OF THIBODEAUX, LOUISIANA, ASSIGNOR
TO HIMSELF AND JOHN LECHE, OF SAME PLACE.

ACETYLENE-GAS APPARATUS.

SPECIFICATION forming part of Letters Patent No. 640,646, dated January 2, 1900.

Application filed January 13, 1899. Serial No. 702,057. (No model.)

To all whom it may concern:

Be it known that I, ALPHONSE FLORESTAN GAIENNIE, of Thibodeaux, in the parish of Lafourche and State of Louisiana, have invented
5 a new and Improved Acetylene-Gas Apparatus, of which the following is a full, clear, and exact description.

My invention relates to an improvement in apparatus for the generation of acetylene gas,
10 and comprises the novel features hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification,
15 in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of my device. Fig. 2 is an elevation of the generator,
20 and Fig. 3 is a plan of the lever connecting the generator and the gasometer by which the supply of carbid is regulated.

My device is intended for using carbid in a pulverized form, and the gas is generated by dropping this pulverized carbid in small quantities into an excess of water, the operation of
25 the carbid-feeding device being controlled by the rise and fall of the gasometer-bell. The gasometer used is of that type which includes an open tank A and an inverted bell B, the tank A being supplied with water and the
30 bell B moving up and down within the tank and with its lower edge in the water. The tank A is, however, provided with a central cylinder C, which extends to an elevation equal to or it may exceed the elevation of the
35 sides of the tank A. This central cylinder has a certain amount of water therein, but ordinarily a much less amount than is contained between the cylinder C and the walls of the tank A. This cylinder acts as a purifying-chamber, the gas being introduced
40 through the pipe N and discharged beneath the surface of the water, the gas being purified by passing upward through the water. The gas is discharged from the gasometer
45 through the pipe P, which at its upper end is bent into the form of a hook, so as to open downward. The discharge from the pipe N is through downwardly-curving sections of pipe O, as shown in Fig. 1.

50 The generator-tank E is preferably provided with a conical or sloping bottom, which ter-

minates in a discharge-opening normally closed by a valve K, and a pipe L is connected with the bottom of the tank, so as to carry away the water from the tank. A valve-
55 stem K' extends through a stuffing-box K² to the outside, and is connected with a lever M, by which the valve may be opened or closed when desired. The lever M is pivoted by one end to a bar M', which is attached to the gen-
60 erator, and is also connected with the valve-stem K' by means of a slot m, through which passes a pin carried by the valve-stem. By raising the lever M the valve K is raised and the water and lime discharged from the gen-
65 erator-tank. The tank is also provided with a hand-hole covered by a plate e, secured in any desirable manner. It is also provided with a filling-valve e', located in the side of the tank at or near the water-level. 70

Upon the upper end of the generator-tank is placed the carbid holder or hopper F, which has a conical bottom terminating in a discharge-opening F' within the generator-tank. Passing through this discharge-open-
75 ing and through a stuffing-box at the upper end of the carbid-holder is a valve-stem G', upon which is mounted a valve G, adapted to close the discharge-opening F'. To the lower end of the valve-stem G' is secured a weight
80 G², which is formed as a cone and in addition to securing the closing of the valve acts as a distributor to scatter the carbid when it falls into the generator. The upper end of the valve-stem G' passes through a sleeve or cyl-
85 inder H, which is of sufficient length to prevent that part of the stem which comes directly into contact with the carbid from entering the stuffing-box. Upon one side of the carbid-holder F is placed a bar or yoke R,
90 which extends upwardly and receives the operating-lever D between the two sides thereof. This yoke is provided with a removable pin R', which acts as a fulcrum for the lever D. The lever D is shown in plan in Fig. 3, and has a
95 central section thereof, D', formed as two bars separated from each other sufficiently to allow it to embrace one of the posts a, which serve to guide and control the gasometer-bell in its rise and fall. 100

The lever D is connected by a link d to the top of the gasometer-bell, and at its opposite

end passes through a yoke J, which is secured to the carbid-holder F, or in any other suitable manner is made stationary. This lever D is also connected to a block g, which is secured to the valve-stem G'. When the gasometer-bell rises, it leaves the valve G free to close under the influence of the weight G² and also of the weight of one end of the lever D. This prevents any feeding of the carbid to the generator-tank until the gasometer-bell has fallen to such a position that the lever comes in contact with the fulcrum-pin R'. When this occurs, the valve G is raised until the pulverized carbid passes through the opening F' into the generator. This causes a generation of gas, which causes the gasometer-bell to rise until the valve G is again closed. The carbid-holder F is filled through a valve I, which may be of any suitable construction and which is provided with a funnel I' for convenience in charging the holder.

The gas is conveyed from the generator to the gasometer through the pipe N, which is provided with a check-valve N' to prevent backflow of the gas when the generator is opened for any purpose.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

30 1. An acetylene-gas apparatus, comprising a generating-tank, a carbid hopper or holder having a gravity discharge into the generator-tank, a valve movable to open and close the discharge-opening, the stem of said valve extending vertically through the carbid-holder and extending above the same, a gasometer, a lever connected at one end with the gasometer-bell, a guide-yoke receiving the lever and having a removable fulcrum-pin, and a yoke 40 carried by the carbid-holder and through which the other end of said lever extends, the said lever being connected with the upper end of the valve-stem, substantially as described.

2. An acetylene-gas apparatus, comprising 45 a generating-tank, a carbid hopper or holder having a gravity discharge into the generator-tank, a sleeve or cylinder projecting from the upper part of the carbid-holder, a valve movable to open and close the discharge-opening, the stem of the valve extending vertically through the carbid-holder and sleeve 50 and projecting above the same, a gasometer,

a lever connected at one end by a link with the top of the gasometer-bell, a fulcrum for the lever, a yoke secured to the carbid-holder 55 and through which the other end of the lever passes, and a block connected with the upper end of the valve-stem and to which the said lever is secured, substantially as described.

3. An acetylene-gas apparatus comprising 60 a generating-tank having a valve-controlled discharge-opening in its bottom, a carbid-holder discharging into the upper end of said tank, a valve movable to open and close the discharge-opening of the carbid-holder, the 65 stem of said valve extending through the carbid-holder and projecting above and below the same, a gasometer connected with the said generating-tank, a lever connected at one end with the gasometer-bell, a guide-yoke receiving the lever and provided with a fulcrum-pin for the lever, a yoke through which the other end of the said lever extends, the said lever being connected with the upper end of the valve-stem and a weight at the lower end 75 of said valve-stem within the generator, substantially as described.

4. An acetylene-gas generator, comprising a tank having a carbid holder or hopper discharging into its upper end, the said tank 80 being provided with a valve-controlled discharge-opening in its bottom, a valve-stem extending vertically through the carbid-holder and projecting above and below the same, a valve carried by said stem within the 85 carbid-holder and adapted to close the discharge-opening in the bottom of the carbid-holder, a removable conical weight suspended by a hook from the lower end of said valve-stem, the said weight being located within 90 the generator and below the discharge end of the carbid-holder, and a lever connecting the upper end of the stem and the gasometer-bell for operating said valve, the said conical weight serving to secure the closing of the 95 valve and also acting as a distributor to scatter the carbid passing from the discharge-opening of the carbid-holder, substantially as described.

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Witnesses:

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