

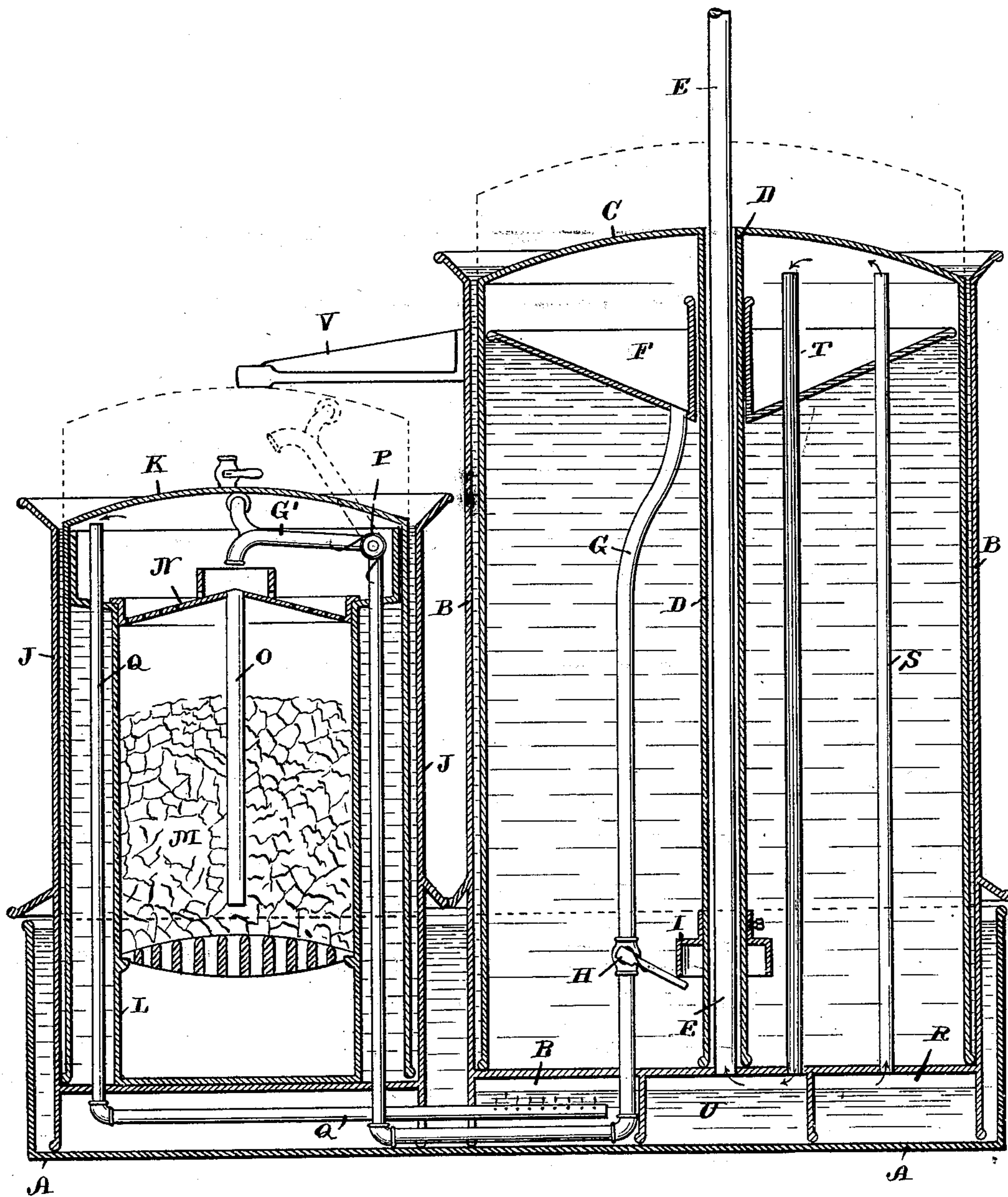
No. 611,885.

Patented Oct. 4, 1898.

W. J. BAULIEU.
ACETYLENE GAS GENERATOR.

(Application filed Apr. 23, 1898.)

(No Model.)



Witnesses.

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WILLIAM J. BAULIEU, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR OF ONE-HALF TO JOHN D. CARPENTER, OF SAME PLACE.

ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 611,885, dated October 4, 1898.

Application filed April 23, 1898. Serial No. 678,604. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BAULIEU, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Acetylene-Gas Machines, of which the following is a specification.

This invention relates to new and useful improvements in acetylene-gas machines such as are used to manufacture illuminating-gas for local purposes.

It is the object of my invention to improve upon generating and storing apparatuses for the above purpose, and particularly to produce novel mechanism for delivering quantities of water from a reservoir to the carbid within the generator; further, to provide automatic mechanism for regulating said supply of water by the varying quantity of gas accumulated within both the generator and reservoir, and, finally, to arrange the generator with a body of water for the purpose of retaining the same at a cool and even temperature.

With the above objects in view my invention resides and consists in the novel construction and combination of parts illustrated upon the accompanying drawing, forming a part of this specification and illustrating a central vertical longitudinal sectional view of my machine complete, and on which similar characters of reference denote like or corresponding parts.

Referring to the characters of reference marked upon the drawing, A indicates a base in the form of a pan, in which both the generator and receiver are mounted and which in practice is filled with water to surround said parts.

B indicates a tank, and C a telescopic gas-reservoir slidably mounted therein. The tank B is provided with water, which surrounds and enters the reservoir to form a seal for the same. The reservoir C is provided with a central depending tube D, which surrounds the service-pipe E, as clearly appears in the drawing. Supported within the reservoir and disconnected therefrom I provide a concave disk F, having a drain-pipe G, through which a supply of water is taken from the interior

of said reservoir and delivered to the carbid within the generator. This disk, as will be apparent, is located within the upper portion of the reservoir and serves to take water therefrom, thereby using the surface and impurest water thereof. 55

From the foregoing it will be apparent that the reservoir is free to rise and fall by the pressure of gas therein and independently of the disk before mentioned. 60

Within the pipe G, I provide a spring-actuated valve H, having a lever extended therefrom in a manner to be engaged by bracket I, secured to the tube D. The action of this construction is to automatically close the valve as the tube and bracket are raised by an excessive amount of gas within the reservoir and to open said valve when said reservoir drops down to the position shown in the drawing. 70

Within the base A and detachably connected therefrom is mounted the generator, which comprises a tank J, having therein a telescopic receiver K, which fits over the generating-basket L, as shown in the drawing. In practice the tank J is filled with water in a manner to seal the receiver K, located therein. The carbid M is located within a basket and can be placed upon a suitable grating, as shown. Said basket is provided with a cover N, which is preferably perforated and provided with a depending pipe O, through which water is fed to the interior surfaces of the carbid. This water, as will be apparent, is delivered upon the top of the cover N from the hinged pipe G', which latter is connected through valve-pipe P with pipe G, connecting through valve H with the disk before mentioned. The valve P, like the valve H, is spring-actuated and is operated by the movement of the telescopic receiver. K in a manner to further control the making of gas. Said section serves to open the valve when in the position shown in full lines and the spring serving to close it when in the position shown in dotted lines. It will thus be apparent that the water which acts upon the carbid is taken from the interior of the receiver and delivered through pipes G and G' upon the top of the cover N of the basket within the generator. The gas formed there- 75 80 85 90 95 100

by rises and escapes through pipe *q*, by which it is carried down and across the base and discharged into a body of water within the annular compartment *R* beneath the tank *B*.

5 From this compartment the gas rises through pipe *S* and is delivered into the upper surface of the reservoirs, which automatically rise and fall in accordance with the quantity of gas therein. From the reservoir the gas
10 is delivered for consumption down through pipe *T*, central compartment *U*, and up through service-pipe *E*, before mentioned.

It will be obvious to those skilled in the art that carbid when in action becomes heated
15 and will in turn heat the generator, which is objectionable. The water in which the basket and section *K* rest serves to cool said basket to some extent; but inasmuch as this water is idle, having no special source of supply, it
20 will likewise become heated, and thereby retain the heat within the basket to some extent. For this reason I further provide a base, as before designated, which surrounds the said generator, and its walls may extend
25 well upon the sides. This base also surrounds the tank of the receiver, and owing to its special shape and exposure serves to desirably cool the generator and its contents, the practical action of the water therein being to
30 rise in the immediate vicinity of the generator and move over to the receiving-tank, where it cools, and then settling to the bottom and returning to the base of the generator, where the action is repeated, the effect being to
35 keep the same at a cool and uniform temperature. I preferably cover the surface of the water around the basket within the generator with oil, which prevents vapor from rising therefrom as the carbid becomes heated
40 and generating gas when the water is shut off.

In order to limit the movement of the telescopic receiver *K*, I provide a bracket *V*, which may be attached to the tank *B*, as shown in the drawing.

45 The special features illustrated in this case for delivering the gas to the receiver through the water-chamber are covered by a separate application, and therefore form no part of this invention, the latter comprising novel means
50 for automatically conveying the water from the receiver to the generator and also in the desirable means for compactly inclosing the generator and receiver within a single fluid-receptacle.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a gas-machine of the class specified, the combination with a generator, of a water-sealed gas-reservoir of a diameter nearly as great as that of said reservoir, a concave disk within said reservoir, connections from said disk to the generator for conveying water from the former to the latter, substantially as described.

2. In a gas-machine of the class specified, the combination with a generator, of a water-sealed expansible gas-reservoir, a concave disk within said reservoir and below the normal water-line thereof, connections from said disk to the generator, means for automatically controlling the flow of water there-through by the movement of said reservoir, substantially as shown.

3. In a gas-generating apparatus, the combination with a generator, of a water-sealed and vertically-movable gas-reservoir, a tank in which said reservoir is mounted, a concave disk within said reservoir and adapted to take the surface water therefrom, a drain-pipe leading from said disk, means for automatically regulating the flow through said drain.

4. A gas-machine substantially as herein shown and described, and comprising in combination, a water-sealed expansible gas-reservoir, a concave disk within said reservoir a generator, connections from said disk to the generator, valves within said connections and means whereby said valves are automatically operated by the movements of the reservoir and receiver.

5. A gas-generating apparatus comprising a water-sealed expansible gas-reservoir and a generator, a disk within said reservoir, connections from said disk to the generator, separate valves within said connections, each independently operated to regulate the gas-supply to the reservoir, substantially as shown and described.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 20th day of April, A. D. 1898.

WILLIAM J. BAULIEU.

Witnesses:

C. M. NEWMAN,
J. D. CARPENTER.