

No. 640,035.

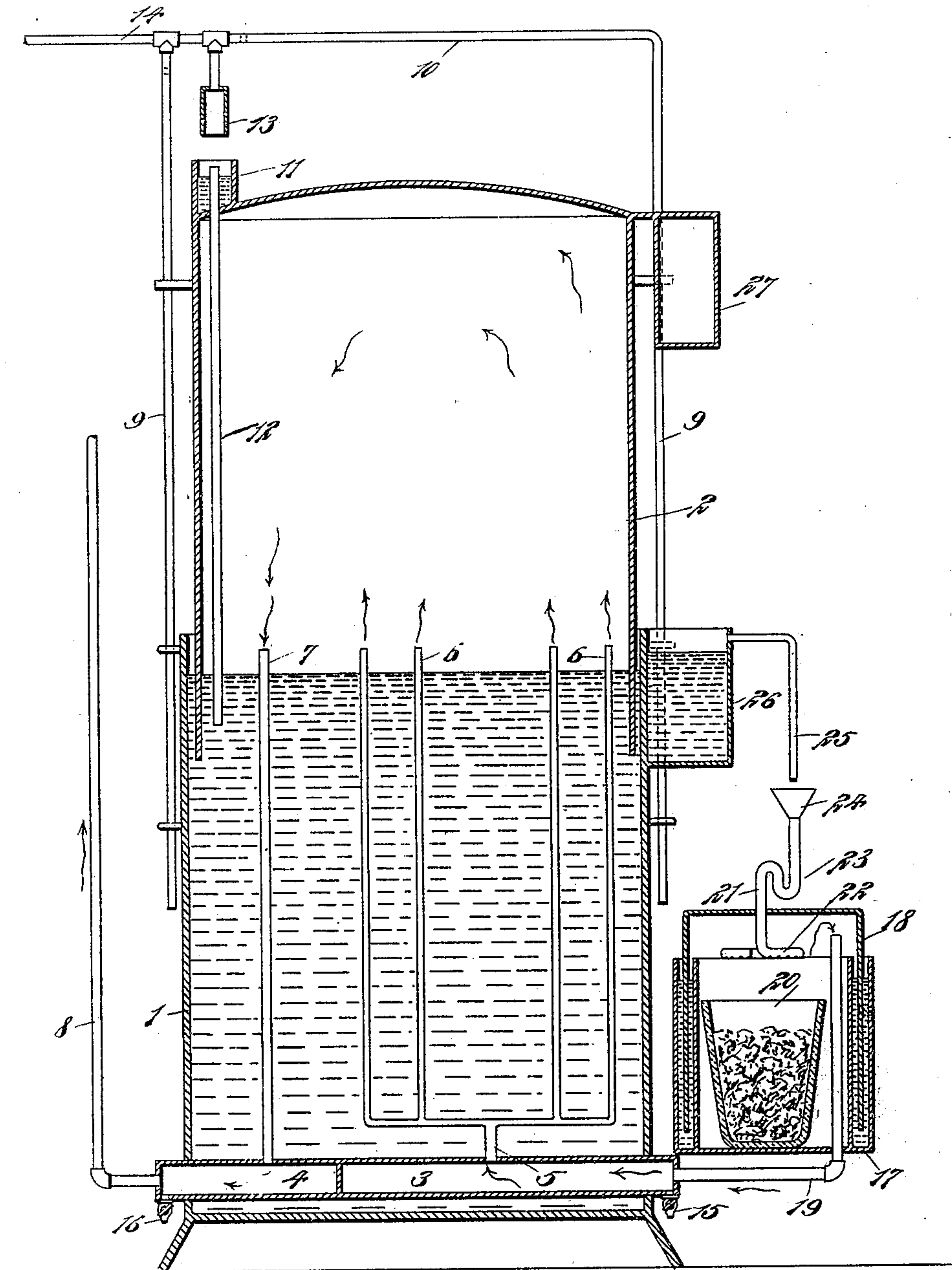
Patented Dec. 26, 1899.

J. S. SEELY & E. M. RODENBERGER.

ACETYLENE GAS MACHINE.

(Application filed Dec. 12, 1898.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAY S. SEELY, OF SYRACUSE, AND EDWIN M. RODENBERGER, OF  
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## ACETYLENE-GAS MACHINE.

SPECIFICATION forming part of Letters Patent No. 640,035, dated December 26, 1899.

Application filed December 12, 1898. Serial No. 699,001. (No model.)

*To all whom it may concern:*

Be it known that we, JAY S. SEELY, of Syracuse, in the county of Onondaga, and EDWIN M. RODENBERGER, of Walworth, in the county  
5 of Wayne, State of New York, have invented a new and Improved Acetylene-Gas Machine, of which the following is a full, clear, and exact description.

This invention relates to improvements in  
10 machines for generating acetylene gas; and the object is to provide a machine of simple and comparatively inexpensive construction and having a simple means for automatically supplying water to the carbid when necessary  
15 and also having an improved safety device.

We will describe an acetylene-gas machine embodying our invention and then point out the novel features in the appended claim.

Reference is to be had to the accompanying  
20 drawing, forming a part of this specification, in which the figure is a vertical section of a gas-machine embodying our invention.

The machine comprises a gasometer consisting of the lower section 1 and the upper  
25 section 2, designed to move upward and downward relatively to the lower section, in which water is placed in the usual manner. Below the lower or fixed section 1 is a condenser consisting of two chambers 3 4. From the  
30 chamber 3 a pipe 5 leads upward into the lower or fixed section of the gasometer and communicates with branch pipes 6, which extend upward above the water-line in the fixed section. A gas-discharge pipe 7 leads from  
35 above the water-line in the gasometer to the condenser-chamber 4, and leading outward from this chamber 4 is a gas-distributing pipe 8.

The section 2 of the gasometer is guided in  
40 its vertical movement by guide-rods 9, which may for convenience be made of tubing, these guide-rods being connected at the top by a cross-rod 10. On the top of the movable section 2 of the gasometer is a cup 11, designed  
45 to contain water for a seal, and extended through the top and into said cup is a pipe 12. The upper end of this pipe 12 is slightly above the water-level in the cup, and the lower end of said pipe normally passes into the water con-  
50 tained in the lower section 1 of the gasometer.

Should, however, an undue amount of gas accumulate in the gasometer, the upper portion will be raised until the cup 11 receives a hollow  
thimble 13, which has a pipe connection with the safety or discharge pipe 14, leading to  
55 the outside of the house or to any desired place. When the upper portion of the gasometer is thus raised and the lower end of the pipe 12 is above the water-line the surplus gas will pass through the pipe 12, the thimble  
60 13, and the safety-pipe 14. As soon as the pressure is reduced, the upper section of the gasometer will move downward by gravity, and upon the lower end of the pipe 12 entering the water a further discharge of gas through  
65 said pipe will of course be cut off. The chambers 3 and 4 have outlet-cocks 15 16, designed to let off any water of condensation that may accumulate in the chambers.

Arranged near the gasometer is a genera-  
70 tor comprising a shell 17, having double walls the space between which is designed to receive water to serve as a seal to prevent the escape of gas around the cover 18, which has its downwardly-extended portion in the space  
75 between the walls. A pipe 19 leads from the upper portion of the generator into the condenser-chamber 3, and arranged in the generator is a carbid-holder 20, which preferably consists of pottery-clay or the like, so that  
80 there will be no danger of its destruction by corrosion.

Leading through the cover 18 is a pipe 21, the inner end of which is formed in a coil 22, having perforations to distribute water onto  
85 the carbid in the holder 20. Above the cover 18 the pipe 21 is provided with a trap 23 and at its upper end with a funnel 24, designed to receive water from a pipe 25, leading from the upper portion of a water-supply tank 26,  
90 fastened to the lower or fixed portion of the gasometer.

Carried by the movable portion 2 of the gasometer and adapted to pass into the water-supply tank 26 is a plunger 27. As the  
95 gas lowers in the gasometer the plunger 27 will enter the tank 26, and the water displaced thereby will flow through the pipe 25 and thence through the pipe 21 to the carbid. As the gas is generated and passes into the  
100



gasometer the upper section thereof will be moved upward, and consequently the plunger 27 will be moved out of the tank 26, thus automatically stopping the flow of water.

5 The operation is as follows: When the parts are in the position shown in the drawing, the plunger 27 having been moved out of the water-tank 26, the flow of water from said tank for the generation of the gas has been  
10 cut off and the gas from the gasometer flows therefrom, through the pipe 7, into the condensing-chamber 4, and from thence to the distributing-pipe 8. As soon as the pressure in the gasometer is reduced sufficiently to al-  
15 low the upper movable section of the gasometer to descend and the plunger 27 to enter the tank 26, the water in the tank will be displaced and flow therefrom through pipes 25 and 21 onto the carbide in the holder 20 of the  
20 generator, when the gas will be again generated and will pass from the generator, through the pipe 19, into the chamber 3 and from thence into the gasometer through the pipes 5 and 6. Should an undue amount of gas ac-  
25 cumulate in the gasometer, the upper section 2 of the gasometer will be raised until the cup 11 receives the thimble 13 and the lower end of the pipe 12 will be above the water-line of the gasometer, when the gas will pass

through the pipe 12, the thimble 13, and the 30 discharge-pipe 14.

It will be seen that a gas-machine embodying our invention is of a very simple construction and that its parts may be easily separated for the purpose of cleaning. It 35 will preferably be made of galvanized iron of suitable thickness.

Having thus described our invention, we claim as new and desire to secure by Letters 40 Patent—

The combination with the gasometer, of the water-cup 11 on the top of the movable section of the gasometer, the pipe 12 in the gasometer and extending through the cover of the same into the cup with its end above the water- 45 level of the cup, the lower end of the pipe being normally in the water of the stationary section of the gasometer, an offtake-pipe above the gasometer, and a thimble 13 secured to said pipe and projecting downwardly there- 50 from over the cup of the gasometer-section, substantially as and for the purpose set forth.

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EDWIN M. RODENBERGER.

Witnesses:

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