

986,784.

Fig. 1.

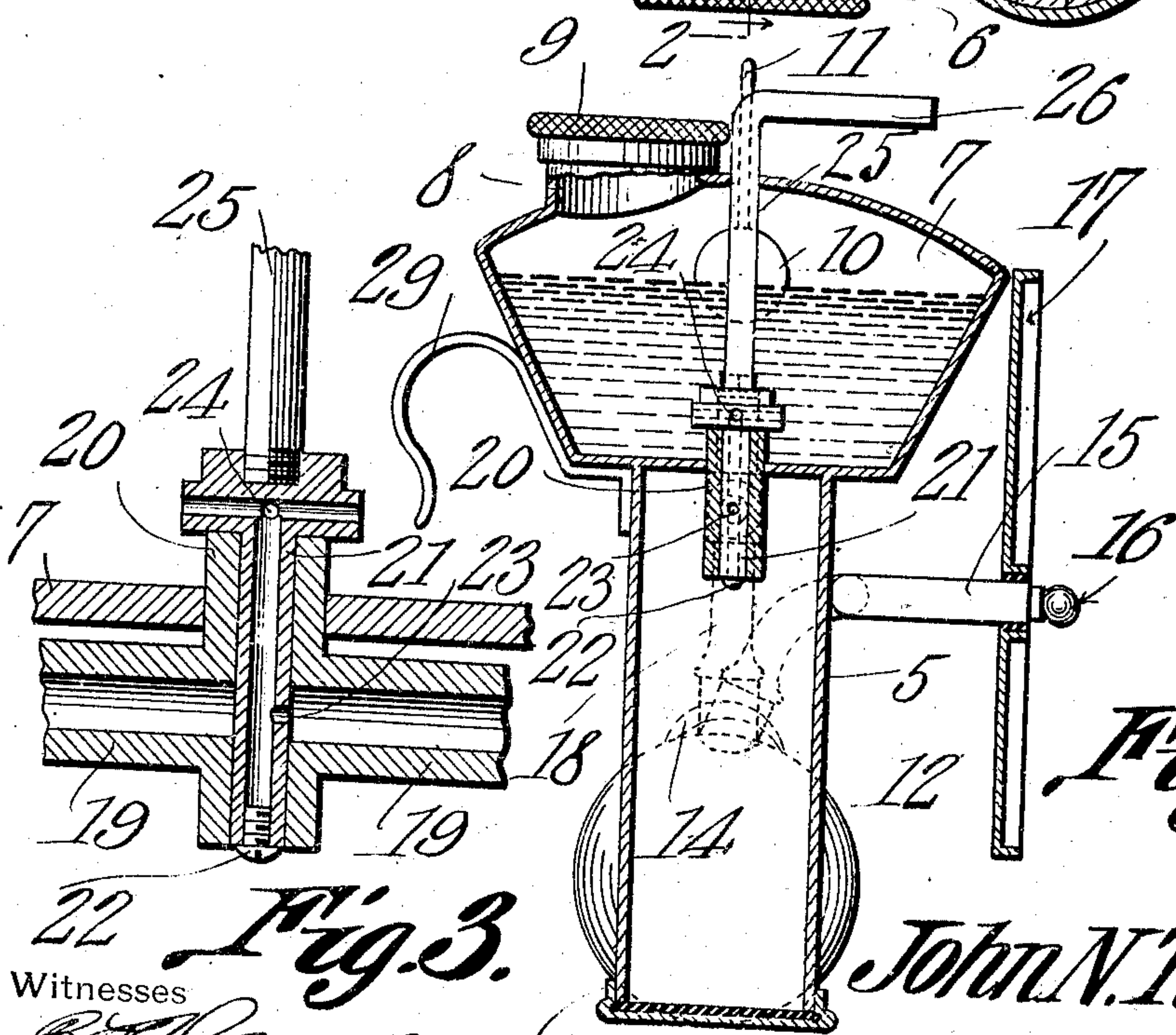
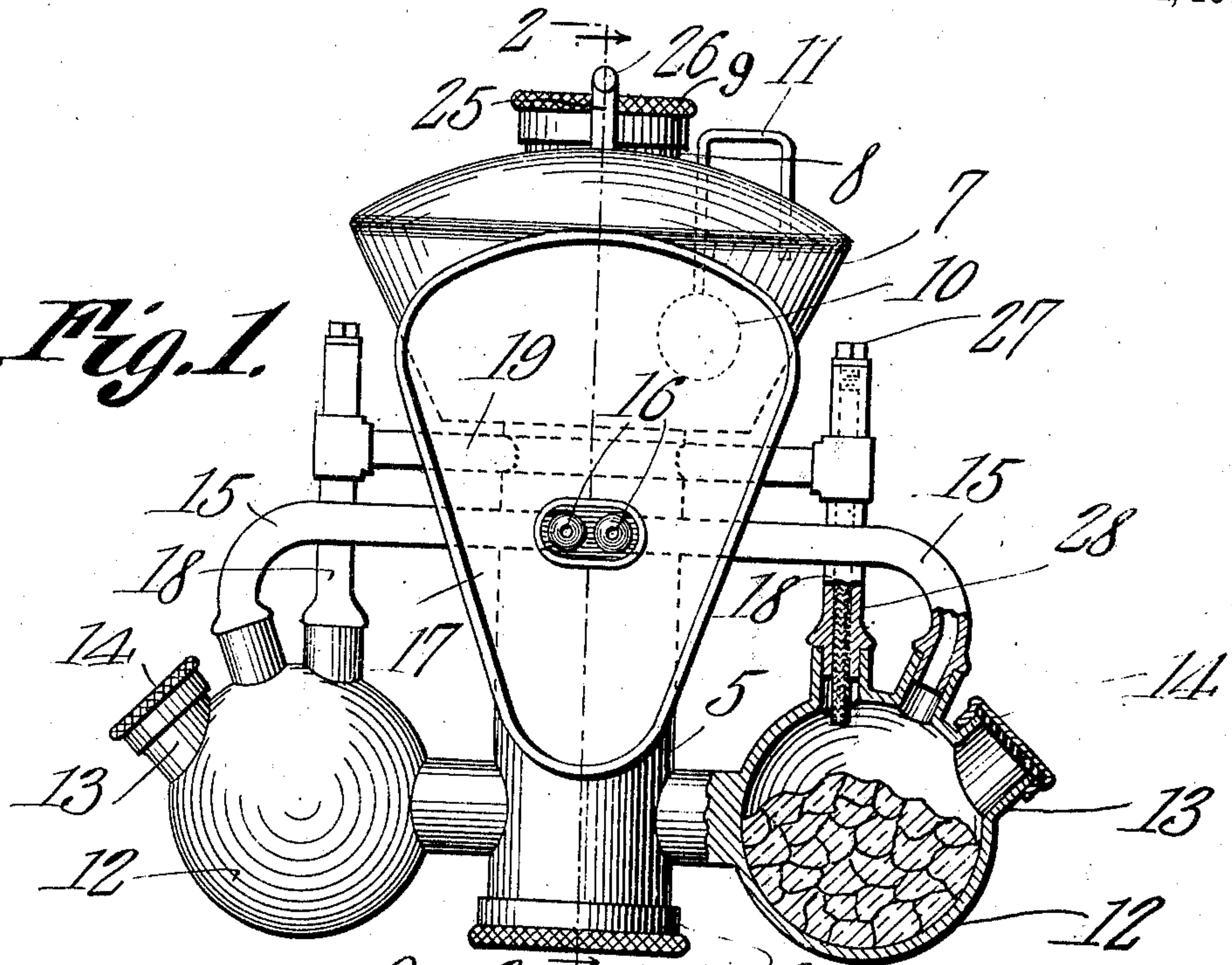


Fig. 2.

22 *Fig. 3.*
Witnesses

Witnesses

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UNITED STATES PATENT OFFICE.

JOHN N. TWEEDY, OF WORDEN, ILLINOIS, ASSIGNOR OF ONE-HALF TO FRANK LAMB,
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ACETYLENE-GAS GENERATOR.

986,784.

Specification of Letters Patent. Patented Mar. 14, 1911.

Application filed April 29, 1910. Serial No. 558,321.

To all whom it may concern:

Be it known that I, JOHN N. TWEEDY, a citizen of the United States, residing at Worden, in the county of Madison and State of Illinois, have invented a new and useful Acetylene-Gas Generator, of which the following is a specification.

This invention has relation to acetylene gas generators and consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide a simple generator of the character indicated which is adapted to be carried around from point to point and which is especially adapted for use in mines and subterranean passages. With this object in view the parts of the structure are so arranged that they are balanced and the generator may be placed upon the ground in upright position or rested upon other level support without danger of the same tipping or falling over. Also the generator may be suspended from a support hanging pendent from a wall or roof.

In the accompanying drawing:—Figure 1 is a front elevation of the generator. Fig. 2 is a vertical sectional view of the same cut on the line 2—2 of Fig. 1. Fig. 3 is a detail sectional view of a valve used in the generator for controlling the flow of water to the generating chambers.

Referring more specifically to the drawing, 5 denotes the body of the generator, said part 5 being a tube of suitable length, and said tube being closed at its lower end by a removable screw cap 6. On the upper end of the tube is mounted a water receptacle 7, said receptacle being rigidly secured to the tube, and closed thereto. The top of the water receptacle has a nipple 8 provided with a removable screw cap 9, which, upon being removed, permits filling of the receptacle. Within the receptacle is located a float 10 carrying a stem 11 which extends to the outside of the receptacle through an opening in the top thereof, said float and stem being provided to indicate the water level in the receptacle.

At 12 are indicated two gas generating chambers, said chambers being located on opposite sides of the tube 5, near its lower end, and rigidly secured thereto in any suitable manner. These gas generating chambers have nipples 13 which are provided

with removable screw caps 14. The supply of carbid may be introduced into the chambers after removing the screw caps from the nipples.

To each generating chamber 12 is connected a gas conducting tube 15 leading to a suitable burner 16, said tube extending to a point in front of the tube 5, at which the point of the burner tip is located. The burner tip of the respective tubes 15 are located side by side in close proximity to each other, and behind said tips is located a reflector 17, carried by the tube 5. Each generating chamber is also entered by a tube 18 which is connected to the water receptacle 7 and which tube feeds water to the carbid in the generating chamber. The two tubes 18 are connected across by a tube 19 which passes through the part 5, and is formed on the inside thereof with a short branch 20 passing through the bottom of the water receptacle 7. In this branch 20 works a valve comprising a hollow plug 21 extending through said part 20, and across the bore of the tube 19, and through an opening made in said tube opposite the part 20. The plug projects a short distance from the tube 19, and has its projecting end closed by a screw plug 22. In the plane of the bore of the tube 19, the plug has a side port 23. The plug has a portion extending into the receptacle 7, and in said portion are side inlet ports 24, opening at one end into the bore of the plug, and at the opposite end into the interior of the receptacle, so that the water in said receptacle may flow through said ports into the bore of the plug, and by the way of the port 23 into the tube 19. To the plug is connected an operating stem 25 extending through the top of the receptacle 7, and provided with a suitable handle 26. The port 23 is located so that in one position it lets water into that portion of the tube 19 leading to one of the tubes 18, and in another position it shuts off said tube 18 from the water supply, and opens the other tube 18 thereto. The purpose of this arrangement is to enable either generating chamber 12 to be placed in operation. Both of said chambers will contain a supply of carbid, and if the supply in one chamber is used up, the other chamber will be opened to the water supply, so that the generation of gas may continue.

The tube 19 is coupled to the tubes 18 in-

intermediate their ends, and the outer ends of said tubes 18 are closed by a removable screw plug 27. The tubes 19 contain a wick 28 through which the water passes slowly, and is thus made to enter the generating chambers drop by drop. The wicks may be readily inserted into the tubes 18 upon removing the screw plugs 27. To the rear portion of the water receptacle 7 is secured a hook 29 for hanging up the lamp. The part 5 is made tubular for the purpose of holding a supply of matches.

A generator and lamp constructed as herein described is efficient and reliable in operation, and effectually serves the purpose for which it is designed. The amount of water supplied to the carbid is readily regulated by operating the valve 21. If the carbid in one generating chamber is used up, the valve will be turned to place the other chamber in communication with the water supply.

What is claimed is:

An acetylene gas generator comprising a tubular support, a water receptacle located upon the upper end thereof, carbid chambers attached to the opposite sides thereof, and having their bottoms at the same level as the lower end of the tubular support, water tubes leading from the receptacle to the carbid chambers, gas conducting tubes leading from the carbid chambers and having their outlets located in the same heating zone, and a valve within the receptacle and operable from the exterior of the receptacle to direct the flow of water through either water tube to either carbid chamber.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN N. TWEEDY.

Witnesses:

FRANK LAMB,
H. N. RIZZER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."