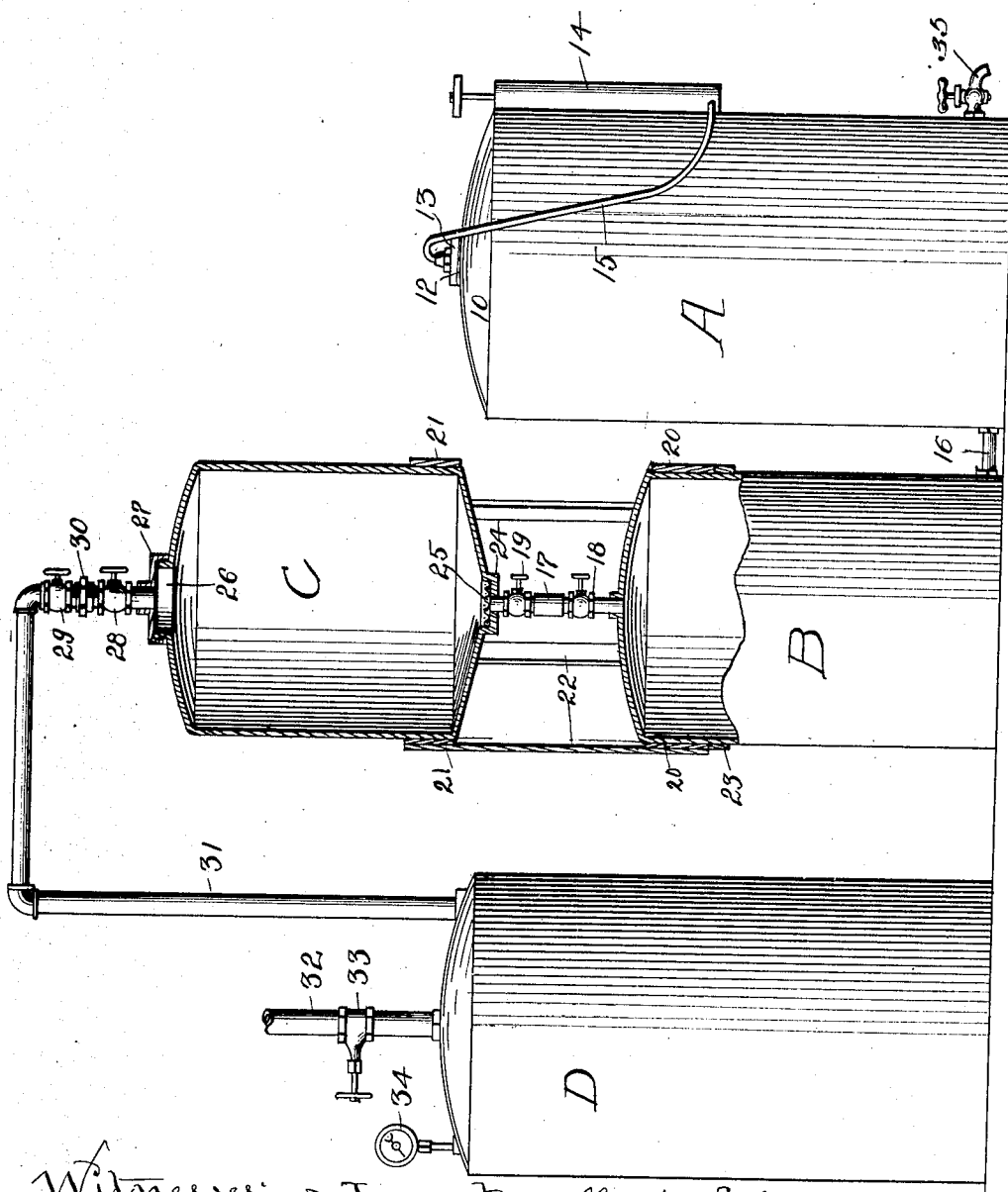


No. 892,924.

PATENTED JULY 7, 1908.

C. E. WRY & C. R. JONES.
ACETYLENE GAS GENERATOR.

APPLICATION FILED SEPT. 14, 1907.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES E. WRY AND CLAIR R. JONES, OF FOREST CITY, IOWA.

ACETYLENE-GAS GENERATOR.

No. 892,924.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed September 14, 1907. Serial No. 392,949.

To all whom it may concern:

Be it known that we, CHARLES E. WRY and CLAIR R. JONES, citizens of the United States, residing at Forest City, in the county of Winnebago and State of Iowa, have invented a new and useful Acetylene-Gas Generator, of which the following is a specification.

The objects of our invention are, first, to provide a simple, inexpensive and efficient self-feeding acetylene gas generator in which the carbid is stationary and the water elevated by air pressure to periodically wet the carbid; second, to provide means for safely refilling the carbid tank while the machine is in operation; third, to automatically elevate water into the carbid chamber as required for wetting the carbid and generating gas by means of air and gas pressure; fourth, to provide means for retaining the carbid chamber perpendicular relative to a water chamber as required to maintain water circulation and preventing leakage.

Our invention consists in the economic arrangement and combination of two water tanks, a detachable carbid holder and a gas receiver as hereinafter set forth, pointed out in our claims and illustrated in the accompanying drawing in which the letter A designates a main water tank that may vary in size as desired. It has a closed top, 10, provided with a central open neck 12, to which is fitted a removable cap 13 to which cap is connected an air pump, 14, that is preferably fixed to side of the tank as shown. A flexible tube, 15, extends from the pump, 14, to the cap 13. A second water tank B is connected with the lower tank A by a tube 16 as required to allow continuous communication between the two tanks.

With the closed top of the tank B is connected a removable air-tight carbid holder C by a coupling 17 that is provided with a cut-off valve 18. Above the coupling 17 is a cut off valve, 19. The valves 18 and 19 are only for the purpose of shutting off the water pressure when it is desired to refill the carbid chamber or in case of disconnecting the machine at some other point. At all other times these valves remain open, leaving the water free to enter the carbid chamber whenever the gas pressure in the tank D is lower than the air pressure in the tank A; and also to allow water to drain out of the carbid chamber when gas pressure in the tank D

becomes strong enough to automatically force the water back into the tank B.

To support the holder C in a perpendicular position a skeleton frame, composed of circular bands 20 and 21 and a plurality of uprights 22 fixed to the bands, is detachably fitted to the top of the tank B to rest upon a band 23 fixed on the tank as shown, or in any suitable way, in such a manner that the upper band 21 will engage the carbid holder C in concentric position therewith as shown in the drawing. The lower end of said holder is concavo-convex and has a flat bottomed central extension 24 provided with a central screw-threaded opening into which the tube at the upper end of the valve 19 is detachably fixed. A screen 25 placed in the extension 24 serves as a drainer.

The top of the holder C has a neck 26 to which is detachably fixed a cap 27 and on the cap is a cut off valve 28. Another cut off valve 29 is detachably connected with the valve 28 by a union 30. A gas conductor pipe 31 extends from the valve 29 to a gas receiver D. By means of the union 30 it is obvious the pipe can be readily detached from the holder C as required preliminary for disconnecting the said holder from the water tank B. A gas distributing pipe 32 is fixed to the receiver D and provided with a cut off valve 33. A pressure gage 34 on top of the gas receiver indicates the pressure of the gas confined therein.

In the practical operation of our invention when all the parts are properly connected, water in the tanks A and B and carbid in the holder C, air pumped into the tank A will force water up from the tank B through the open valves 18 and 19 as required to wet carbid in the holder C for generating gas that will pass up through the carbid and through the open valves 28 and 29 into and through the pipe 31 into the receiver D from whence it can be distributed to any number of burners that may be connected with said distributing pipe. The quantity of water in the tanks A and B and the quantity of air pumped into the tank A regulates the upward pressure of the water in the tank B and also the pressure of the gas in the holder C and the receiver D. And the air confined in the tank A will press water into and up through the tank B as required to wet the carbid in the holder C. The amount of air pumped on top of the water in the tank A

forces the water into the carbid chamber and retains it there until sufficient gas is generated to force the water back out of the carbid chamber and compresses the air in the top of the tank A, as required to automatically drain the water from the carbid chamber and thus discontinue the generation of gas. A stop cock 35 is provided at the bottom of the tank A for emptying the water from the tanks. A very simple and complete means of regulating the generation of gas and the quantity required is thus provided by filling water into the tank A and pumping air on its top.

15 Having thus set forth the purpose of our invention, the construction, arrangement, function and combination of all its parts the practical operation and utility thereof will be obvious.

20 What we claim as new and desire to secure by Letters-Patent, is:—

1. In an acetylene gas generator, two water tanks beside each other and communicating at their lower ends, an air pump con-

nected with one of said tanks, a carbid holder on top of one of the tanks, a detachable skeleton frame between the carbid holder and the tank and means to regulate the flow of water from the water tank into the carbid holder, for the purposes stated. 30

2. An acetylene gas generator comprising two water tanks communicating with each other at their lower ends, an air pump connected with one of said tanks and a carbid holder on top of the other tank, a tube connecting the carbid holder with the tank under it, cut off valves in said tube, a gas receiver, a pipe connecting said receiver with said holder, cut off valves in said pipe and means for distributing gas from the receiver, 35 arranged and combined to operate as set forth. 40

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