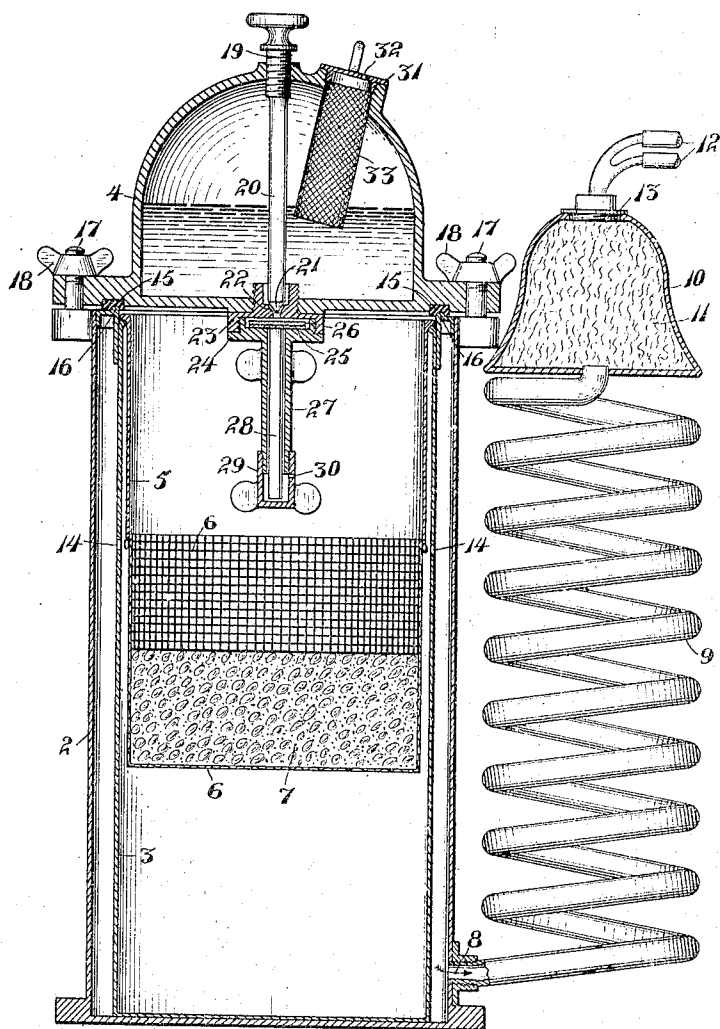


J. CORROYER.
ACETYLENE GAS GENERATOR.
APPLICATION FILED NOV. 10, 1910.

1,016,475.

Patented Feb. 6, 1912.



WITNESSES:

J. C. Thiedner
Agnes Pringle

INVENTOR
Joseph Corroyer
BY
Lincoln Sonntag
ATTORNEY

UNITED STATES PATENT OFFICE.

JOSEPH CORROYER, OF OAKLAND, CALIFORNIA.

ACETYLENE-GAS GENERATOR.

1,016,475.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed November 10, 1910. Serial No: 591,610.

To all whom it may concern:

Be it known that I, JOSEPH CORROYER, a citizen of the United States, residing at the city of Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Acetylene-Gas Generators, of which the following is a specification.

My invention relates to improvements in acetylene-generators.

The object of my invention is to provide a generator for the production of gas from calcium carbide which is simple in construction and which supplies an even flow of purified gas for the production of light of intense whiteness.

To said end my invention consists in the combination and arrangement of parts shown in the accompanying drawing, described in the following specification and claimed in the appended claims.

Referring to the accompanying drawing, the same shows an elevation of the apparatus partly in section to illustrate certain parts hereinafter described and therein contained.

In the drawing 2 designates a tank which serves as a reservoir for the gas as created, to contain the carbide and to serve as supports for certain parts thereto secured.

3 shows the inner wall of the tank the upper end of which supports the basket 5 which has a rim engaging said end. The lower part of the basket consists of wire mesh 6 so as to permit the descent of the carbide dust, moisture and the escape of gas. The upper ends of the exterior and interior walls of the tank are separated by an annular piece having a projection 16 which penetrates and secures a washer 15. The tank supports a dome 4 serving as a reservoir for water. Centrally penetrating said dome is a valve stem 20 having a threaded portion 19 engaging a threaded aperture in the apex of said dome, and the lower end of said stem is provided with a point engageable with the valve seat 22 in the plug 23 secured centrally in the lower wall of said dome. The lower portion of said plug is threaded internally and supports the drip cylinder 27 which contains rod 28. The lower end of said drip cylinder 27 supports an internally threaded cap therefor 29 which contains an aperture 30. The drip cylinder and cap are provided with ears as shown to afford means to turn the same. In

the chamber formed between the lower portion of the plug 23 and the upper portion 24 of the drip cylinder 27 is a leather disk 26 and a screen 25 thereunder which cover the channel of the drip cylinder. The upper end of the valve stem 20 is provided with a knob for turning the same. The upper portion of the dome is provided with an opening surrounded by a projecting wall 31 which supports the threaded cap 32, having a hollow stem centrally extending through said cap. The lower end of said cap 32 supports a cylindrical screen 33. The upper end of said tank is provided with ears projecting therefrom and centrally supporting screws 17 penetrating ears projecting from the lower portion of said dome, the upper ends of said screws being provided with wing nuts 18 whereby said dome is secured to said tank. The washer or gasket 15 rests in seats in the ears of said dome as shown. The lower end of said tank is provided with an opening and coupling 8 in which is secured the worm 9, the upper end of which penetrates and is supported in an opening in the chamber 10 containing cotton 11. The upper end of said bell is penetrated by and supports screw-cap 13 having tubes 12 penetrating said cap and secured therein.

To operate the apparatus water is poured through the tube in the cap 32 which is filtered by the screen 33. The water as contained in the dome then passes into the plug 23; through the valve therein, which is slightly opened to permit the passage of the same, and downward into the valve chamber containing leather disk 26 which as well as the screen immediately beneath the same fits loosely therein to permit the passage of the fluid, which then continues its downward course around rod 28 and through aperture 30 from which it descends upon the carbide in the basket. The rod 28 is made of such diameter as shown to allow sufficient space for the water to descend with equal pressure and to give the proper supply for the best result. Water contacting with the carbide the evolution of the gas commences and escapes through apertures 14 in the inner wall of the tank to the chamber between the interior and exterior walls of said tank and then into the coupling 8, rising in the worm 9 wherein the gas is cooled, and then purified in its passage through the cotton in the chamber 10

after leaving said worm, the gas escaping through the tubes 12 to a suitable outlet for use. To fill the basket with carbid the nuts 18 are removed and the dome 4 removed, whereupon the material may be placed in the basket, the basket being removable by lifting it from the tank. The cap 29 being of larger diameter than the cylinder 27 permits organic matter or impurities in the descending water to remain therein, the pure water discharging through aperture 30. In the action of the generator the dust or residue of carbid drops from the basket to the bottom of the tank, and should the pressure of gas in the tank increase to an undue extent the increasing pressure of the same against the disk 26 which is flexible and preferably of leather will close the aperture in the bottom of the valve preventing the downward passage of water and consequently decreasing the evolution of gas. In the operation of said generator stability of light may be obtained, offensive odor is prevented by permitting escape of gas at the bottom only, danger of explosion is removed and economy in the consumption of gas is attained. Although for filtering, I prefer to use cotton in bell 10, other suitable filtering material may be used therein. The shaking of said generator, such as may occur in the movement of a vehicle in which the generator may be used, will cause the movement of the rod 28 in cylinder 27, thereby freeing the cylinder from foreign matter which may be sticking therein; also said rod will cause the escape of water from the cylinder drop by drop as desired for the proper evolution of the gas for by the omission of said rod the water would run from said cylinder in a steady stream. The cap 29 is removably secured to the lower end of cylinder 27 as shown so that any sediment collecting therein may be removed without disconnecting said cylinder.

I claim:—

1. In an acetylene gas generator in combination with a tank and a water dome having a bottom aperture extending there-through mounted on said tank; a plug having a narrow central opening secured in said aperture and a wall projecting downwardly in said tank; a drip cylinder having

a closed lower end and an upwardly projecting wall secured in said downwardly projecting wall and forming a chamber between said plug and cylinder, and said cylinder having a side opening above its base; a rod resting loosely in said cylinder; a screen resting loosely in said chamber and a disk resting on said screen.

2. In an acetylene gas generator in combination with a tank and a water dome having a bottom aperture extending there-through mounted on said tank, a plug having a narrow central opening secured in said aperture and a wall projecting downwardly in said tank, a drip cylinder having an open lower end and an upwardly projecting wall secured in said downwardly projecting wall and forming a chamber between said plug and cylinder; a cap secured removably on the lower end of said cylinder and having a side opening above the base thereof; a rod resting loosely in said cylinder; a screen resting loosely in said chamber and a leather disk resting on said screen.

3. In an acetylene gas generator in combination with a tank and a water dome having a bottom aperture extending there-through mounted on said tank; a plug having a narrow central opening secured in said aperture, and having a wall projecting upwardly in said chamber containing a valve seat, and a wall projecting downwardly in said tank, a valve stem turnably mounted in the roof of said dome and engageable with said valve seat, a drip cylinder having an open lower end and an upwardly projecting wall secured in said downwardly projecting wall and forming a chamber between said plug and cylinder, a cap secured removably on the lower end of said cylinder and having a side opening above the base thereof; a rod resting loosely in said cylinder, a screen resting loosely in said chamber and a disk resting on said screen.

In testimony whereof I affix my signature, in presence of two witnesses.

JOSEPH CORROYER.

Witnesses:

JULES H. TARDY,
L. F. HUDSON.