

**993,573.**

Patented May 30, 1911.



INVENTOR  
3 Joseph Corroger  
BY Lincoln Lomitz  
ATTORNEY

# UNITED STATES PATENT OFFICE.

JOSEPH CORROYER, OF OAKLAND, CALIFORNIA.

## ACETYLENE-GAS GENERATOR.

993,573.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed March 21, 1910. Serial No. 550,746.

*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 wherein danger is prevented, and a further object is to provide such generator which combines strength, simplicity and ease of operation. I attain said objects by the mechanism shown in the accompanying drawing and described in the following specification said drawing showing parts of the apparatus in section to disclose their contents.

Referring to the accompanying drawing numerals indicate parts of said generator as follows, to wit:—

1 shows the shell of the apparatus positioned outwardly which is secured by cleats 3 to bars 2. The bars 2 support transversely extending tubes 4 and 4' by means of tees 30 and 31 and said tubes support by means of couplings 32 and 33 the vertical tubes 6 and 5 into which telescope the inner tubes 7 and 8 as shown. The inner tube 7 is secured to and has an opening 12 into bell 9 and said bell contains a basket 10 having a grating 14 supporting carbide 13 as shown. A side pipe 36 has a coupling 38 which is secured to the bell 9 near its base and opens into basket 10 as shown at 11. The pipe 36 has a coupling 39 secured to transversely extending pipe 37 which is secured to inner tube 8 by means of coupling 40. The cylinder 25 incloses the inner tubes 7 and 8 and contains water as shown to prevent the escape of gas from said inner tubes. Hangers 34 and 35 are secured to tube 4 and support pulleys 23 and 23' on which is mounted the cord 22. The cord 22 has one of its ends secured to the top of bell 9 and its other end to the weight 24. Stop 18 is secured interiorly to the shell 1 whereby the bell and basket are prevented from descending lower than desired. Water chamber 1 is provided with an outlet pipe 20 having a valve 21 for opening the same, the said pipe being positioned at the base of said shell so that the same may be cleaned.

The hook 15 is secured to the inner side of the basket 10 as shown at 41, and has a short arm 16 which engages the projection 17 on the bell 9. By pushing the hook 15 the same can be freed from such engagement so as to permit the bell to rise when the pressure of gas is upward, the basket telescoping into the bell so as to enlarge the space for the accumulation of gas when the apparatus is in action. The dotted lines 43 show the position of the bell when the upward pressure of gas has forced the same upwardly to engagement with stop 19 which is adapted to turning to permit the disengagement of the basket and the bell. For the operation of the apparatus the basket 10 is preferably filled with carbide to the height shown in the drawing and water being poured into the shell to the height preferably as shown the evolution of gas commences. During the evolution of the gas the surplus gas rises through the aperture 11 and thence upward through pipes 36, 8 and 6 until it is discharged through pipe 4' into the atmosphere. The illuminating gas rising from the carbide 13 ascends through pipe 7 into pipe 5 and thence through pipe 4 to a suitable outlet for the purpose of lighting. Water jacket 25 is preferably filled with water to the height shown in the figure so as to prevent the escape of gas from between the telescoping pipes. The heaviness of the weight 24 is adjusted so as to assist the bell to a gradual ascension as the upward pressure of the gas therein increases.

To charge the basket with carbide, the bell 9 is raised from its position as shown in the drawing until it clears the chamber 1; then the basket is moved to one side and the same filled with carbide; then the basket is restored to its proper position under the bell and the latter is lowered. The movement of the stop 18 and hook 15 permit the upward movement of the bell, and the couplings or tees 30 and 31 being screw-threaded permit the disengagement of the rods 2 and 2' therefrom, or the turning of the pipes 6 and 5 to one side after disengagement so as to permit the removal of the bell or its ascent as high as may be desired. After the basket is filled with carbide as shown and permitted to contact with the water in the tank the evolution of the gas commences passing upwardly through pipe 5 and thence through pipe 4 for the purpose of lighting. When the flow of gas through pipe 4 is obstructed, gas es-

capas upwardly through pipe 6 and thence through pipe 4' to the atmosphere at any point to which pipe 4' may be carried, preventing the escape of the gas through other parts of the apparatus whereby the air in a house in which the apparatus may be contained is not contaminated. As the carbide is consumed the residue descends through the mesh at the bottom of the basket to the bottom of the tank, being in the form of ashes.

I claim:

1. In an acetylene-gas generator the combination with a water chamber of a gas-bell having an upper opening and a lower side aperture therethrough, a carbide receptacle in said gas-bell having a side opening adapted to register with said lower side aperture, a discharge pipe leading from the said lower side aperture and extending above said bell, a pipe leading from the upper opening of said bell, and a pair of oppositely positioned pipes mounted above said bell and telescoping over said pipes leading as afore-
2. In an acetylene-gas generator the combination with a water chamber of a gas-bell having an upper and a lower opening therein, a carbide receptacle in said gas bell, a discharge pipe leading from said lower opening and extending above said bell, a discharge pipe leading from said upper opening, a pair of oppositely positioned pipes mounted above said bell and telescoping over said discharge pipes, and a water jacket mounted on said bell and surrounding said telescoping pipes.
3. In an acetylene-gas generator the combination with a water chamber of a gas-bell having an upper opening and a lower side opening therein, a carbide receptacle in said gas-bell, a discharge pipe leading from said lower opening and extending above said bell, a discharge pipe leading from said upper opening, a pair of oppositely positioned pipes mounted above said bell and telescoping over said discharge pipes, a water jacket

mounted on said bell and surrounding said telescoping pipes, and a locking device having two separable parts, one of said parts being connected to said basket and the other of said parts being connected to said bell.

4. In an acetylene-gas generator the combination with a water chamber of a gas bell having an upper top opening and a lower side opening, a carbide receptacle in said gas bell, a discharge pipe leading from said lower opening and extending above said bell, a discharge pipe leading from said upper opening, a pair of oppositely positioned pipes mounted above said bell and telescoping over said discharge pipes, a water jacket mounted on said bell and surrounding said telescoping pipes, a locking device having two separable parts, one of said parts being connected to said basket and the other of said parts being connected to said bell, and a turnable stop for preventing the ascent of said bell beyond a determined point.

5. In an acetylene-gas generator the combination with a water chamber of a gas bell having an upper top opening and a lower side opening, a carbide receptacle supported in said bell, a discharge pipe leading from said lower opening and extending above said bell, a discharge pipe leading from said upper opening, a pair of oppositely positioned pipes mounted above said bell and telescoping over said discharge pipes, a water jacket mounted on said bell and surrounding said telescoping pipes, a locking device having two separable parts, one of said parts being connected to said basket and the other of said parts being connected to said bell, a turnable stop for preventing the ascent of said bell beyond a determined point, and means for assisting the ascent of said bell.

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

JOSEPH CORROYER.

Witnesses:

ALBERT NILLARK,  
IDA GINOCCHIO.

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