

UNITED STATES PATENT OFFICE.

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ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 616,108, dated December 20, 1898.

Application filed October 15, 1897. Serial No. 655,331. (No model.)

To all whom it may concern:

Be it known that I, JULES MARIE JOSEPH JACQUOT, a citizen of the Republic of France, and a resident of Méhoncourt, in the Department of Meurthe-et-Moselle, France, have invented certain new and useful Improvements in Apparatus for Manufacturing Acetylene Gas; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, which forms a part of this specification.

My invention relates to apparatus for manufacturing acetylene gas; and it consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawing the figure represents a longitudinal sectional view of an apparatus for manufacturing acetylene gas according to my invention.

In the said drawing the reference-numeral 1 designates a tank or receptacle for containing water supported by suitable legs 2. At its lower end it is provided with a draw-off spout 3, provided with a valve 4. The numeral 5 designates a vertical pipe for supplying the tank with water, so as to keep up the proper level. The numeral 6 designates a pipe connected by a pipe 7 with a gasometer 8, which receives the gas. Located at one side of said tank, at the upper end thereof, is a casing 9, in which is located an inclined rotatable cylinder 10, open at both ends and provided in its interior with a helicoid thread 12. The upper end of this cylinder communicates with the upper end of the tank, while projecting into the lower end of the same is the spout 13 of the hopper 14, containing calcium carbide. This cylinder is provided with a bevel-gear 15, which meshes with a corresponding pinion 16 on a shaft 17, which shaft is provided with a pinion 18, which meshes or engages with a rack-bar 19, connected with the movable section 20 of the gasometer.

The pipe 7, which conveys the gas from the tank to the gasometer, extends vertically up into the same and has its end turned down, as seen at 21. The numeral 23 designates

a burner supply-pipe extending into the gasometer above the water-line thereof.

The operation is as follows: The tank is filled with water nearly to the top, and there is then superimposed thereon a body of lighter non-decomposable liquid, such as coal-oil, in which the carbide-feeding cylinder is submerged. To feed the carbide, the cylinder is turned by means of the shaft, pinion, and gear-wheel, so that the carbide is carried up by the helicoid thread and, emerging from the end of the cylinder, falls through the non-decomposable liquid to the water, where decomposition takes place, the acetylene gas escaping up through the coil-oil and from thence to the gasometer. After once being started the carbide will be fed automatically, the cylinder being rotated to feed the same as the quantity in the gasometer is diminished by the downward movement of the movable section.

Having thus fully described my invention, what I claim is—

1. In an apparatus for manufacturing acetylene gas, the combination with the water-tank, the pipe at the upper end thereof, the inclined casing communicating with said pipe, the inclined open-ended rotatable cylinder located in said casing and submerged in a non-decomposable liquid and provided with a helicoid thread consisting of a spiral rib secured to the interior thereof, and the hopper provided with a spout extending through the casing into the lower end of said cylinder, of the gasometer connected with said water-tank and means connected with the movable section of the gasometer for rotating said cylinder, substantially as described.

2. In an apparatus for manufacturing acetylene gas, the combination with the water-tank, the pipe at the upper end thereof, the inclined casing communicating with said pipe, the inclined open-ended rotatable cylinder located in said casing and submerged in a non-decomposable liquid and provided with a helicoid thread secured to the interior thereof, and the hopper provided with a spout extending through the casing into the lower end of said cylinder, of the gasometer comprising the stationary and movable sections,

the pipe connected with the pipe of the wa-
ter-tank and with said stationary section, the
rack-bar connected with said movable sec-
tion, the horizontal shaft provided with a pin-
5 ion and bevel-gear and the bevel-gear se-
cured to the lower end of said cylinder, sub-
stantially as described.

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

JULES MARIE JOSEPH JACQUOT.

Witnesses:

HIPPOLYTE LAURENT,
JULES LOUIS DELALLE.