No. 609,189. Patented Aug. 16, 1898.

J. KIRKHAM.

ACETYLENE GAS GENERATOR.

(Application filed Mar. 15, 1898.)

(No Model.)

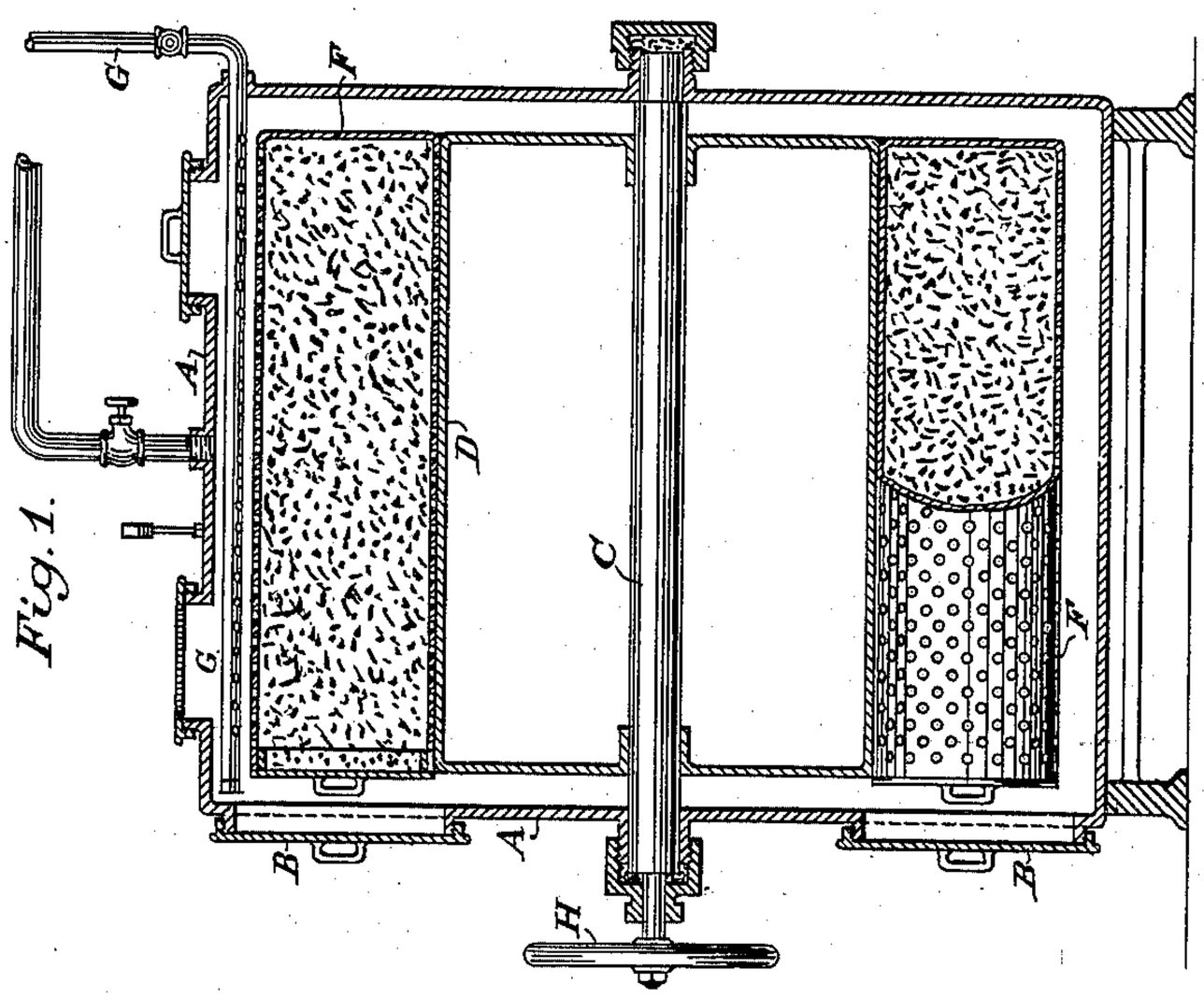

Fig. 1.

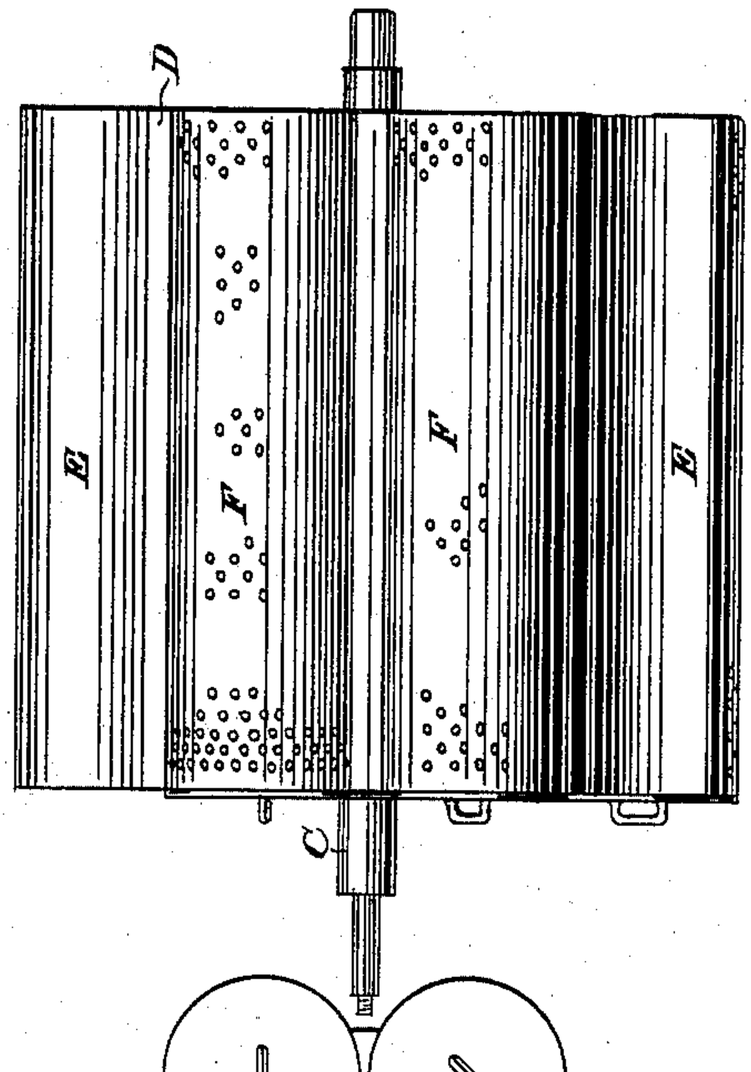

Fig. 2.

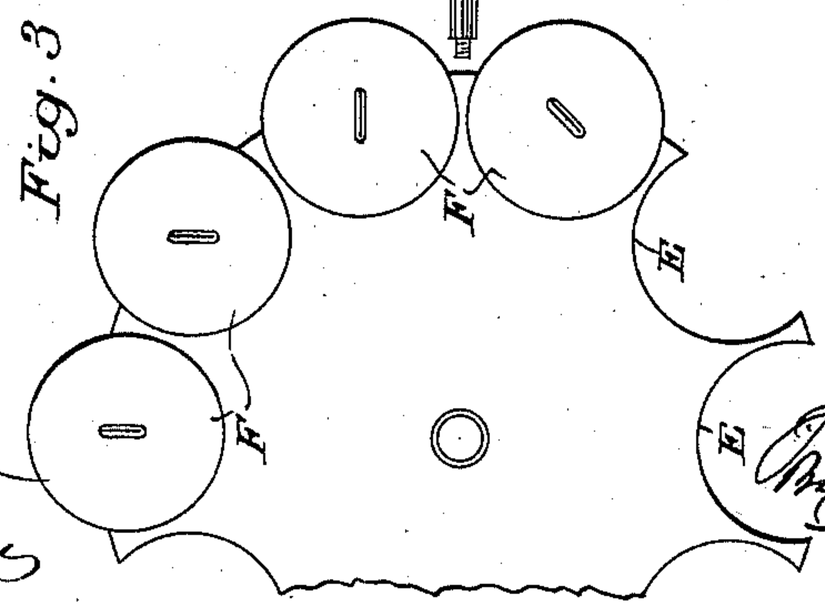

Fig. 3

Witnesses,
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UNITED STATES PATENT OFFICE.

JOHN KIRKHAM, OF OAKLAND, CALIFORNIA, ASSIGNOR OF ONE-HALF TO JOSEPH VON WYL, OF SAME PLACE.

ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 609,189, dated August 16, 1898.

Application filed March 15, 1898. Serial No. 673,917. (No model.)

To all whom it may concern:

Be it known that I, JOHN KIRKHAM, a citizen of the United States, residing in Oakland, county of Alameda, State of California, have invented an Improvement in Acetylene-Gas Generators; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an apparatus which is especially designed for the generation of acetylene gas.

It consists, essentially, of a cylindrical generating chamber having an interior carrier so constructed as to contain a plurality of carbid-containing cylinders, said carrier being rotatable to present the carbid-containers successively to the action of water, which is so introduced to the apparatus that it may be delivered into the contents of the carbid-cylinders as they are presented at the point of water-supply.

The apparatus is provided with means for introducing and removing the containing-cylinders and for turning the apparatus. It also comprises details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a vertical section. Fig. 2 is a longitudinal elevation of the carrier. Fig. 3 is an end view of the same.

The object of this invention is to provide a simple and continuously-operating apparatus for the production of acetylene gas.

A is an exterior containing-chamber, which is here shown as cylindrical in shape, having in one or both of the heads, if desired, openings, with closing-plates B, by which access may be had to the interior and parts of the apparatus introduced and removed, as will be hereinafter described. Through the center of this cylinder passes a shaft C, and upon this shaft is mounted a carrier D. This carrier is essentially cylindrical in general outline and has fixed upon its periphery the cylindrical segments E. These segments are something over half of a cylinder and are adapted to receive the carbid-containing chambers F, which are slidable longitudinally within the segments E, so that they may be introduced or removed whenever they are brought opposite to and in line with the openings B, previously described, these openings being intended for this particular purpose.

When the carbid-containing cylinders F are in place, the segments E surround and clasp them sufficiently close to hold them in place. Each of the cylinders F has its side perforated with holes for the admission of water and for the escape of the gas generated by the action of the water on the carbid of calcium, which forms the charges for the cylinders.

The ends of the cylinders are preferably made tight and fit sufficiently closely in the segments E so that there is little or no escape of water in that direction.

The water-supply for the apparatus is introduced through a pipe G, which extends into the end of the case A and passes along approximately above the uppermost of the carbid-containing cylinders, so that when the carrier has been revolved to bring either cylinder in line with the water-supply water may be delivered through the perforated pipe to fall through the openings into the cylinder F which may at that time be beneath it. This will act upon the carbid contained in the cylinder and produce gas until the supply is exhausted, when the apparatus may be turned to present another cylinder.

Any suitable means for turning the shaft C may be employed, such as a hand-wheel or other device, as shown at H.

It will be manifest that as fast as the exhausted cylinders reach the lower part of the travel of the carrier they will be brought opposite to the opening at that point from which, the cover B being removed, the cylinder can be drawn out and another one substituted, the apparatus thus being made continuous by a constant supplying of new charges of the carbid.

The shape and position of the retaining-segments E are such that the carbid-cylinders are essentially separated from each other, and the water will have no access to any cylinder but the one which is just beneath the water-pipe.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus for generating acetylene

gas consisting of a generating-chamber, a horizontally-disposed carrier turnable about its axis therein, segmental holders fixed upon the periphery of the carrier and perforated cylinders adapted to contain the material from which the gas is generated, fitting said holders and secured to the carrier thereby.

2. An apparatus for generating acetylene gas consisting of a closed casing, a horizontally-journaled carrier having segmental holders fixed to its periphery, perforated cylindrical chambers slidably fitting into said holders having the sides perforated for the admission of water and the escape of gas, the water-supply pipe extending through the upper part of the outer chamber in line above the line of travel of the containing-cylinders and a gas-escape pipe connecting with the chamber.

3. An apparatus for the generation of acetylene gas consisting of an exterior chamber, a horizontally-journaled rotatable carrier and means whereby it may be turned upon its axis, cylindrical segments fixed around the periphery of said carrier cylindrical chambers adapted to contain material from which the gas is generated and said cylinders having closed ends and perforated sides and fitting within the segmental holders, a perforated pipe extending through the upper part of the chamber adapted to discharge water into each of the cylinders as they are successively brought in line therewith, and openings with removable covers in the ends of the chamber and in line with the containing-cylinders whereby the latter may be removed and introduced.

In witness whereof I have hereunto set my hand.

JOHN KIRKHAM.

Witnesses:
S. H. NOURSE,
JESSIE C. BRODIE.