

(No Model.)

2 Sheets—Sheet 1.

E. J. DOLAN.  
ACETYLENE GAS GENERATOR.

No. 604,140.

Patented May 17, 1898.

Fig. 2,

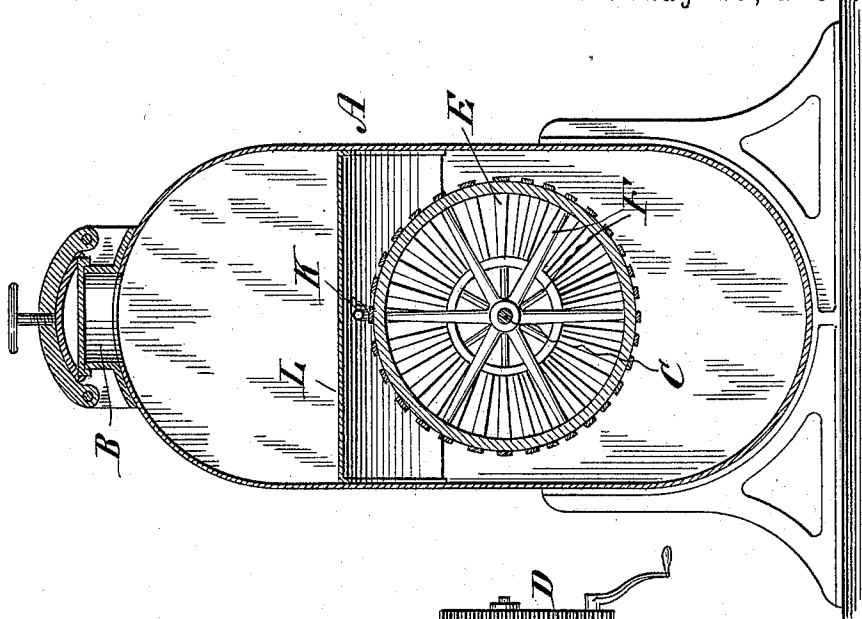
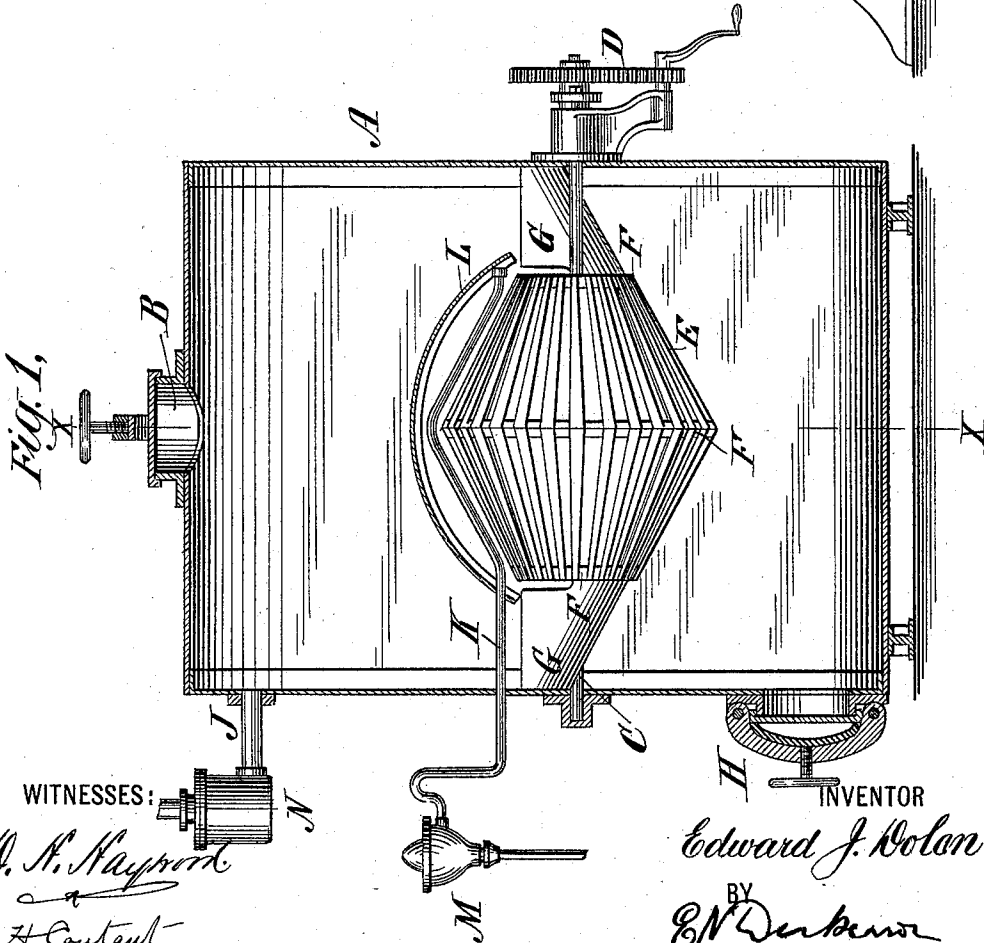


Fig. 1,



WITNESSES:

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*H. Cantant.*

INVENTOR

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BY  
*E. N. Decker*  
ATTORNEY

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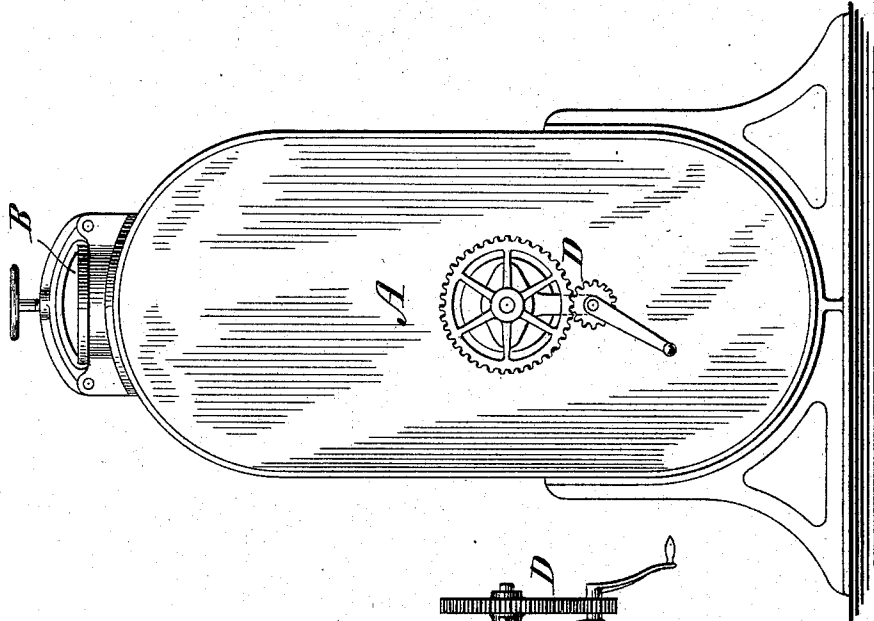
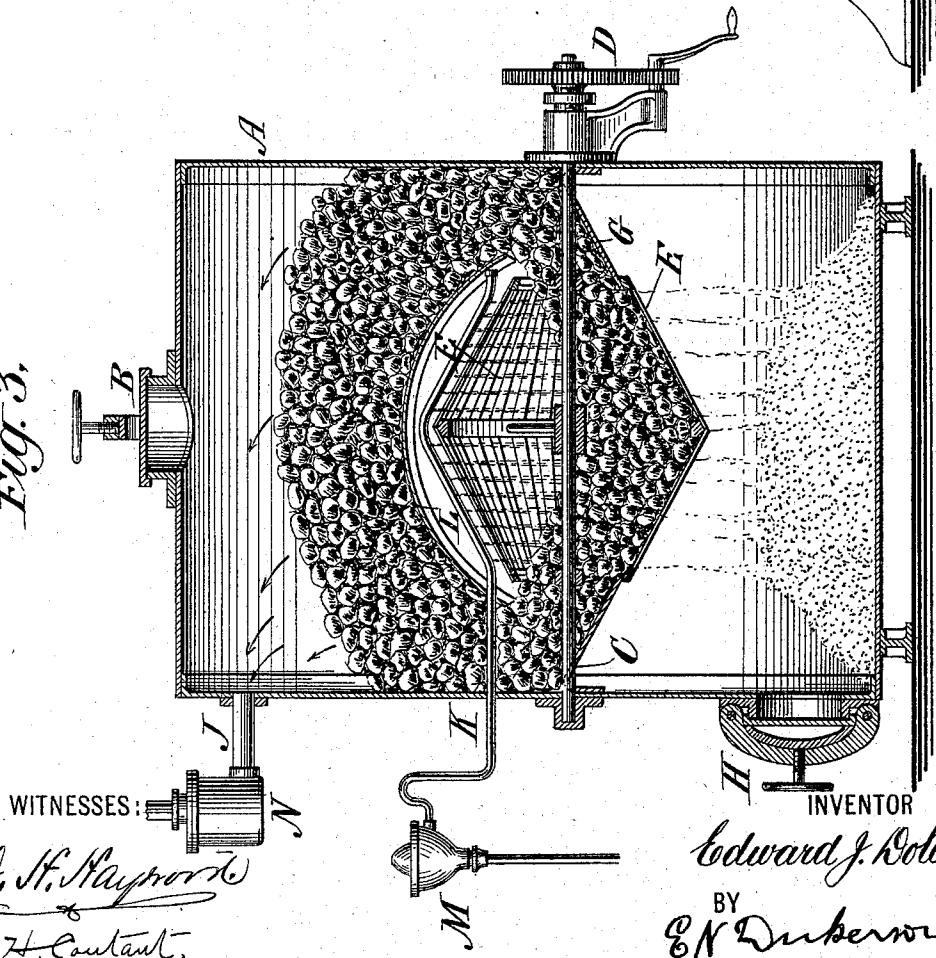


Fig. 3.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

EDWARD J. DOLAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE  
ACETYLENE HOUSE LIGHTING COMPANY, OF WEST VIRGINIA.

## ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 604,140, dated May 17, 1898.

Application filed October 30, 1897. Serial No. 656,893. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD J. DOLAN, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Gas-Generators, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

This invention relates to an improved generator for generating gas, and especially relates to that class of generators in which the gas is produced by the union of a liquid and a solid—such, for instance, as acetylene-gas generators.

The invention is especially designed to increase the capacity of that class of generator in which the liquid, as water, is sprayed upon a mass of carbid of calcium, which is caused to be revolved or moved beneath the spray, so that the refuse material can fall from such carbid and rest in another portion of the receptacle.

My invention will be readily understood from the accompanying drawings, in which—

Figure 1 represents a longitudinal view, partly in section, of my device; Fig. 2, a transverse section through Fig. 1 on the line  $xx$ ; Fig. 3, the same view as Fig. 1, showing the generator charged and in operation; and Fig. 4, an outside elevation of the basket-moving mechanism.

A represents a chamber which may be of any suitable size or construction. It contains a charging-opening B, through which material, as carbid, may be supplied. The various openings through the chamber A are of course provided with gas-tight gaskets or stuffing-boxes. Toward the lower part of the chamber A is arranged a horizontal shaft C, suitably journaled, which may be turned by exterior mechanism—as, for instance, by the crank and gear-wheels D. Upon this shaft is carried the revoluble cage E, which by preference is in the form of two truncated cones united at their bases and supported by the spider-frames F F F. Entering the openings at the end of the cage are the troughs or guides G, which, as shown, surround the shaft and, communicating with the upper portion of the chamber, serve to guide the carbid into the revoluble cage. Above the cage E

is arranged the water-spray pipe K, which may be, if desired, provided with governor M, allowing the water to enter only when the gas-pressure becomes reduced below the determined point. This governor may be of any known construction, of which many are in use. Above the pipe K is the shield L, which, as shown, is in longitudinal section an arc of a circle and which serves the double purpose of protecting the jet-pipe K from the falling fragments of carbid and of guiding the carbid into the openings of the troughs or guides G. Its operation will be readily seen in Fig. 3. The bottom of the vessel A is provided with a manhole H for removing the waste material. The gas-outlet J, located in the upper part of the chamber, may be provided with an automatic governor N, determining the gas-pressure which shall pass outside of the apparatus into the service-pipes.

The operation of my apparatus, which is simple, may now be readily understood. The carbid is placed in the chamber A, as shown in Fig. 3. Water is allowed to enter, as desired, or its delivery is automatically controlled through the pipe K. This generates gas by attacking the carbid within the cage F. At intervals the cage is revolved and the refuse lime is caused to fall through its open grating, as shown in Fig. 3. It may be removed at intervals, as desired, through the manhole H. The generated gas passes upward through the body of carbid above the water-jet and is thereby dried. As the carbid is consumed in the revolving cage fresh carbid is automatically fed into the end of that cage by gravity.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination in a gas-generator, of a suitable casing, a revoluble cage located in said casing and provided with open ends, a guide for each end of said cage and a curved protecting-casing over said cage, substantially as described.

2. The combination in a gas-generator, of a suitable casing, a revoluble cage located in said casing, a protective casing over said cage, and means at the end of said cage for guiding a gas-producing material into it, said

means in connection with said protective casing forming a chamber for the gas-producing material, a spraying device intermediate the cage and protective casing and a gas-outlet 5 at the upper end of said casing, substantially as shown and described.

3. The combination in a gas-generator, of a suitable casing provided with a charging-opening at its upper portion and a manhole 10 at its lower portion, a cage provided with open ends journaled in said casing, means in connection with said cage for revolving it, a protective casing over said cage, a guide for

each of said open ends, said guides and casing forming a division for said casing, a spraying 15 device intermediate the protective casing and cage, and a gas-outlet at the upper end of the casing, substantially as shown and described.

In testimony whereof I have signed my 20 name to this specification in the presence of two subscribing witnesses.

EDWARD J. DOLAN.

Witnesses:

FELIX McLOUGHLIN,  
ADAM BROWN.