

(No Model.)

F. CLAUSS.
GAS GENERATOR.

No. 311,161.

Patented Jan. 20, 1885.

Fig. 1.

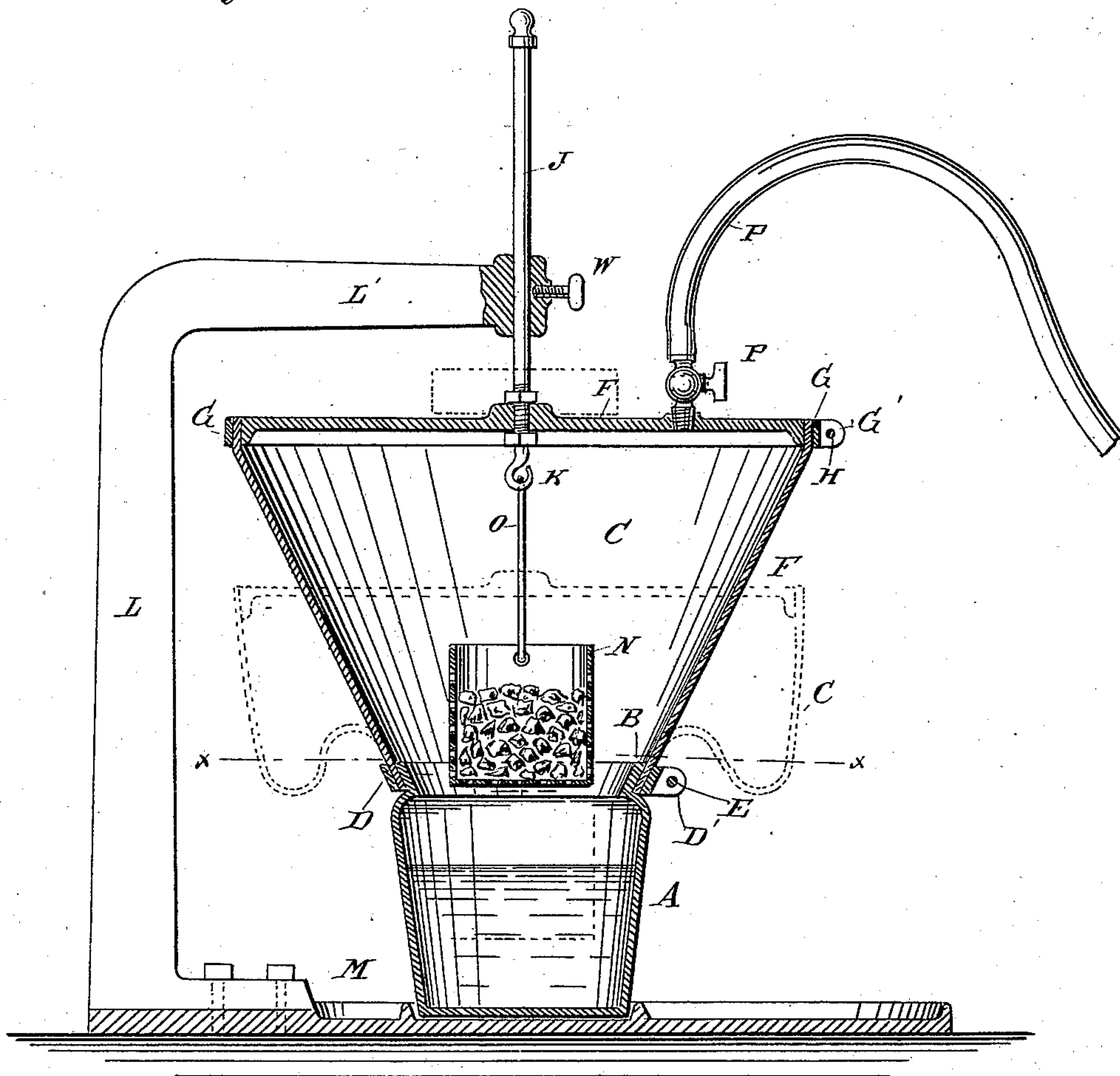
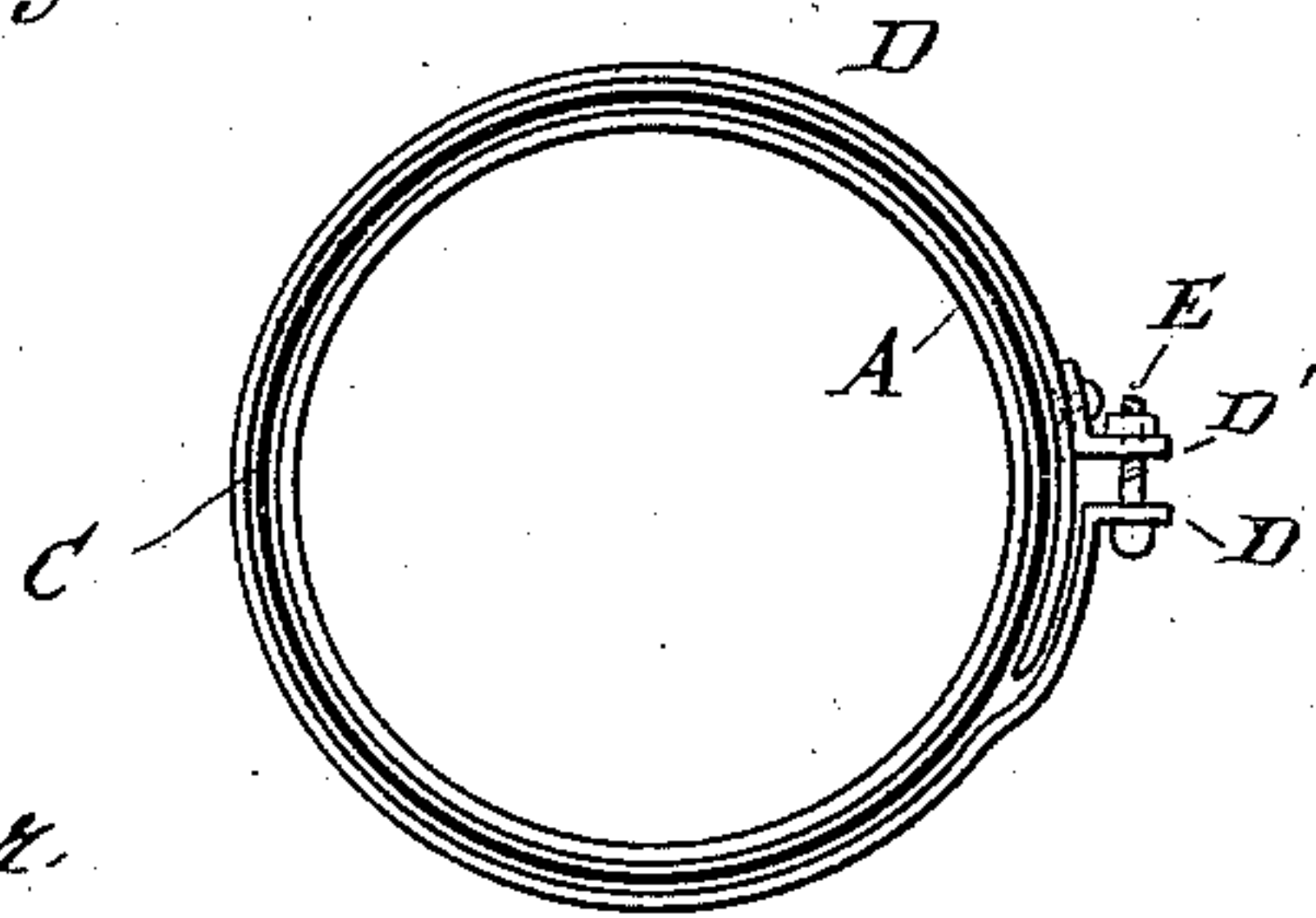


Fig. 2.



WITNESSES:

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GAS-GENERATOR.

SPECIFICATION forming part of Letters Patent No. 311,161, dated January 20, 1885.

Application filed May 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK CLAUSS, a citizen of the United States, and a resident of Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Gas-Generators, of which the following is a specification.

The object of my invention is to provide a new and improved apparatus for generating gas in such quantities as are required.

The invention consists in the combination, with a vessel for receiving acid, of a funnel-shaped flexible vessel held on the top of the same, and provided with a top from which a vessel is suspended which contains marble-dust.

The apparatus is provided with an outlet-pipe for the gas, and with guiding devices, and operates in a manner that will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a cross-sectional elevation of my improved gas-generator. Fig. 2 is a sectional plan view of the same on the line *x x*, Fig. 1.

The glass or earthenware vessel A is provided with a flaring neck, B, around which the lower end of a funnel-shaped soft-rubber flexible funnel-shaped extension, C, is clamped by a ring, D, provided on its ends with jaws D', through which a bolt, E, is passed. In the top or wider end of the said rubber flexible funnel-shaped extension C a cover, F, is held, on which the edge of the said vessel C is clamped by a ring, G, having jaws G' on its ends, through which jaws a bolt, H, is passed. A rod, J, secured in the cover or top F, projects upward from the same, and on the lower end of the same a hook, K, is formed, which projects from the under side of the said top. The rod J passes through a guide-arm, L', formed on a standard, L, projecting upward from a base, M, on which the vessel A rests. An apertured vessel, N, made of glass, earthenware, glazed metal, or any other suitable material, is suspended by means of its bail O from the hook K. A flexible tube, P, provided with a cock, P', has one end secured in the cover F, and leads to the barrel or other vessel in which the gas is required. Marble

pieces or other carbonate of lime is filled into the vessel N.

The rod J can be locked in place, and the flexible funnel-shaped extension C held secured by means of the binding-screw W in the end of the arm L'.

Other gases may be generated in this apparatus by changing the materials used.

The operation is as follows: When the gas in the flexible funnel-shaped extension C is exhausted, it collapses, as shown in dotted lines in Fig. 1, whereby the vessel N descends into acid contained in the vessel A. The acid acts on the marble-dust in the vessel N, and thus carbonic-acid gas is generated, whereby the cover F is raised, and the vessel N is lifted out of the acid and the generation of gas ceases. As soon as the flexible funnel-shaped extension C is exhausted or partially exhausted, again the vessel N descends into the acid and more gas is generated, and so on, the apparatus working automatically and generating the gas as rapidly and in such quantities as the same is required.

The special advantage of my improved apparatus is that not a very great pressure of gas is required to raise the cover F and the vessel N suspended from the same, and thus the rubber flexible funnel-shaped extension C is not subjected to any undue strains. As the flexible funnel-shaped extension C is made conical, it can fold or collapse without forming wrinkles, and thus the said vessel will last longer. The cover F can be weighted, if desired.

The flexible funnel-shaped extension C need not necessarily be made of rubber, but can be made of any other suitable air-tight material.

I am aware that Letters Patent No. 47,205 were issued to P. and F. Hinkel on the 11th day of April, 1865, for a gas-generator, and consider my invention an improvement on Hinkel's device, as I can operate with less pressure, do not strain the flexible funnel-shaped extension, and finally, the flexible funnel-shaped extension in my apparatus does not wrinkle, as the flexible funnel-shaped extension in the Hinkel apparatus does.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

The combination, with the vessel A, having a neck, B, of the flexible cone-shaped extension C, clamped on the neck B by a ring, D, the cover F, held in the top of the flexible funnel-shaped extension C, the ring G, clamping the top of the flexible funnel-shaped ex-

tension C on the cover F, the rod J, the hook G, the vessel N, suspended from the cover F, 10 and the outlet-tube P, substantially as herein shown and described.

FREDERICK CLAUSS.

Witnesses:

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