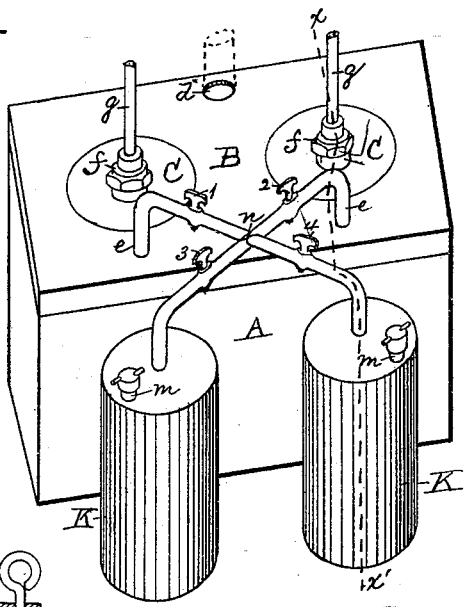
(No Model.)

M. R. SPELMAN.

GAS GENERATING MACHINE.

No. 262,704. Patented Aug. 15, 1882.

FIG. 1.



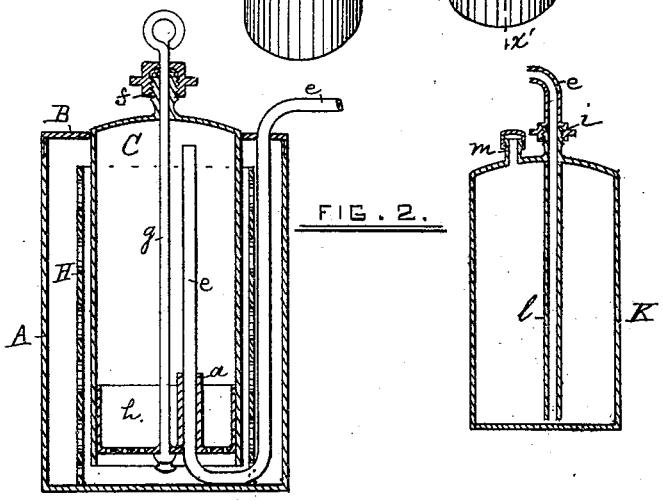


FIG. 2.

WITNESSES.

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MARK R. SPELMAN, OF NEW ORLEANS, LOUISIANA.

GAS-GENERATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 262,704, dated August 15, 1882.

Application filed November 3, 1881. (No model.)

To all whom it may concern:

Be it known that I, MARK R. SPELMAN, a resident of the city of New Orleans, parish of Orleans, and State of Louisiana, have invented a certain new and useful Improvement in Gas-Generating Machines; and I do hereby declare the following to be a full, clear, and correct description of the same, reference being had to the annexed drawings, making a part of this specification.

Figure 1 is a perspective view of my apparatus as when made double, and Fig. 2 a cross-section through the line *x x'* thereof.

My invention, which relates to gas-generating machines, consists in the construction and novel combination of parts, as will be hereinafter more fully set forth, and pointed out in the claims.

In the annexed drawings, the letter A is a rectangular casing, provided with a cover, B, in which are one or more circular openings for the reception of gasometers C and of inlet and outlet pipes *d e e*. In the top of each gasometer is fitted a stuffing-box, *f*, to receive a rod, *g*, that has fitted to its lower end a vessel, *h*, the bottom of which is perforated, so that iron filings or scrap metal placed therein may at certain times be subjected to a bath of diluted sulphuric acid contained in the bottom of the casing A, thereby causing a generation of gas, which, increasing in volume and pressure, forces the gasometer upward. The quantity of gas contained in the gasometer is always indicated by the height of same. The water is fed into the casing through the pipe *d*, which, though not shown in the drawings, is furnished with a suitable stopper.

The stuffing-box *f* and the rod *g*, by which the vessel *h* is suspended, may be threaded or otherwise constructed so as to provide for adjusting the said vessel at any desired height. Thus it will be seen that the generation of gas in this part of the apparatus is automatically controlled, inasmuch as the raising of the gasometer above a certain height lifts the vessel from the bath, arresting further generation of gas until by withdrawal of same the gasometer settles down again, bringing the vessel *h* and its contents in contact with the sulphuric-acid bath and causing again the generation of gas.

Within each gasometer is a vertical pipe, *e*, through which the gas is withdrawn for consumption. This pipe, which passes through a sleeve, *a*, connected with the vessel *h*, is so constructed as to pass outward beneath the perforated vessel *h* and through the lower part of the guide H, which surrounds the same, and which is perforated, so as to permit of a free and uninterrupted flow of liquid through the same. The aforesaid pipe *e* is next carried upward through the top of the casing, and is provided with a half-coupling, as shown at *i* in Fig. 2, so as to connect with a portable carbon or oil vessel, *k*, the interior of which is provided with a pipe, *l*, by which the gas is conveyed to the bottom thereof, so as to be enriched by passing upward through the hydrocarbon or oil contained therein, and is finally drawn off for consumption through a pipe, *m*. The pipe *e* is furnished with a stop-cock to regulate the flow of gas between the two vessels; and when the apparatus is made double, as in Fig. 1, the pipes from the carburetors are made to cross one another, as at *n*, and the four branches each supplied with a stop-cock, as at 1, 2, 3, and 4, so that one half of the apparatus may be replenished while the other half is in operation.

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

1. In a gas-generating machine, the combination, with a gasometer, a gas-exit pipe, *e*, and rod *g*, adjustably sustained in position, of the vessel *a*, fitted to the lower end of rod *g* and provided with a perforated bottom, and sleeve *a*, surrounding the pipe *e*, as described, and for the purpose set forth.

2. In a gas-generating machine, the combination, with a casing, A, and its cover B, of the gasometer C, provided with the stuffing-box *f*, rod *g*, with perforated vessel *h*, the perforated guide H, and exit gas-pipe *e*, substantially as and for the purpose set forth.

In testimony whereof I hereunto sign my name.

M. R. SPELMAN.

In presence of—
J. C. HUBBELL,
P. J. FINNEY.