J. L. Bartlett,

Carbureter.

No. 107,853. Patented Oct. 4. 1870.

Fig. 1.

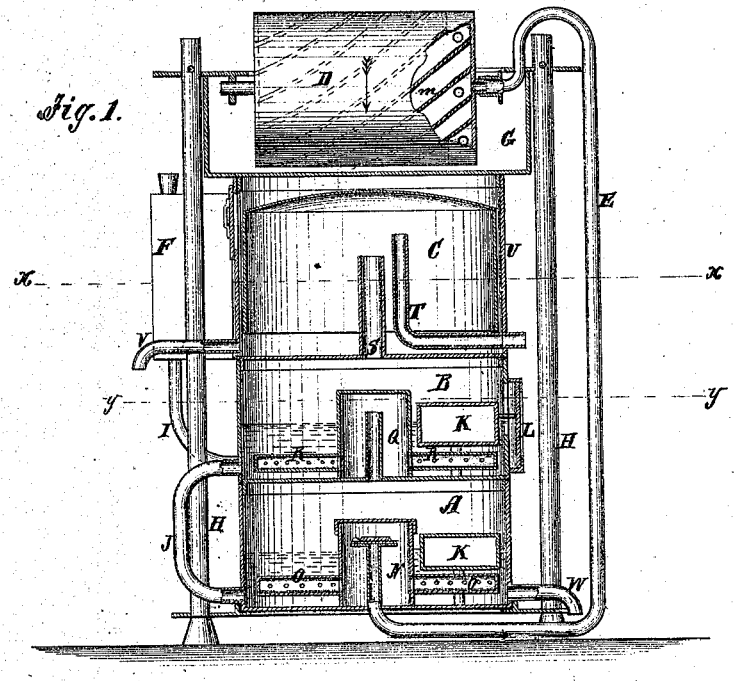


Fig. 2.

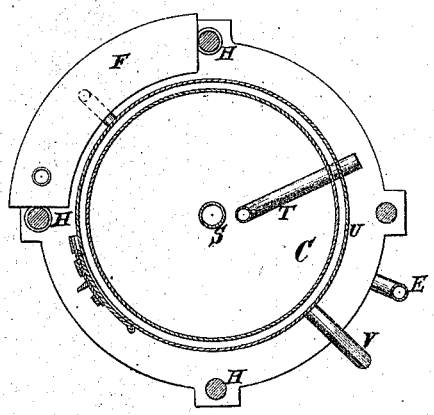
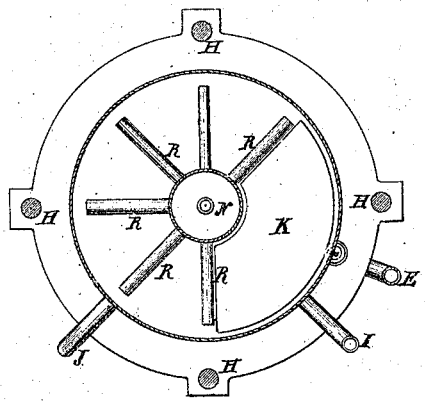


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN L. BARTLETT, OF STOCKTON, ASSIGNOR FOR ONE-HALF HIS RIGHT TO WILLIAM BIVEN, OF SAN JOAQUIN COUNTY, CALIFORNIA.

IMPROVEMENT IN GAS-CARBURETERS.

Specification forming part of Letters Patent No. **107,853**, dated October 4, 1870.

To all whom it may concern:

Be it known that I, JOHN L. BARTLETT, of Stockton, in the county of San Joaquin and State of California, have invented a new and useful Improvement in Gas-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a new and useful improvement in machines for generating illuminating gas by carbureting atmospheric air; and it consists in the construction, arrangement, and combination of parts hereinafter described.

In the accompanying drawing, Figure 1 represents a vertical central section of the machine. Fig. 2 is a horizontal section of Fig. 1 on the line *x x*. Fig. 3 is a horizontal section of Fig. 1 on the line *y y*.

Similar letters of reference indicate corresponding parts.

This machine consists mainly of two or more separate carbureting-chambers, a gas or carbureted air-holder, a blower for supplying air, and a reservoir for the hydrocarbon liquid, with the pipes connected therewith.

A is the lower carbureting-chamber. B is the upper one. C is the gasometer or holder. D is the blower, by means of which air is forced into the lower chamber A through the pipe E. F is the fountain or reservoir, which contains the gasoline, naphtha, or other hydrocarbon liquid for carbureting the air. G is a case or receptacle for the blower, which is placed on the gasometer, which, with the carbureting-chambers A and B, are secured together by means of the rods H. The fountain F is supported by two of these rods H. The carbureting liquid is discharged into the upper chamber B through the pipe I, and from that chamber into the chamber A through the pipe J. The flow of the liquid into these chambers is regulated by means of floats K, which are made to operate stop-valves. The upper float also indicates the height of the liquid in the upper chamber by means of a pointer thereon, which is seen through the glass or transparent indicator L.

The blower D is revolved in the direction indicated by the arrow. It consists of an outer and an inner cylinder, between which are spiral channels *m*, which are open to the atmosphere at one end for the admission of the air. At the other end they open into the interior cylinder, from which the air passes into the pipe E through the journal of the blower, which is hollow. The air is conveyed down under the machine, and up through the bottom of the chamber A, into the air-receiving chamber N, through a valve, to prevent a return of the air, from whence it is discharged into the perforated arms O, beneath the surface of the liquid. The air takes up or combines with a portion of liquid, and becomes partially carbureted in the chamber A, but passes directly upward through the tube P into the receiving-chamber *q*, from whence it is again forced into the liquid from the perforated arms R, and rises from the liquid and chamber B into the gasometer C through the tube S, from whence it is discharged ready for use through the pipe T. The gasometer C is confined in the water-tank U.

V is a tube provided with a stop-cock for drawing off the water from the tank. W is a tube for drawing off the carbureting liquid from the chamber A.

The blower D may be rotated by means of a spring or weight and clock-work or gearing, or in any other suitable or convenient manner.

By this machine atmospheric air may be charged with the vapor of the hydrocarbon liquid at a very slight expense, so as to give a most brilliant light.

This entire apparatus is in a very portable shape, and well adapted to family use, as well as for supplying any greater number of burners, the number of burners being regulated by the number of carbureting-chambers.

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

1. The fan-blower D, consisting of two cyl-

inders connected by spiral channels *m*, open to the air at one end, and discharging the air into the interior cylinder at the other, constructed as and for the purpose described.

2. In gas-machines, the floats K, arranged in air-receiving chambers A B, as and for the purpose specified.

3. The air-receiving chamber N, having radial perforated arms O arranged in the hydrocarbon-chamber A, as and for the purpose described.

JOHN L. BARTLETT.

Witnesses:
GEORGE TILGHMAN,
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