

(No Model.)

F. RUCKLE & W. WOLTERS.

CARBURETOR.

No. 390,037.

Fig. 1. Patented Sept. 25, 1888.

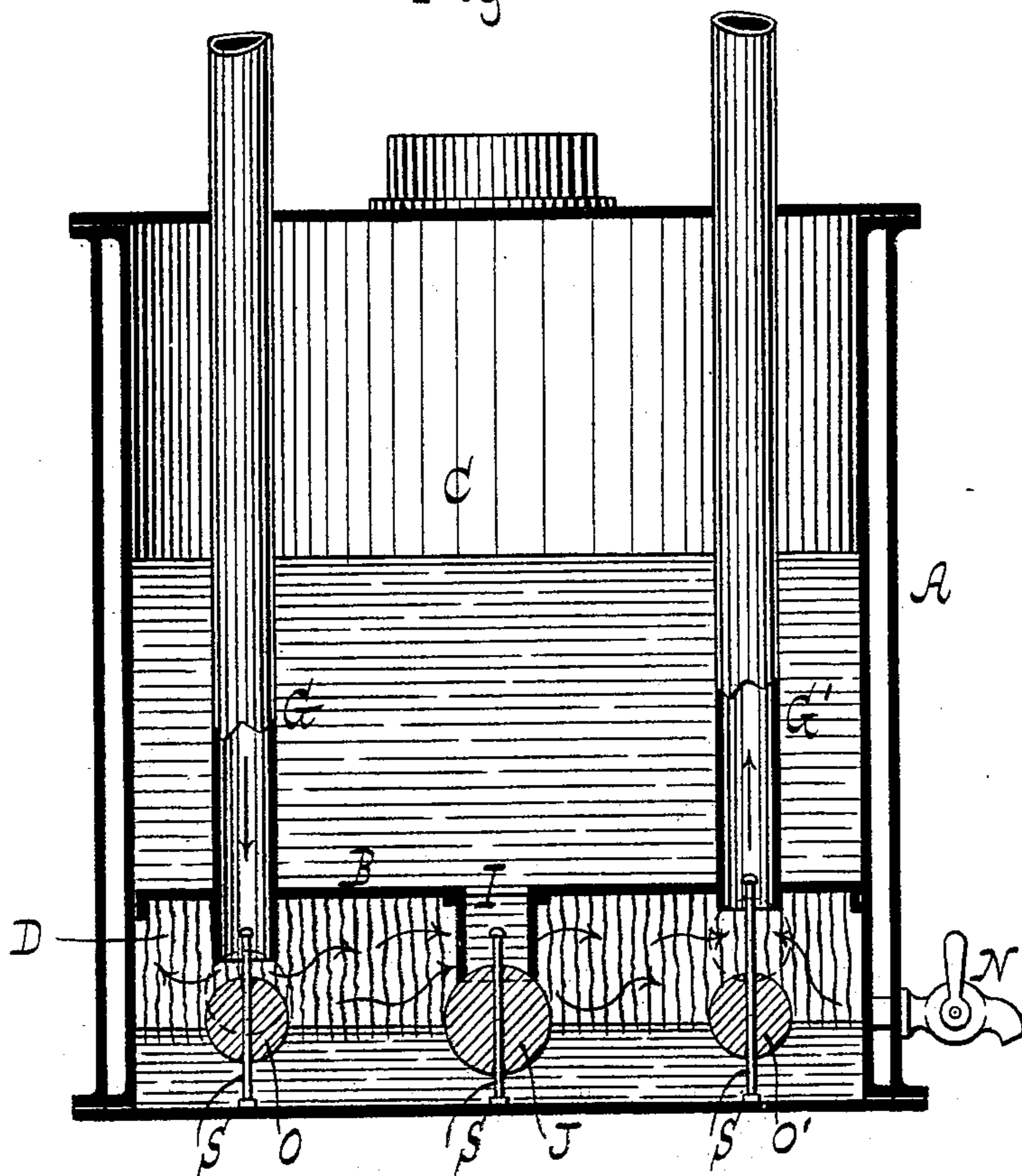
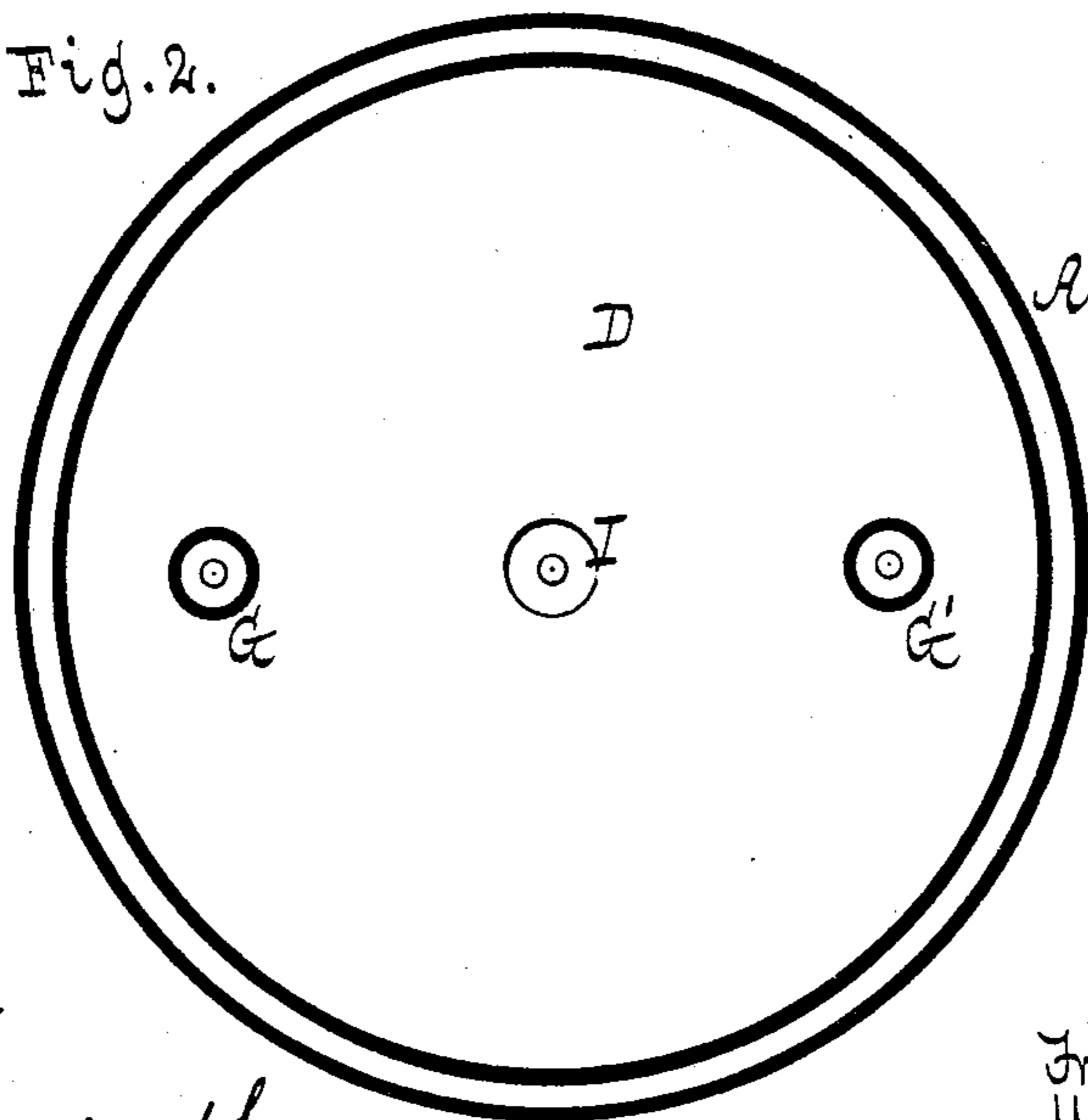


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE

FRANZ RUCKLE AND WILLIAM WOLTERS, OF NEW YORK, N. Y., ASSIGNORS  
TO JAMES GILBERT FOSTER, OF SAME PLACE.

## CARBURETOR.

SPECIFICATION forming part of Letters Patent No. 390,037, dated September 25, 1888.

Application filed August 11, 1887. Serial No. 246,652. (No model.)

*To all whom it may concern:*

Be it known that we, FRANZ RUCKLE, a citizen of Germany, and WILLIAM WOLTERS, a citizen of the United States, and both residents of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Carburetors, of which the following is a specification.

Our invention relates especially to that class of gas-carburetors in which the gas is conducted by means of suitable pipes to and from a liquid-evaporating chamber, which is supplied with a hydrocarbon liquid from a storage-chamber through a passage with an automatically-operating float-valve.

The novel features of our invention are hereinafter fully described, and illustrated in the accompanying drawings, in which—

Figure 1 represents a vertical central section. Fig. 2 represents a horizontal section.

Similar letters indicate similar parts.

The letter A indicates the body of the apparatus, having a horizontal partition, B, whereby it is divided into two chambers, one of which, C, is a storage-chamber for the hydrocarbon liquid—such as naphtha—with which the gas is to be treated, and the other, D, a chamber for evaporating such liquid.

G G' are two pipes extending vertically through the storage-chamber C and through the partition B into the evaporating-chamber D, both pipes being open at the lower end, and one forming an inlet and the other an outlet for the gas to and from the evaporating-chamber.

I denotes a tube projecting downwardly from a hole in the partition B into the evaporating-chamber D, for supplying the latter with liquid from the storage-chamber, the lower end or terminal of which tube is at a point below the terminal of the gas-inlet pipe G.

Each of the gas-pipes G G', as well as the liquid-supply tube I, has a float-valve, J, O, or O', arranged opposite the terminal thereof in the evaporating-chamber D, for closing said pipes and tube under certain conditions, presently explained; and to the side of the evaporating-chamber is connected a try-cock, N, which is exterior of the apparatus and at a point approximately opposite the terminal of the liquid-supply tube. Said float-valves J O

O' may be of spherical or other suitable shape, and made of wood or other suitable material, with or without packing, and each is fitted upon a stem, S, to slide freely thereon toward its seat, the valve-stems rising from the bottom of the evaporating-chamber; or, if desirable, the valves may be hung loosely in cages affixed to suitable portions of the gas-pipes and supply-tube.

On inspection of the drawings it will be seen that the outlet pipe G' extends but slightly below the partition B, that the inlet-pipe G extends farther down into the evaporating-chamber than said outlet-pipe, and also that the feed-tube I extends still farther downward than the inlet-pipe.

Each of the float-valves J O O' rests upon the liquid that may be admitted to the evaporating-chamber D through the supply-tube I, and by the valve J of said tube the liquid is kept at a fixed level in the evaporating-chamber under normal conditions, due to the closing of the terminal of said tube by the valve when the liquid reaches a certain height, and hence a proper space is left above the liquid for the circulation of the gas through the evaporating-chamber, both gas pipes G G' at the same time remaining open, since the terminals of said pipes are above the terminal of the supply-tube. If, however, said valve J of the supply-tube should fail to operate from any cause and permit an excessive flow of liquid into the evaporating-chamber, the valve O will be carried up so as to close pipe G and cut off the inflow of gas, the outlet-pipe G' meanwhile remaining open, so as to carry off the gas generated in the evaporating-chamber, until the oil shall have lifted valve O' and closed that pipe. By this construction the machine remains in working order until the last valve is closed, and during the gradual closing of that valve the supply of gas to the burners will gradually diminish, thereby giving notice to the user that the machine is about to flood, which difficulty can be at once avoided by drawing off sufficient oil to allow float J to drop and free itself of any obstruction between it and the valve-seat.

For the purpose of drawing off the accumulated liquid from the evaporating-chamber D, it is only necessary to open the try-cock N, the

surplus liquid thus being discharged, and it being again lowered to the proper level, which is that of the terminal of the supply-tube I in the evaporating-chamber.

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

10 In a carburetor, the combination, with an evaporating-chamber and a storage-chamber above said evaporating-chamber, of a liquid-supply tube extending from the storage-chamber into the evaporating-chamber, an inlet-pipe, and an outlet-pipe, also extending into the evaporating-chamber, float-valves for the said tube and pipes, and a draw-off cock in

communication with the evaporating-chamber, 15 the terminal of the inlet-pipe being below that of the outlet-pipe and the terminal of the supply-tube below that of the inlet-pipe, substantially as described, and for the purposes stated.

Signed at New York, in the county of New York and State of New York, this 10th day of August, A. D. 1887. 20

FRANZ RUCKLE.  
WILLIAM WOLTERS.

Witnesses:

CHAS. WAHLERS,  
HENRY BISCHOFF.