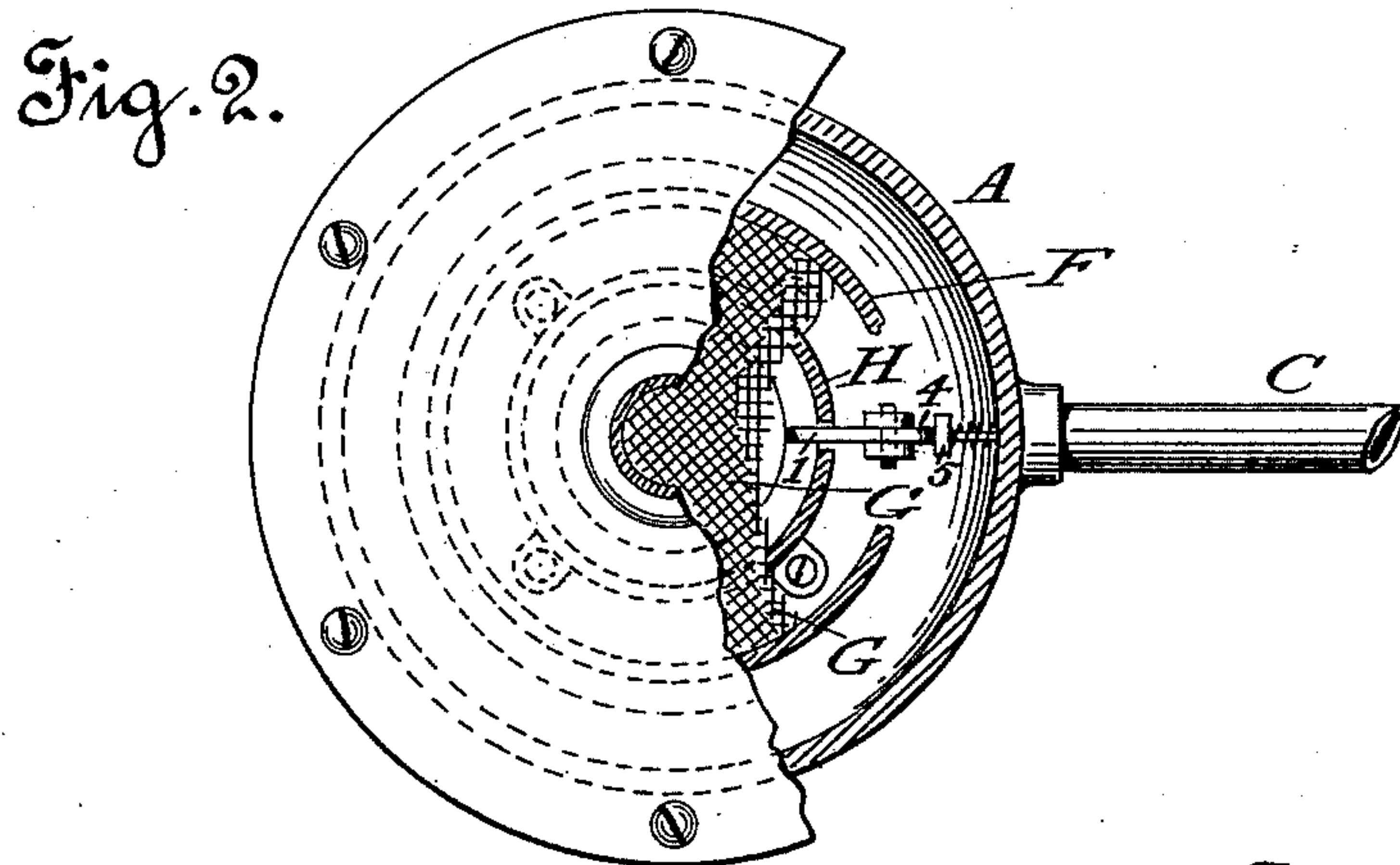
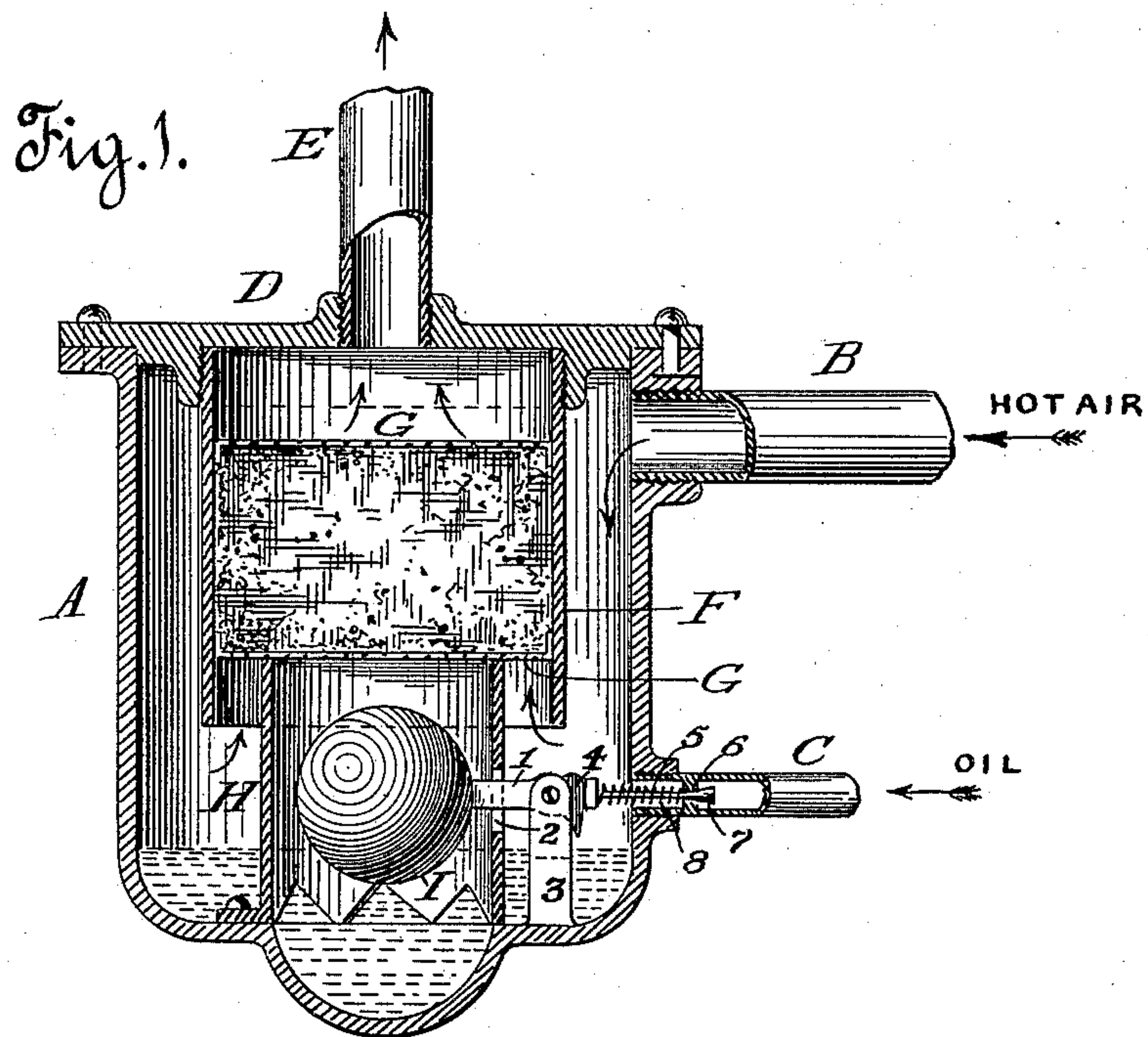


(No Model.)

F. A. REDMON.
CARBURETER.

No. 583,818.

Patented June 1, 1897.



Witnesses.

H. Hartenwerdt.

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UNITED STATES PATENT OFFICE.

FREDERICK A. REDMON, OF SAN FRANCISCO, CALIFORNIA.

CARBURETER.

SPECIFICATION forming part of Letters Patent No. 583,818, dated June 1, 1897.

Application filed April 1, 1896. Serial No. 585,772. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. REDMON, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Vaporizers and Carbureters; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to apparatus for carbureting air, and in the form in which I have embodied it is used for producing an explosive mixture of air and vapor for operating a gas-engine.

My apparatus comprises a vaporizer for oil, means for mixing the vapor of oil with hot air, and means for regulating the supply of oil and admitting it automatically to the vaporizer.

The object of my invention is to do away with the heavy, cumbersome, and expensive carbureters commonly employed and to provide instead a small and simply-constructed vaporizer and carbureter which can be attached directly to the gas-engine, if desired, and which will be convenient as well as perfectly safe in use.

I have illustrated my invention in the accompanying drawings, in which—

Figure 1 is a central vertical section of the apparatus. Fig. 2 is a combined plan and horizontal section of the same.

A is a cylindrical metallic chamber, the bottom of which is preferably rounded to form an oil-receptacle.

B is a pipe entering the chamber and which is supposed to supply air heated by a coil in the exhaust-passage of the gas-engine.

C is a pipe which enters the chamber near its bottom and which supplies oil from any suitable tank conveniently located.

D is a plate which closes the top of the chamber and from which a pipe E conveys the carbureted air to the gas-inlet of the engine. Within the chamber is a cylinder F, depending from the top plate D and having secured within it screens G G, between which is a body of some porous material.

Below the lower screen and resting on the bottom of chamber A is a shell H, having a serrated lower edge or otherwise provided with openings to allow the oil to enter freely.

This shell incloses a float I, which is supported upon the body of oil and rises and falls as the latter changes its level. An arm 1 projects from the float through a slot 2 in the shell and is pivoted in a standard 3. This arm forms a lever, the free end of which is formed into a cam 4, which bears on the end of the valve-stem 5 in the oil-pipe C. A seat 6 is formed in the pipe for the valve 7, which is kept seated by a spring 8, excepting when moved by the cam. If the oil in the chamber A falls below a certain level, the cam will open the oil-valve and admit oil until the float rises enough to close the valve again. Thus the supply is automatic and regulated. The chamber A forms a hot-air space above the oil. The air can circulate around the cylinder F and shell H, but is compelled to pass downward in contact with the oil. The vapor produced by the hot air changes the air or carburets it, and the resultant explosive or ignitable mixture rises between the shell H and the cylinder F and through the porous filling and escapes through the pipe E ready for service in the engine. The porous filling entirely prevents any danger of explosion by a possible back draft of carbureted air.

The device can be attached to any convenient part of the engine and forms an exceedingly simple, cheap, and convenient carbureter particularly well adapted to supply vapor to small gas-engines, especially in situations where it is inconvenient to use the ordinary large carbureters.

What I claim is—

1. In combination, the outer casing, the bottomless inner casing depending from the top thereof, the sleeve supported in the bottom of said outer casing and extending upwardly within the inner casing, the porous filling and the screen extending entirely across the inner casing for supporting the same, the upper edge of said sleeve contacting with said screen, and the inlet and outlet pipes, substantially as described.

2. In combination, the outer casing, the outlet-pipe in the top and the air and oil inlet pipes in the ends thereof, the inner casing depending from said top, the sleeve supported by said outer casing, said sleeve having a serrated end below the oil-level in said casing,

the valve under spring-tension for closing
said oil-inlet pipe, the standard arranged to
one side of said sleeve, the lever carrying the
cam at one end pivoted to said standard, the
5 opposite end of said lever extending through
a slot in said sleeve, and the float carried
thereby, substantially as described.

In testimony whereof I have affixed my
signature, in presence of two witnesses, this
14th day of March, 1896.

FREDERICK A. REDMON.

Witnesses:

L. W. SEELY,

F. E. MONTEVERDE.