No. 638,557. Patented Dec. 5, 1899.

W. E. CARY.

CARBURETER.

(Application filed Apr. 28, 1899.)

(No Model.)

Fig. 1.

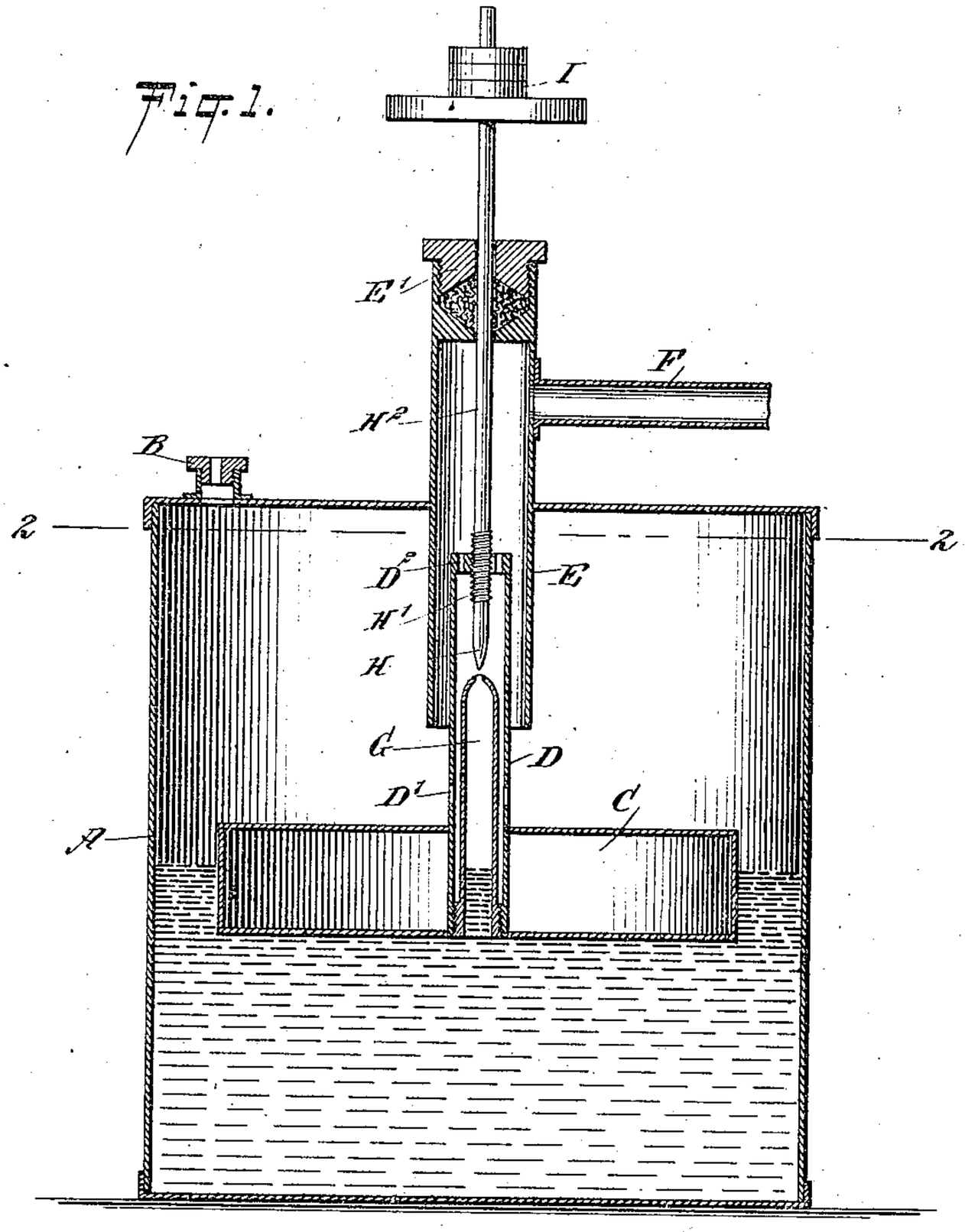
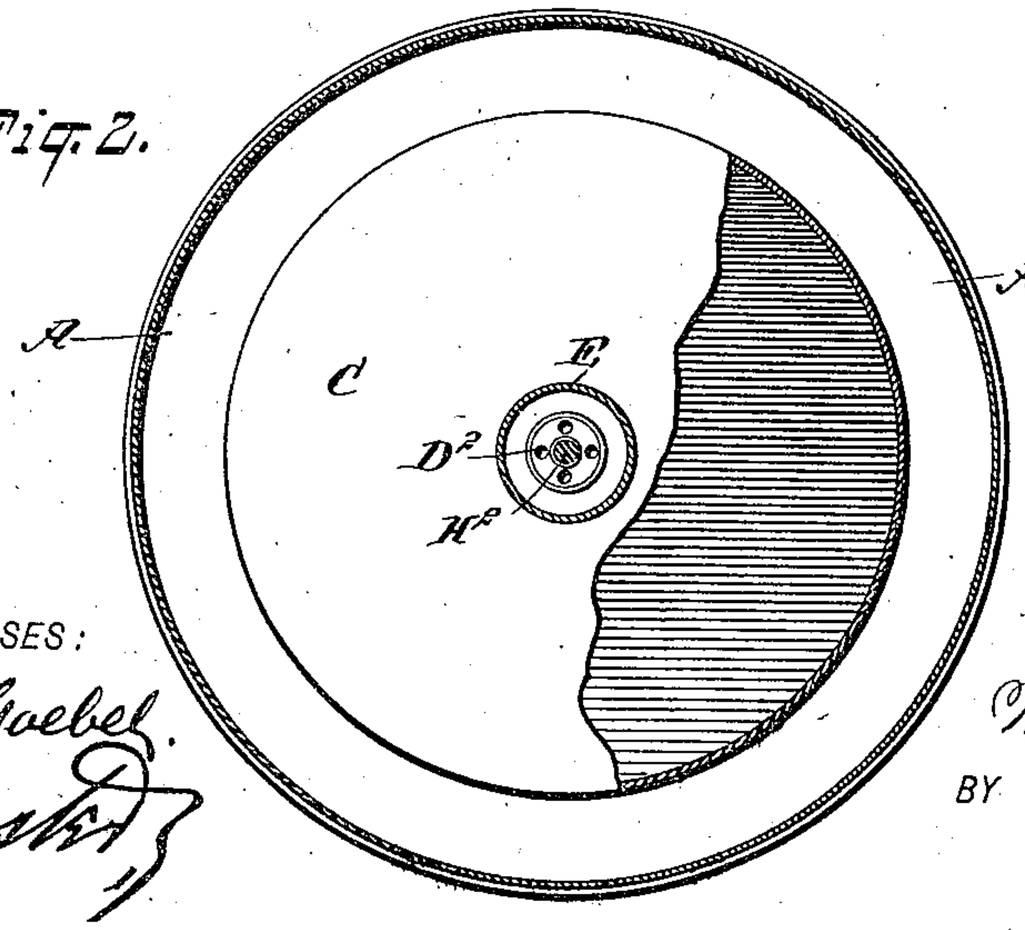


Fig. 2.



WITNESSES:

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WILLIAM E. CARY, OF SPRINGFIELD, VERMONT.

CARBURETER.

SPECIFICATION forming part of Letters Patent No. 638,557, dated December 5, 1899.

Application filed April 28, 1899. Serial No. 714,865. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. CARY, of Springfield, in the county of Windsor and State of Vermont, have invented a new and Improved Carbureter, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved carbureter more especially designed for forming an explosive mixture of gas and air for use in gas-engines as the motive agent, the carbureter being arranged to permit the operator to accurately regulate the proportion of gas and air to enrich the air according to the requirements of the engine.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the views.

Figure 1 is a sectional side elevation of the improvement, and Fig. 2 is a sectional plan view of the same on the line 2 2 in Fig. 1.

The improved carbureter is provided with a tank A, adapted to contain gasolene or other oil for enriching the air passing into and through the tank by way of a vent or filling-plug B on the top of the tank A. On the liquid in the tank A is arranged a float C, provided at its middle with an upwardly-extending pipe D, having an easy sliding fit in a pipe E, secured to the top of the tank A, and provided outside of the tank with a pipe F, leading to the engine or other machine in which the enriched gas is to be used.

Inside of the pipe D is secured a nozzle G, opening at its lower end into the liquid contained in the tank A, the upper or discharge end of the nozzle being above the inlets D′ formed on the pipe D a short distance above the float C. A needle-valve H serves to regulate the amount of oil passing through the nozzle-opening, said needle-valve extending outside of the nozzle-opening and in an upward direction and having a screw-thread H′ on its stem H^2, said screw-thread screwing in the upper threaded end of the pipe D, as is plainly illustrated in Fig. 1.

The upper end of the pipe D has outlets or openings D^2, which open into the upper portion of the fixed pipe E, so that the enriched air can pass from the pipe D through said openings D^2 into the upper part of the pipe E and from the latter by the pipe F to the engine, which draws the gas during the suction period of its piston.

The stem H^2 of the needle-valve H extends through a stuffing-box E′ in the top of the pipe E, and on the outer end of said valve-stem H^2 are adapted to be supported weights I for holding the float C with more or less force down in the liquid contained in the tank A and forcing the liquid in the desired quantity to the outlet of the nozzle G.

Now it is evident that when the engine is started the suction caused in the upper end of the pipe E causes the air to pass through the inlets D′ into the pipe D and over the upper portion of the nozzle G to create a suction therein to draw the liquid up in the nozzle and through the nozzle-opening thereof to finally mix with the outwardly-rushing air to form an explosive charge. The air thus enriched passes through the upper end of the pipe D and the outlets D^2 to the upper end of the pipe E and the pipe F to be drawn into the engine. As the pipe D, carried by the float C, has an easy sliding fit in the pipe E, it is evident that the float rises and falls with the liquid in the tank, and as the needle-valve stem is adjustable in said pipe and is weighted at the outer end it is evident that the float can be forced with more or less power down into the liquid, as above mentioned.

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

1. A carbureter, comprising a tank for containing liquid, a float on said liquid, an air-pipe carried by the float and having air-inlets and gas-mixture outlets, and a nozzle in said pipe and opening at its lower end to the liquid and extending at its upper end above the inlets in said pipe, substantially as shown and described.

2. A carbureter, comprising a tank for containing liquid, a float on said liquid, an air-pipe carried by the float and having air-inlets and gas-mixture outlets, a nozzle in said pipe and opening at its lower end to the liquid and

extending at its upper end above the inlets in said pipe, and an outlet-pipe in which the air-pipe is fitted to slide, and which outlet-pipe is carried by the tank and connected with the engine, substantially as shown and described.

3. A carbureter, comprising a tank for containing liquid, a float on said liquid, an air-pipe carried by the float and having air-inlets and gas-mixture outlets, a nozzle in said pipe and opening at its lower end to the liquid and extending at its upper end above the inlets in said pipe, and a valve for controlling the outlet end of said nozzle, substantially as shown and described.

4. A carbureter, comprising a tank for containing liquid, a float on said liquid, an air-pipe carried by the float and having air-inlets and gas-mixture outlets, a nozzle in said pipe and opening at its lower end to the liquid and extending at its upper end above the inlets in said pipe, and a valve for controlling the outlet end of said nozzle, the stem of the valve being threaded to screw in said pipe, said stem also extending to the outside of the tank, to adjust the valve relatively to the nozzle, substantially as shown and described.

5. A carbureter, comprising a tank for containing liquid, a float on said liquid, an air-pipe carried by the float and having air-inlets and gas-mixture outlets, a nozzle in said pipe and opening at its lower end to the liquid, and extending at its upper end above the inlets in said pipe, a valve for controlling the outlet end of said nozzle, the stem of the valve being threaded to screw in said pipe, said stem also extending to the outside of the tank, to adjust the valve relatively to the nozzle, and weights adapted to be secured to the outer end of said stem, as set forth.

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Witnesses:
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