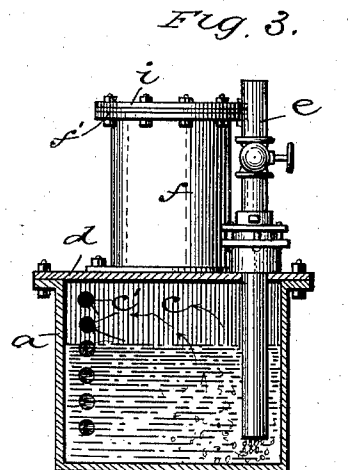
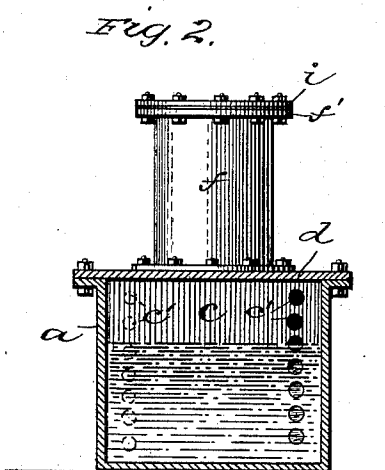
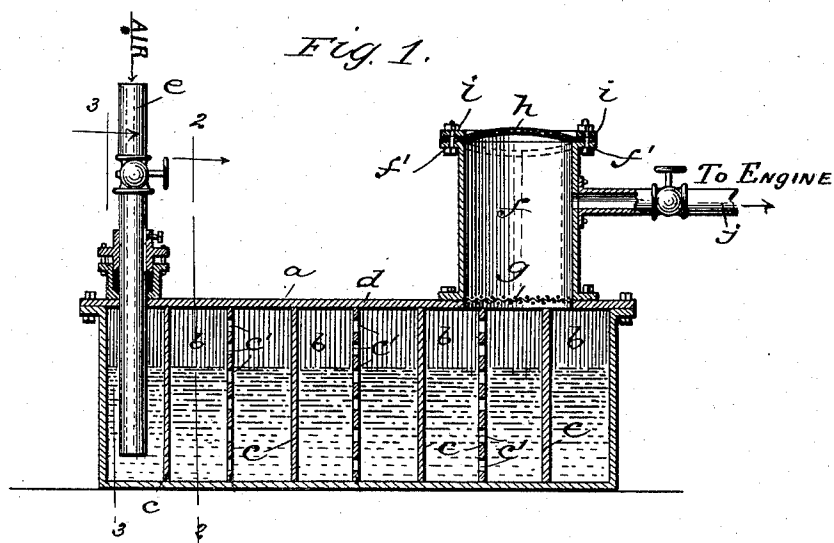


(No Model.)

J. W. LAMBERT.
CARBURETOR.

No. 474,838.

Patented May 17, 1892.



Witnesses
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E. J. Bussey.

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UNITED STATES PATENT OFFICE.

JOHN W. LAMBERT, OF OHIO CITY, OHIO.

CARBURETOR.

SPECIFICATION forming part of Letters Patent No. 474,838, dated May 17, 1892.

Application filed November 12, 1891. Serial No. 411,697. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. LAMBERT, a citizen of the United States, residing at Ohio City, in the county of Van Wert and State of Ohio, have invented certain new and useful Improvements in Carburetors, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and improved carburetor; and it has for its object to provide a device of simple construction which will be particularly adapted for supplying air charged with the vapor of gasoline or other liquid hydrocarbon to vapor or gas engines to be used as fuel or motive power thereof, as will be more fully hereinafter set forth.

The invention consists in the novel combination and arrangement of parts more fully hereinafter described, and particularly pointed out in the claim appended.

In the drawings, Figure 1 is a longitudinal section of a carburetor. Fig. 2 is a transverse sectional view on the line 2 2 of Fig. 1. Fig. 3 is a similar view on line 3 3 of Fig. 1.

In the construction shown I employ a reservoir *a*, preferably rectangular in shape, for containing the liquid hydrocarbon and divide its interior into a suitable number of transverse compartments *b* by means of the partitions *c*, which extend from the top to the bottom of and entirely across the reservoir. These compartments communicate with each other by means of a vertical series of perforations *c'* through one end of each partition, the perforations of one partition being near one side of the reservoir and those through the next or adjacent partitions being near the opposite side of the reservoir, as clearly shown in Fig. 2. The top or cover *d* is secured to the reservoir by bolts or any suitable means and is provided with an air-inlet pipe *e*, the lower end of which extends nearly to the bottom of the reservoir. This pipe enters the reservoir through a suitable stuffing-box located at one corner of the cover, and it is made adjustable vertically through said stuffing-box for the purpose of regulating its extension into the reservoir. Thus adjustably supporting the inlet-pipe is advantageous in that it may be raised or lowered to suit the quantity of liquid in the reservoir, and thereby enable the effi-

ciency of the device to be maintained until all or nearly all the liquid is used. The inlet-pipe enters the first compartment at the opposite end from the communicating perforations in the first partition, in order that the air drawn in by the action of the engine, as will be hereinafter described, will pass through the liquid contained in said compartment and over the surface of it before passing into the next compartment. This pipe extends a suitable distance above the reservoir and may be provided with a suitable valve, if desired.

A dome *f* is secured to the top of the reservoir at the opposite end from the inlet-pipe, its lower end opening into the reservoir. The lower end of this dome has secured across it by any suitable means a fine or closely-woven wire-gauze *g*, for a purpose hereinafter described.

The upper end of the dome *f* is closed by means of a flexible head *h*, which is secured between a radial flange *f'* on the upper end of the dome and a metal clamping-ring *i* by means of bolts or other suitable means. This flexible head may be formed of rawhide, leather, or any other suitable flexible material impervious to air and gas.

Gas from the upper end of the dome *f* is supplied to the engine through a pipe *j*, which enters the dome near its upper end and is provided with suitable regulating-valves, as desired.

The operation of my device is as follows: The reservoir being about two-thirds full of gasoline or other liquid hydrocarbon, air is admitted through pipe *e*, and as the lower end of this pipe extends below the surface of the liquid the air is drawn through the same, which insures its being charged thoroughly with hydrocarbon. After passing across the surface of the liquid contained in the first compartment the air passes through the perforations in the first partition and over the surface of the liquid contained in the second compartment, then through the perforations in the second partition near the opposite side of the reservoir, and so on in a zigzag course through all the compartments in the reservoir to the dome *f*. The gas or vapor is drawn through the compartments and from the dome *f* by the engine, each stroke of its piston causing the loose flexible head *h* to vibrate

forceibly, which materially aids in expelling gas from the dome. As the gas is drawn from the dome air is sucked down the inlet-pipe below the liquid contained in the reservoir and passes through the compartments, as before described, to the dome f.

The object of the gauze across the opening into the dome is to prevent any dust or foreign substances that may enter the reservoir through the inlet-pipe from passing into the engine, and also to assist in commingling the air and vapor.

By this apparatus the air is thoroughly impregnated and commingled with the volatile vapor of the gasoline and a highly-inflammable gaseous mixture is produced thereby.

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

In a carburetor, the combination of a reservoir, transverse partitions in said reservoir

provided with a vertical series of apertures at alternate ends of each partition, a valved air-inlet pipe entering the reservoir through the cover and extending below the level of the liquid in said reservoir, said pipe being adjustable vertically through the stuffing-box secured to the cover of the reservoir, a dome secured to the cover of the reservoir at the opposite end from the inlet-pipe, its lower end opening into the reservoir, a flexible head closing the upper end of said dome, and a valved outlet-pipe entering the dome between the gauze and the flexible head, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. LAMBERT.

Witnesses:

GEO. W. BANTER,
PETER LAWSON.