

(No Model.)

E. SAVILL.
CARBURETOR.

No. 504,137.

Patented Aug. 29, 1893.

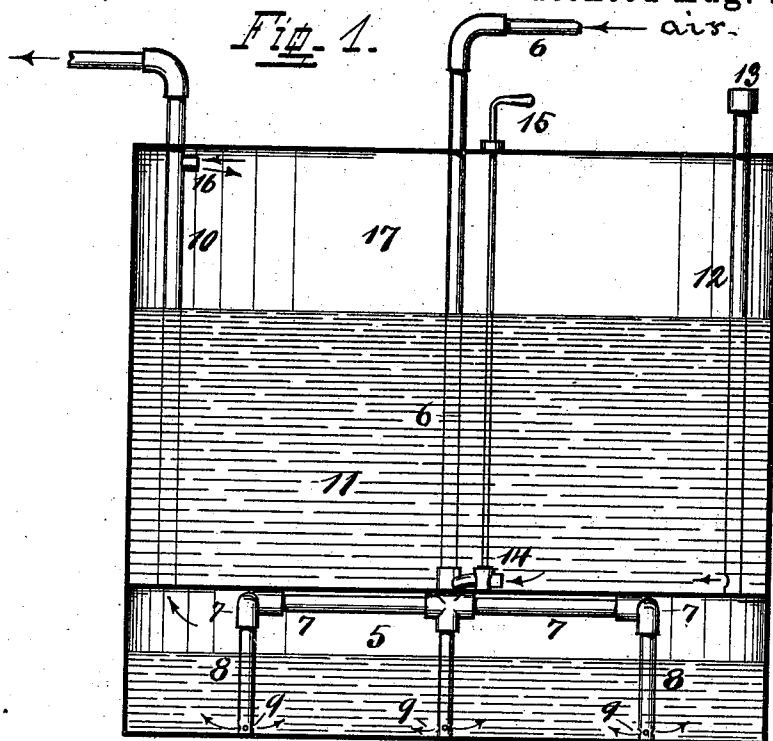
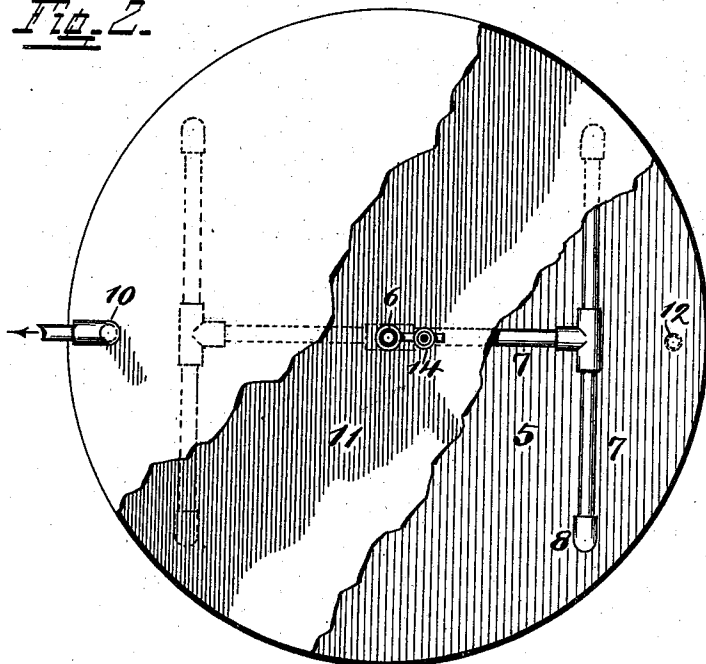


Fig. 2.



Attest
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UNITED STATES PATENT OFFICE.

EDWARD SAVILL, OF LEXINGTON, KENTUCKY, ASSIGNOR OF TWO-THIRDS
TO JOHN W. NEWMAN AND JAMES C. OLIVER, OF SAME PLACE.

CARBURETOR.

SPECIFICATION forming part of Letters Patent No. 504,137, dated August 29, 1893.

Application filed December 12, 1892. Serial No. 454,901. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SAVILL, a citizen of the United States, residing at Lexington, in the county of Fayette and State of Kentucky, have invented certain new and useful Improvements in Carburetors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in the construction of carburetors, or similar devices where atmospheric air is mixed with the vapor of a suitable volatile hydro-carbon liquid, like gasoline for instance, to be used for illuminating purposes.

It consists of the general and specific features of the construction all of which will appear more fully hereinafter.

In the following specification and particularly pointed out in the claims at the end thereof, is found a full description of my invention, its parts, operation and construction, which latter is also illustrated in the accompanying drawings in which—

Figure 1, is a vertical, central section of an improved gas-generator for gas-machines and Fig. 2, is a top view of the same, parts of it broken away.

In my carburetor the air is introduced into a volume of oil below the surface of the latter so that before the former can separate again from the latter, it must pass through it whereby the air becomes thoroughly mixed and saturated with the oil, respectively with its vapor. To give the air the requisite motive power to do this, it is desirable that it be introduced while under pressure.

In the drawings, 5 indicates the generator, consisting of a suitable tank or vessel, constructed air-tight and capable of holding oil.

6, is an air-pipe entering the generator and spreading in a number of horizontal branches 7, having vertical branches 8, which latter are provided with air-outlets 9 near the bottom of the generator. The number and disposition of these branches and air-outlets may be modified in many ways, all of which will how-

ever accomplish the same purpose as long as the air enters the oil below the top-surface of the same. Pipe 6, is preferably connected with an air-pump which furnishes the necessary pressure. The mixture of air and vaporized oil, after separating from the oil passes off through gas-pipe 10 to the place where the gas is to be used, respectively to the burners.

For the sake of convenience and simplicity I combine a storage tank 11, with the generator, which surmounts the latter and has preferably the same diameter. It is provided with a fill-pipe 12, which is ordinarily closed by a cap 13. The outlet of it reaches down to the bottom of the storage tank whereby the same under use of a pump, fitting said fill-pipe, may be completely emptied in case repairs or other reasons require such.

The generator is supplied from the storage-tank by means of a valve, or stop-cock 14 which communicates with air-pipe 6, and has an operating rod and handle 15, reaching above and to the outside of the storage-tank. When this cock is open the oil passes, for the time being, through the air-outlets into the generator until the latter is supplied.

It will be noticed that in supplying the generator the oil from the bottom of the storage tank is used first, whereby the heavier parts of the same, which do not so readily vaporize, are prevented from accumulating and settling, owing to the frequent disturbances at the bottom of the tank, incident to the opening of the cock and flow of the oil. This is a great advantage toward producing gas of unvarying quality and preventing settlements of residues which in time become so thick and heavy as to be unable to vaporize and impair the successful operation of the generator until they are removed. In the generator itself this accumulation is prevented by the agitation of the air-currents which enter the same at the bottom where the oil is the heaviest.

Near the top of the storage-tank, gas-pipe 10, is provided with an outlet 16, through which the upper part of said tank becomes filled with gas and thus forms a storage-tank or reservoir 17 for gas, which steadies the flow of the latter through the pipes to the burners by equalizing any fluctuations in the vapor-

izing operation of the generator or in the air-pressure.

In disposing the storage-tank above the generator it becomes desirable that the floor of the former be well supported, which supports are obtained by vertical branches 8.

It will be noticed that I do away with all complicated devices usually found in such machines for the purpose of vaporizing the oil, the simplicity in construction resulting therefrom greatly lessening the manufacturing cost. The operation of my generator is also much more economical, inasmuch as its construction enables me to use all the oil and prevents all waste, or useless settlements which have to be thrown away.

Having described my invention, I claim as new—

1. The combined carburetor and storage tank above it, in combination with oil-supply pipes to the storage tank and carburetor, gas-outlet pipe from the latter and air-supply pipe to the same, said air-supply pipe having horizontal branches 7, and vertical branches

8, which reach from the underside of the bottom of the storage-tank to the bottom of the generator and serve as supports for the former and provided with air-outlets at their sides, all as substantially shown and described.

2. The combined carburetor and storage-tank above it provided with a fill-pipe reaching down to the bottom of the storage-tank, a gas-outlet from the carburetor, an air-supply pipe passing through the storage-tank and into the carburetor, a short open pipe having a stop-cock and connected to the air-supply pipe near the bottom of the storage-tank, and an operating-rod reaching up and to the outside of the latter tank for the purpose of operating the stop-cock to supply the carburetor from the storage-tank through the air pipe, all as substantially shown and described.

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

EDWARD SAVILL.

Witnesses:

T. R. FALVY,

J. C. HEARNE.