G. W. LAMB.

APPARATUS FOR CARBURETING AIR.

No. 193,007. Patented July 10, 1877.

Fig. 1.

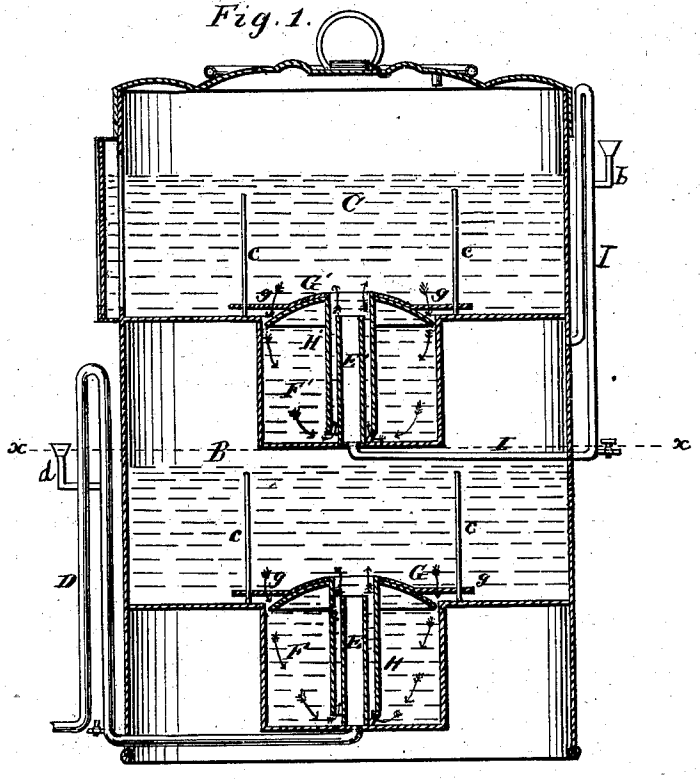
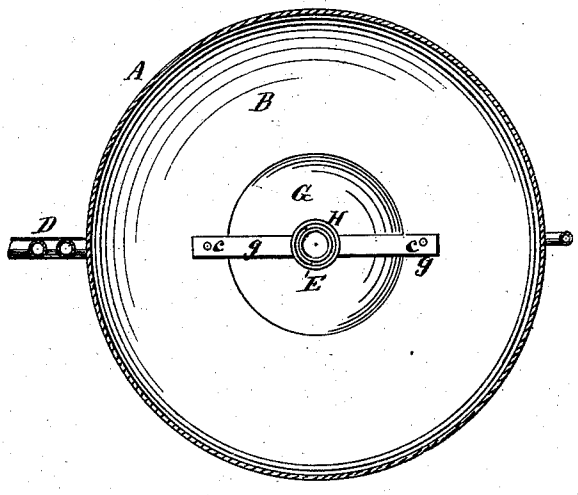


Fig. 2.



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GEORGE W. LAMB, OF WESTONBURG, KENTUCKY.

IMPROVEMENT IN APPARATUS FOR CARBURETING AIR.

Specification forming part of Letters Patent No. **193,007**, dated July 10, 1877; application filed July 3, 1877.

To all whom it may concern:

Be it known that I, GEORGE W. LAMB, of Westonburg, in the county of Crittenden and State of Kentucky, have invented certain new and useful Improvements in Gas-Generating Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a central vertical section of my improved machine; Fig. 2, a cross-section through the line *x x*, Fig. 1.

This invention relates to improvements in machines for generating gas; and the invention consists in the combination of parts, as will be hereinafter fully described.

A in the drawing represents the outer case or shell of the machine.

In the present instance the machine is composed of two carbureting-chambers, B representing the lower, and C the upper, one. The lower chamber is for the reception of crude petroleum and water, which is introduced through the pipe *b*. D is a pipe, through which the air is forced, under heavy pressure, into the chamber B through the vertical pipe E in the well F, arranged below the bottom of chamber B.

Over the pipe E is placed a loosely-fitting tube, H, from the top of which extends outward a broad flange, forming a convex cap or float, G.

The tube H is made larger in diameter than the pipe E, so that it is adapted, in connection with the concave cap or float G, to rise and fall with the liquids contained therein, said cap or float being guided in its movement by the vertical stationary rods *c*, which pass through the arms *g* of the cap or float.

The upper chamber C, which contains the gasoline, naphtha, or other hydrocarbon liquid introduced therein through pipe *d*, is also provided with a well, F′, having a central vertical pipe, E′, with a concave cap or float, G′, and tube H, arranged in a similar manner as in chamber B. These chambers B and C communicate with each other through the pipe I, arranged in such manner that the gas generated in chamber B by the crude petroleum, water, and air is discharged therefrom at a point above its introduction into the gasoline-chamber C. This pipe I also passes upwardly to a point above the gasoline contained in chamber C, thence downwardly and communicates with the gasoline-chamber C through pipe E′.

This construction and arrangement of pipe I prevents the gasoline from passing down into chamber B.

It will also be observed that the pipe D is arranged in a similar manner to pipe I, which prevents the crude petroleum and water from escaping through said pipe.

Illuminating-gas is generated in the following manner: The lower chamber B is filled with crude petroleum and water, and chamber C with gasoline, to a point equal to the vertical play of the conical caps or floats G G′. The air is then introduced into the lower chamber, under heavy pressure, through the pipes D E, which forces the petroleum and water up through the tube H over the cap or float, thence downward into the well, and back through the tube and over the cap or float, as clearly indicated by the arrows in Fig. 1, this operation being continued until the gas is entirely generated from the liquids contained therein, the gas generated in chamber B in the meantime passing up into the chamber C, where the gasoline is subjected to the same operation as the crude petroleum and water in chamber B, and the illuminating-gas generated therefrom being discharged ready for use through the pipe J.

The cap or float in the upper chamber can be used for indicating the height of the liquid contained therein through a glass or transparent indicator in the side of the chamber.

The pipes D I may also be provided with tubes and stop-cocks for drawing off the liquids contained in the chambers B C when desired.

The above-described machine is very simple in its construction, and the gas generated from the liquids used in connection with the air makes a very brilliant light.

The entire apparatus is well adapted for family use, as well as supplying any greater number of burners, the number of burners being regulated by the size of the carbureting-chambers.

I claim as my invention—

1. The combination, in a gas-generating apparatus, of the pipe and well chambers E F and concave cap or float G with its tube H, arranged and operating substantially in the manner specified.

2. The combination, with the carbureting-chambers B C, of the pipes D I E E′, well-chambers F F′, caps or floats G G′, with their tubes H H′, the several parts constructed and relatively arranged substantially as herein shown and described.

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