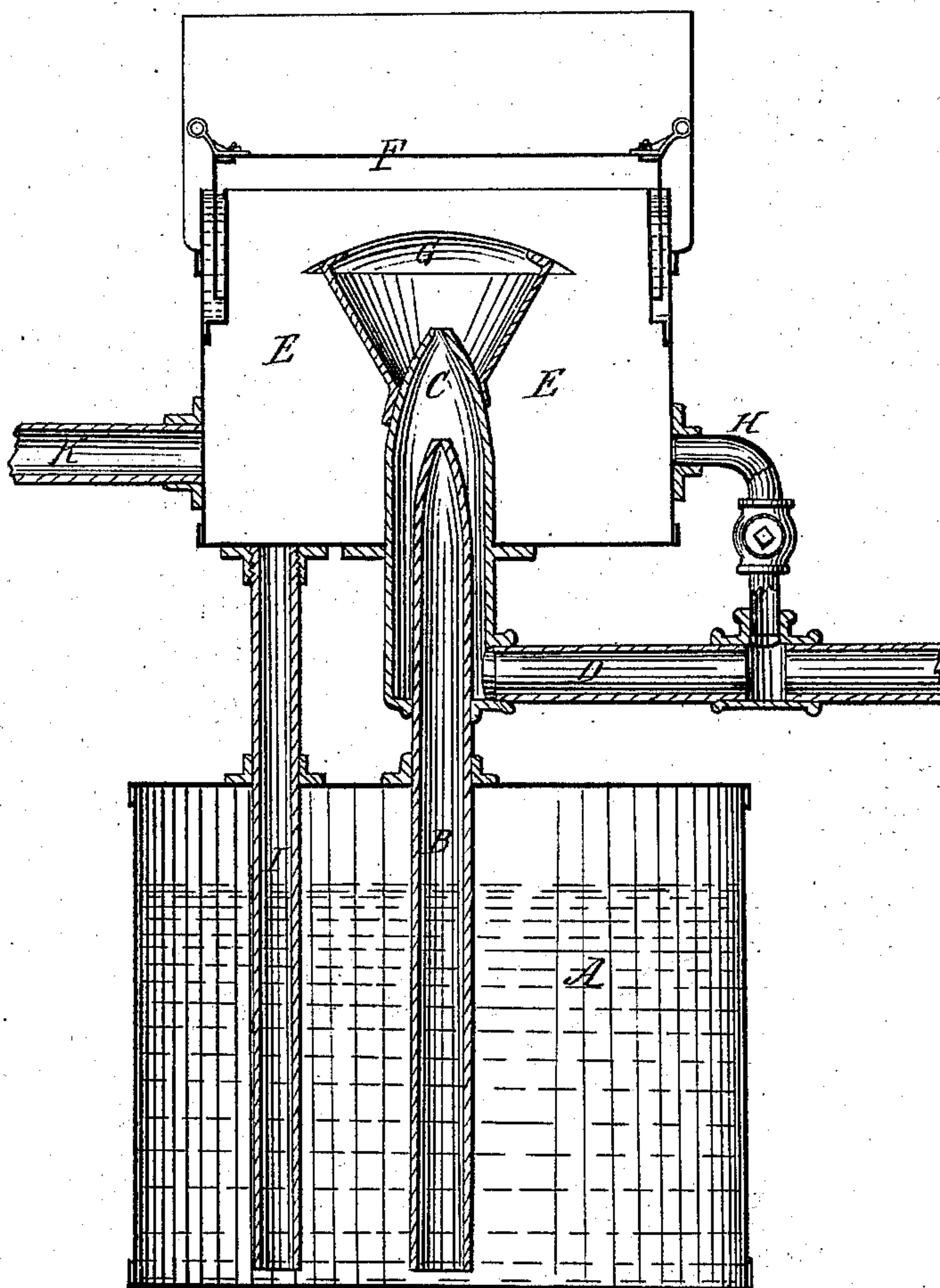


J. A. BASSETT.

Carbureter.

No. 66,069.

Patented June 25, 1867.



Witnesses:

*W. L. Stuart*

*L. B. Barnes*

Inventor:

*John A. Bassett*



# UNITED STATES PATENT OFFICE.

JOHN A. BASSETT, OF SALEM, MASSACHUSETTS.

IMPROVED MODE OF CARBURETING GASES FOR HEATING AND ILLUMINATION.

Specification forming part of Letters Patent No. **66,069**, dated June 25, 1867.

*To all whom it may concern:*

Be it known that I, JOHN A. BASSETT, of Salem, in the county of Essex and State of Massachusetts, have invented a new and useful Process for Carbureting Gases for Illuminating and Heating Purposes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawing accompanying this specification.

The atomization of hydrocarbon liquids for illuminating and heating purposes by any method which will thoroughly separate and put into spray form a hydrocarbon fluid, either with or without the mixture of gases, may be stated as the object of this invention. The principal object, however, and that most thoroughly reduced to practice, is to saturate a volume of atmospheric air with a hydrocarbon liquid by the atomizing process, and to do it simultaneously with the separation of the fluid and the frictional contact of the air. The air and the hydrocarbon are thoroughly intermingled or carbureted by this process, and made useful for illuminating and heating purposes.

One of the methods by which I carry out this process is shown in the drawing, which represents an elevation of the apparatus employed for this purpose.

A is a reservoir of hydrocarbon-liquid, made of any size which may be required. Reaching nearly to the bottom of the reservoir A is a pipe, B. The upper part of this pipe terminates in a fine cone-shaped jet above the top of the hydrocarbon-vessel. The upper part of the pipe B is surrounded by a larger pipe, C, the top of which has a cone-shaped jet, and is a little higher than the jet of pipe B. A branch pipe, D, or continuation of the pipe C, is connected with any suitable apparatus for forcing in air. The pipe C is connected with the chamber E, which may also be the seal of a gas-holder, F, for the purpose of regulating the pressure. Over the top of the jet of the pipe C is a cone-shape plate, G.

The operation of this apparatus may be stated as follows: The reservoir A being filled with a hydrocarbon fluid, air is forced in through the pipe D, and, passing up through the outer pipe C, carries up with it a portion of the hydrocarbon through the pipe B. The

air and hydrocarbon mingling together are projected through the jet of pipe C with considerable force, uniting in the form of spray or mist. This mingled spray and air strike against the plate G, and the surplus of hydrocarbon is condensed and thrown down, and returns to the hydrocarbon-vessel through the pipe I. If the air is too richly saturated with the hydrocarbon, a supply of air may be admitted to the chamber E through the pipe H, connected directly with the main inlet-pipe D, which, mingling with the carbureted air, reduces its density and illuminating power to any degree required. The outlet-pipe to the burners is shown at K.

It is obvious that the apparatus may be modified in form and the relation of the parts changed without changing the nature of the invention. Only one form of the apparatus used is shown, which fully explains the object in view. The air should be delivered under pressure sufficient to raise the column of liquid in the pipe B; or the reservoir may be placed above the level of the jet-pipe B, and a reduced pressure of air will be required. I prefer to use for this purpose the light products of petroleum at about eighty degrees specific gravity, or above.

The pressure of air may be controlled, and the quantity delivered to the carbureter regulated, by a lever and valve connected with the gas-holder and supply-pipe, as shown in my patent of March 14, 1865.

The air or gases may be heated, or the hydrocarbon may be heated, to facilitate the evaporation and mixture of the vapors.

Having thus explained the nature of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The process of charging gases with the vapor of atomized hydrocarbon fluids for illuminating and heating purposes, substantially as set forth.

2. The apparatus, as shown and described, with the several parts or their equivalents, when used for this purpose, for carbureting air or gases for illuminating and heating purposes, in the manner substantially as set forth.

JOHN A. BASSETT.

Witnesses:

D. S. RAMSEY,  
GEORGE P. GANSTER.