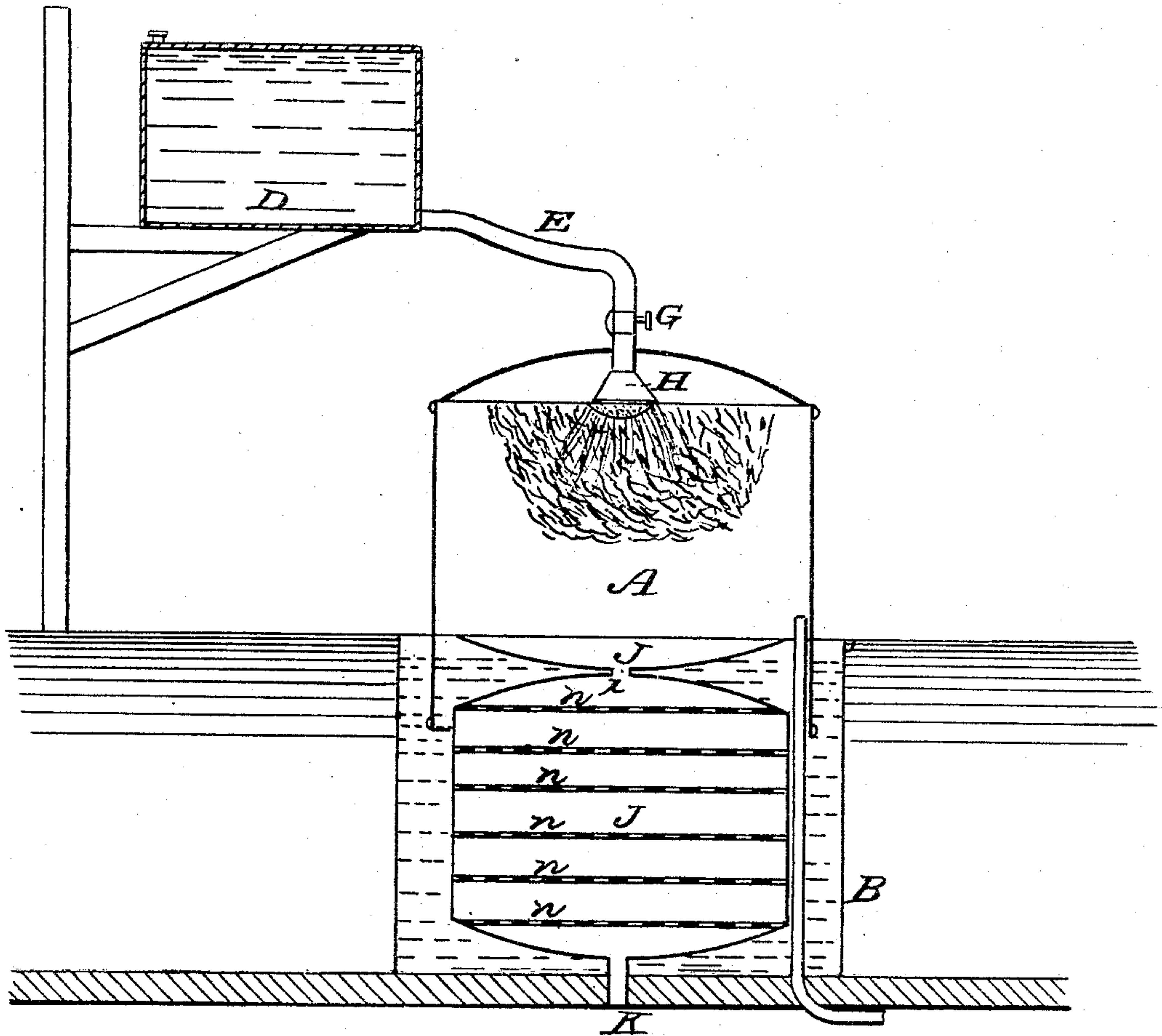


C. M. WILLIAMS.

Carbureter.

No. 83,748.

Patented Nov. 3, 1868.



WITNESSES:

H. L. Stuart
Geo. M. King

INVENTOR

C. M. Williams

UNITED STATES PATENT OFFICE.

CYRUS M. WILLIAMS, OF NEW YORK, N. Y., ASSIGNOR TO HENRI L. STUART,
OF SAME PLACE.

IMPROVEMENT IN CHARGING GASES WITH VAPORS OF HYDROCARBON LIQUIDS.

Specification forming part of Letters Patent No. **83,748**, dated November 3, 1868.

To all whom it may concern:

Be it known that I, CYRUS M. WILLIAMS, of the city of New York, county of New York, and State of New York, have invented a new and useful Process for Charging Gases with the Vapor of Hydrocarbon Liquids; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawing annexed, forming a part of this specification.

On the 8th of January, 1867, I received Letters Patent of the United States for an improved method of carbureting gases, and the object of the present application is to more fully elucidate the principles involved in that invention, and to indicate a more perfect method of accomplishing the desired result.

In the patent before spoken of, the hydrocarbon liquid is showered from the top of the holder, permeating the volume of gas, the remaining fluid falling upon the surface of the water in the gas-holder tank. By the method here described and shown, the holder is partially filled with some porous and absorbent material, through which the hydrocarbon is showered, and the remaining fluid is received in a chamber occupying the tank, through which it passes, and the gas passes through the same outlet, the chamber being filled with porous material, retained between perforated diaphragms, and the carburation of the gases is fully performed.

In the drawing, A represents the gas-holder; B, the tank. From the top of the holder are suspended masses of fibrous material C.

D is the hydrocarbon-tank, connected with the top of the holder by the flexible tube E. The supply is controlled by the cock G.

The pipe terminates inside the holder with

a rose-head, H, by which the hydrocarbon is distributed over and through the fibrous material.

The surplus liquid flows into the cup-shaped receiver I, and, through the opening *i*, into the carbureter J, through which the gas also passes. The outlet-pipe is shown at K.

The space between the perforated diaphragms *n n* may be filled with fibrous material, in order to more fully distribute the liquid.

This arrangement is found very effective in carbureting air and gases of inferior illuminating-power. None of the hydrocarbon is lost, as it may be pumped back into the tank and used again.

It may be desirable to retain a surface or surfaces of hydrocarbon in the tank J, and for this purpose I make use of pans instead of perforated plates, the pans being so arranged that the gas passes over each in succession. An overflow arrangement of the outlet permits the same arrangement of fibrous material in the holder.

Having thus described the nature of my invention, I shall state my claim as follows:

1. A gas-holder in which is suspended or retained any suitable absorbent or capillary material, saturated with hydrocarbon liquid, through which air or gases are passed for carbureting.

2. A carbureting-chamber placed in the gas-holder tank, arranged to receive and distribute hydrocarbon liquid, through which air and gases are forced, for the purpose set forth.

C. M. WILLIAMS.

Witnesses:

W. D. CHESEBROUGH,
JOHN CONWAY.