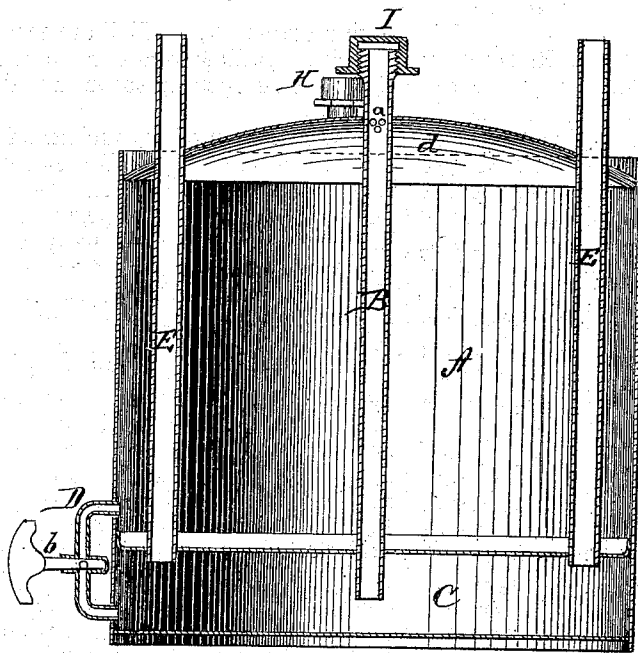


GEORGE REZNOR.

Improvement in Apparatus for Carbureting Air.

No. 125,085.

Patented March 26, 1872.



Witnesses:

James C. Hutchinson
C. L. Quirk

Inventor

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UNITED STATES PATENT OFFICE.

GEORGE REZNOR, OF MERCER, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR CARBURETING AIR.

Specification forming part of Letters Patent No. 125,085, dated March 26, 1872.

To all whom it may concern:

Be it known that I, GEORGE REZNOR, of Mercer, in the county of Mercer and in the State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Carbureting Air; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The object of my invention is to supply carbureters, or other devices used for the purpose of carbureting coal-gas or air, with hydrocarbon or other carbureting agent in quantities as it is consumed, and thereby giving a uniform result from the time the machine is charged until it is all consumed, and thus keeping up the gravity of the fluid exposed to the passing vapor. The nature of my invention consists in the construction and arrangement of a tank containing at the bottom a carbureting-chamber and provided with suitable air and service and supply pipes, and a pipe connecting the tank with the carbureting-chamber, as will be hereinafter more fully set forth, and whereby the object sought is fully accomplished.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a longitudinal vertical section of my machine.

A is an air-tight tank having a separate carbureting-chamber, C, at the bottom. B is an air-tube passing from the carbureting-chamber C upward through the top of the tank A, and provided with a cap, I, at its upper end to close the same. The tube B is also, immediately below the top of the tank, provided with apertures *a*, thus forming a connection between the chamber C and the top of the tank. D is a tube connecting the tank A at its bottom with the chamber C, said tube being provided

with a stop-cock, *b*. E E are service and supply pipes leading from the top of the chamber C. H is an opening through which the tank is filled.

The operation of my machine is as follows: The cock *b* in the pipe D is closed. The tank A is then filled through the opening H to any desired point below the perforations *a a*; then the opening H is closed air-tight and the cock *b* opened, when the fluid from the tank A will pass through the pipe D into the chamber C and rise in said chamber until it closes the lower end of the tube B and also fills said tube to a level with the fluid in the tank, when the partial vacuum formed at *d* in the upper part of the tank by the escape of fluid stops the flow from the tank to the chamber until the air or vapor exhausts the fluid in the chamber so as to allow the air to pass through the tube B, relieving the partial vacuum formed at *d*, thus keeping up the supply of fluid from the tank A to the chamber C in proportion to the exhaust from the chamber. The cock *b* in the pipe D is left open except when filling the tank. The tube B is extended through the top of the tank only for the purpose of external communication with the chamber C.

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

The combination with the tank A, having a diaphragm near its bottom forming the chamber C, of the tubes E E, pipe B perforated near its top and extending into chamber C, and the pipe D connecting the upper and lower chambers and having cock *b*, all as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of January, 1872.

GEORGE REZNOR.

Witnesses:

C. L. EVERTS,
E. W. JACKSON.