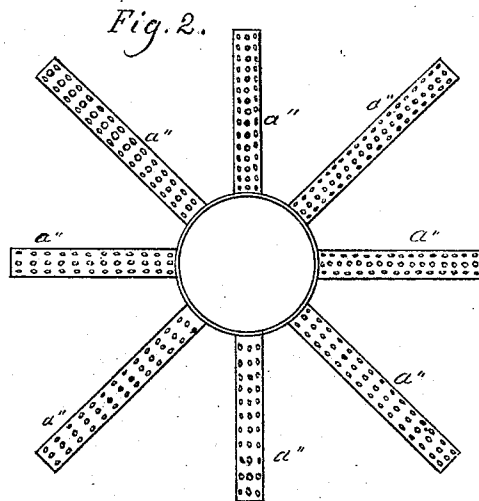
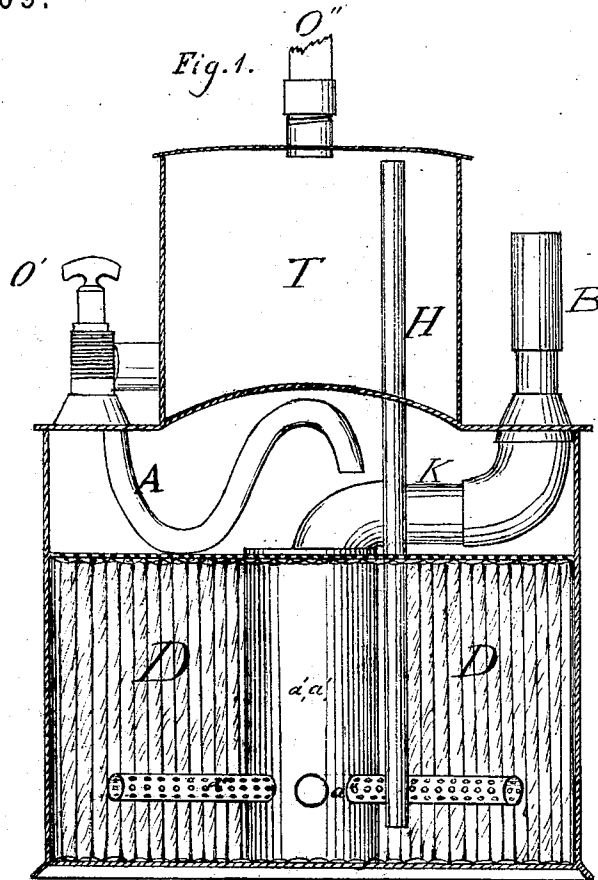


F. A. FISHER.
Improvement in Carbureters.

No. 127,409.

Patented June 4, 1872.



Witnesses.

C. A. Gale

W. L. Munn

Inventor.

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Fig. 4.
Elevation of left side.

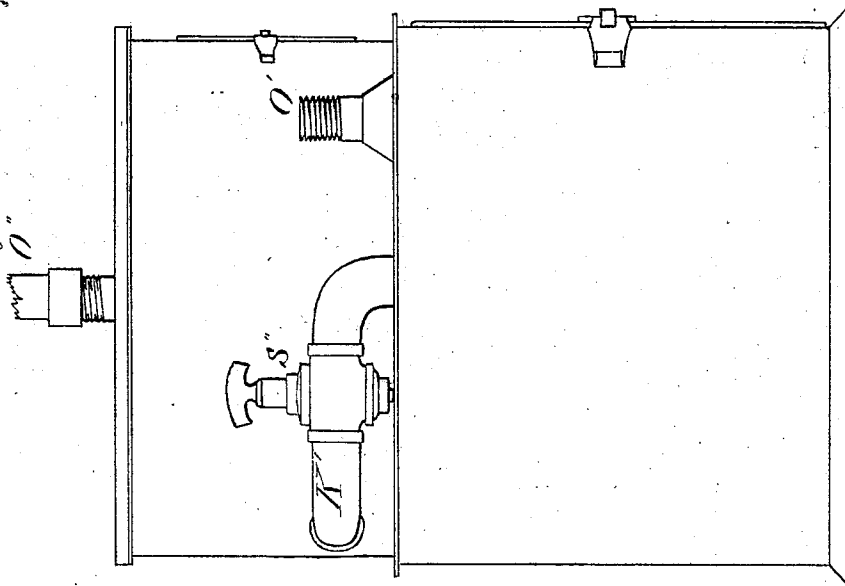
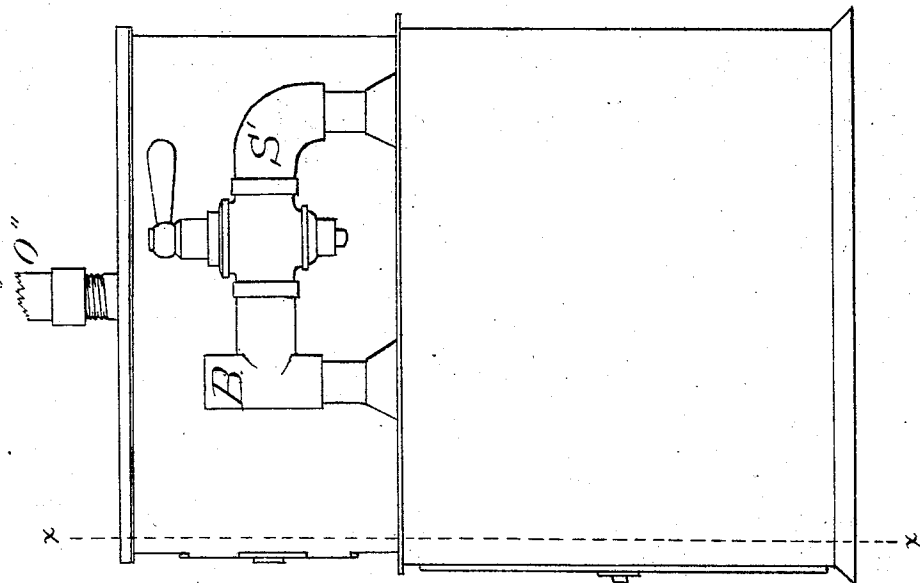


Fig. 3.
Elevation of right side.



Witnesses.

W. D. Gale

W. H. Munn

Inventor.

Fisher Ames Fisher

UNITED STATES PATENT OFFICE.

FISHER AMES FISHER, OF CRANFORD, NEW JERSEY.

IMPROVEMENT IN CARBURETERS.

Specification forming part of Letters Patent No. 127,409, dated June 4, 1872.

Be it known that I, FISHER AMES FISHER, of Cranford, Union county, New Jersey, have invented an Improved Carbureter for Air or Gas, and I hereby declare that the following is a full and sufficient description thereof, in connection with the accompanying drawing making a part of this specification.

This carbureter consists of a rectangular, somewhat elevated box, made of suitable metal, divided into three chambers by two horizontal partitions, one a little above and the other a little below the middle of the box. The lower chamber is filled with hanks of cotton-wicking, arranged vertically, within and among which is arranged a central distributing-box or cylinder, from which radiate four, six, or more perforate open pipes, nearly through the mass of wicking. Immediately above the wicking-chamber is a low chamber, occupied chiefly with siphon and other pipes. Lastly, the upper chamber, called the tank, which is a reservoir for carbureting liquid.

To enable others skilled in the arts to make and use my device, let Figure 1 represent a perspective view of the machine, seen in front, the doors removed; Fig. 2, a plan view of cylinder and perforated tubes; Fig. 3, elevation of right side; Fig. 4, elevation of left side.

The machine, as now arranged, is adapted to carburet gas, but may be arranged to carburet air equally well, if an air-propelling apparatus be used to force the air through the machine.

Looking at the drawing, Fig. 1 represents the gas-induction pipe, placed on the right side of the machine, just above the middle chamber, to receive the gas as it comes from the meter. Connected with this pipe is a stop-cock, designed to carry away to the chamber over the wick a part of the gas to dilute the same with gas not yet carbureted, because it is liable to be surcharged with hydrocarbon, producing a smoky flame; wherefore it should be diluted before it leaves the machine. The design of the stop-cock and pipe is to provide for this tendency to overcharge the gas, which, after it leaves the carbureter, will deposit its excess of hydrocarbon vapor along the cooled gas-pipes be-

fore the gas reaches the burners. This combination of the stop-cock S' with the pipe B makes an important feature of the invention. The induction-pipe B—used for receiving the gas—on entering the middle chamber bends to the left and becomes the horizontal pipe K, which bends directly downward on reaching the central part of the middle chamber, and, passing through the floor of the chamber, enters the vertical cylindrical distributor *a' a'*, whence it passes out through the horizontal radial distributing-tubes *a'' a''*, and then through the cotton wicking, where its vapors are absorbed by the wicking already charged with hydrocarbon liquid, and then ascends through the wicking and its perforate roofing, and thence out through education-pipe O' connected with the burners.

The hydrocarbon liquid used is obtained either from the distilled naphtha of coal-tar or from petroleum liquid prepared for this purpose. This material is charged through the induction-pipe O'', which is to charge tank T to within two inches of the top. Pipe K' and its stop-cock S'' discharge the liquid, through the siphon A, over the perforate roof of the wick-chamber, and, passing through the said roof, is absorbed by the wicking D.

To control the height of the liquid in the tank above and in the wick-chamber below, tube H is arranged and opens into both chambers. In the normal condition gaseous matter passes freely from one to the other; but if liquid in D rise above the bottom of pipe H, the pressure of air in the tank-chamber is taken off, and no longer forces its contents into the wicking-chamber until the dry air or gas passes through the wick-chamber and absorbs up the carbureting liquid until the surface of liquid in the wick-chamber sinks below the level of tube H, at which time the liquid in the tank will begin to flow into the middle chamber, and, through its perforate bottom, again upon the wicking below. Thus it is that the tube H controls the feed, and equalizes the liquids in the upper and lower chambers.

Having described the nature of my invention and the operation of the same, what I claim, and desire to secure by Letters Patent, is—

1. The convex perforated roof of the carbureting-chamber, in combination with the capillary material D, substantially as herein set forth.

2. In combination with the convex perforated roof, the siphon induction-pipe A and regulating-pipe H, whereby the flow of liquid to

the carbureting-chamber is automatically regulated, substantially as herein set forth.

FISHER AMES FISHER.

Witnesses:

ISAAC N. FISHER,
BURNETT WINANS.