

J. A. BASSETT.

Carbureter.

No. 50,675.

Patented Oct. 31, 1865.

Fig. 3.

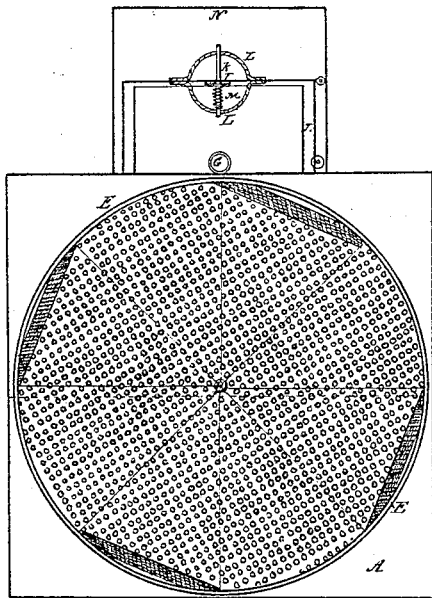


Fig. 4.

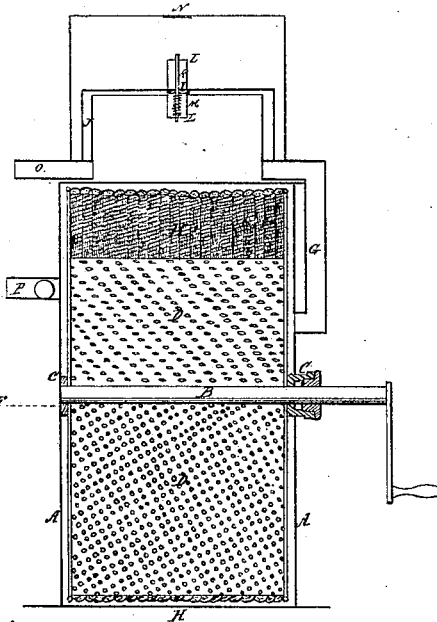


Fig. 1.

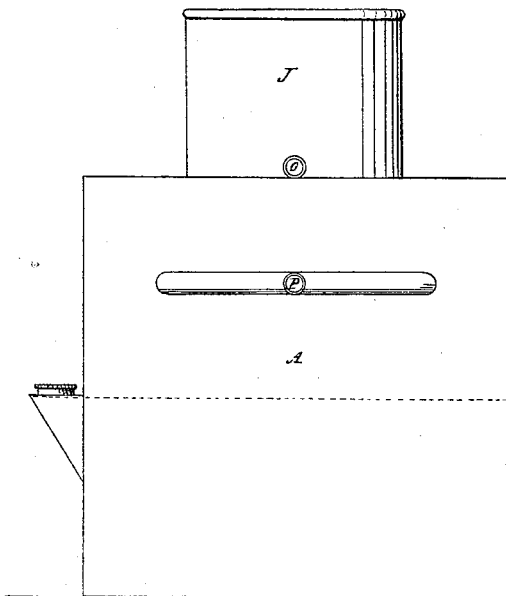
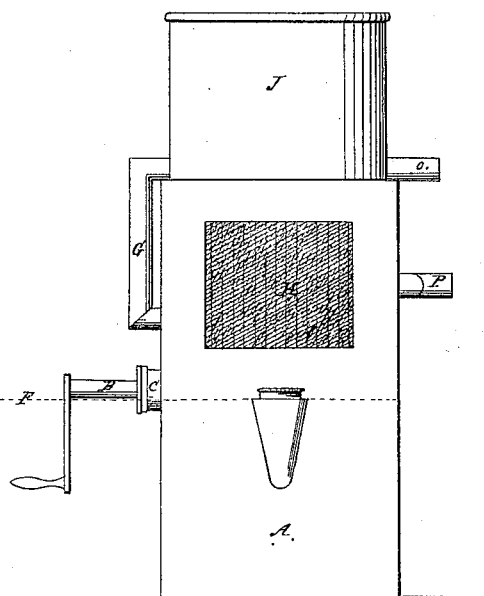


Fig. 2.



Witnesses:

C. Morris Brown
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UNITED STATES PATENT OFFICE.

JOHN A. BASSETT, OF SALEM, MASSACHUSETTS.

IMPROVED APPARATUS FOR CARBURETING AIR.

Specification forming part of Letters Patent No. 50,675, dated October 31, 1865.

To all whom it may concern:

Be it known that I, JOHN A. BASSETT, of Salem, in the county of Essex, in the State of Massachusetts, have invented a new and Improved Apparatus for Carbureting Air; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the use (for the purpose of impregnating air with the vapor of a hydrocarbon liquid) of perforated metallic fans or floats revolving and partially immersed in benzine, the perforations of which are filled with globules of the liquid, over and through which the air is passed to be carbureted.

It also consists in arranging an air-holder so that when by the pressure of the contained air it rises to the desired height any excess of air will pass off through a valve arranged to open in the top of the holder.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation with reference to the drawings.

Figure 1 is a side elevation. Fig. 2 is an end elevation. Fig. 3 is a longitudinal section. Fig. 4 is a cross-section.

Similar letters of reference refer to like parts.

The case or chamber A is made of any suitable material—in practice of galvanized iron. I prefer to make it square, as is represented in the drawings, because it gives the same surface area to be acted upon whatever may be the height of the liquid.

Through the center of the case A shaft B is arranged to revolve in the journals C. Secured to this shaft are a number of fans, D, radiating from the center so as to form a wheel, like a paddle-wheel. These fans are made of zinc, perforated with fine holes, as represented. Any number of fans may be used to give the required degree of carburation, and, if desired, they may be crossed with transverse partitions E, to assist in the carburation.

The chamber A should be filled with benzine, the specific gravity of which should not be less than 80°, up to the level F. The fan-wheel being made to revolve slowly, as the partitions pass successively under the benzine-level the perforations emerge filled with globules of benzine, so that when air through the inlet G is passed into it it becomes impregnated with the vapor evolved from the

fresh surfaces of liquid and passes out fit for burning purposes.

The circumference of the fans may be covered with fibrous material H, so as to continually supply the surfaces of the fans with liquid, the fibrous material absorbing a surplus of benzine, which is given out as the fan revolves; or the fans may be constructed with an indentation on their outer edge, to hold and carry over a small portion of hydrocarbon, thus accomplishing the same result.

The use of these devices is not absolutely essential to the carburation of the air, but are only for the purpose of keeping up a supply of benzine to the perforations.

The valve I is placed in the top of the holder J. It is a socket-valve, the stem of which, K, slides in the loops L, and is held in place by a slight spring, M. When the holder is raised to the required height the stem K comes in contact with the bar N, the valve is depressed, and the surplus air escapes. The air passes through the inlet O and through the pipe S to the carburetor, and when impregnated passes out at the outlet P, to be burned. This arrangement is desirable when this form of gas-lighting is used in places having power.

It is often desirable to fill the holder with an air-pump connected with and driven by the power used in the manufactory, and any surplus of air, instead of being retained and giving undue pressure to the gas, is thus disposed of, so that one holder may supply several gas-generators which may be placed in situations remote from the source of air. Many manufacturing establishments having gas-holders already erected for the use of other gas may use them for air-holders, and obtain in this way a very steady light.

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

1. The impregnation of air or gases with the vapor of a hydrocarbon evolved from the surfaces of the perforated fans, partially immersed in the hydrocarbon, and operated in the manner substantially as shown and described.

2. The use of an air-holder either at a distance from or connected with a gas-generator, when used in combination with the valve, as described.

JOHN A. BASSETT.

Witnesses:

M. B. MANSFIELD,
T. J. HUTCHINSON.