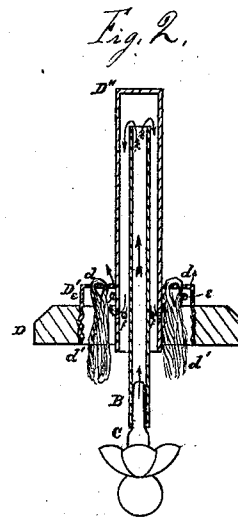
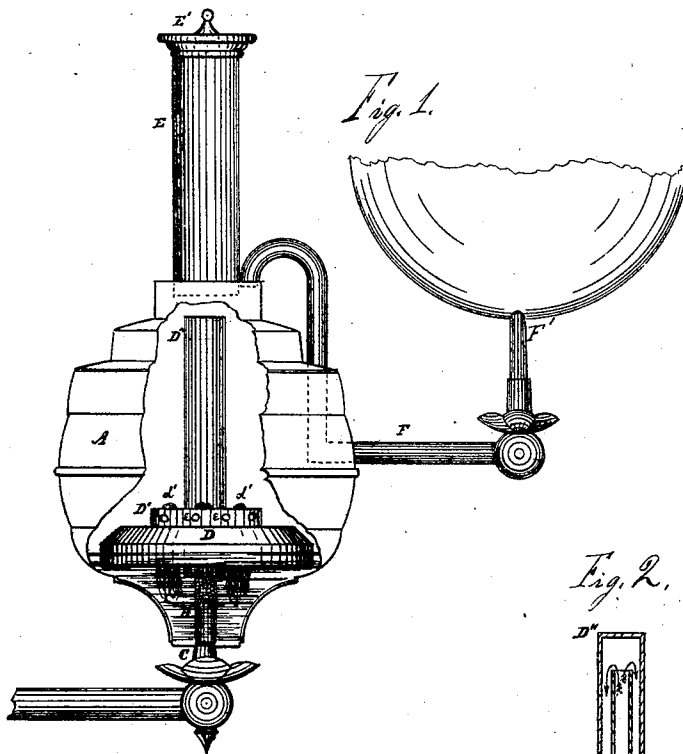


J. H. BUTLER, Jr.

Improvement in Carbureting Attachment for Gas-Burners.

No. 131,210.

Patented Sep. 10, 1872.



WITNESSES

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JOHN H. BUTLER, JR., OF PARK RIDGE, ILLINOIS.

IMPROVEMENT IN CARBURETING ATTACHMENTS FOR GAS-BURNERS.

Specification forming part of Letters Patent No. 131,210, dated September 10, 1872.

SPECIFICATION.

To whom it may concern:

Be it known that I, JOHN H. BUTLER, Jr., of Park Ridge, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carbureting Attachments for Gas-Burners, of which the following is a full, clear, and exact description, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, and in which—

Figure 1 represents my improved carbureter attached to a gas-tip, the reservoir being broken away so as to show the arrangement of the parts within; and Fig. 2, a vertical central section of the parts within the reservoir.

My invention relates to that class of carbureters designed for the purpose of carbureting gas at or near the burner; and it consists in certain novel features in the construction and arrangement of a float device, suspending a fibrous or absorbent material at an unvarying distance in and above the liquid as the latter varies in depth, in combination with a reservoir provided with an induction-pipe constructed to fit upon the burner and support the reservoir, and with a filling tube and eduction-pipe, the latter of which is provided with a burner or "tip," all of which will be hereafter more fully described.

In the drawing, A represents the reservoir. B is a tube extending into the reservoir to, or nearly to, the top thereof, and open at both ends, the lower end of which is rigidly attached to the reservoir so as to prevent leakage; it is also of such size and form as to sit firmly and closely over a gas-tip or other gas-induction tube to which it may be applied, as shown at C, which represents a gas-tip. D is a float of cork or other suitable material. D' is a cap firmly attached to the float D by screw attachment or otherwise. *dd* are perforations in the top of the cap D', and *d'* is a fibrous material drawn through the perforations *dd*, and depending a short way below the lower surface of the float D. *ee* are perforations in the vertical part of the cap D', and communicating with the reservoir A. D''

is a tube, closed at the top and passing through the cap D', and extending a short way below the lower surface of the float D. *ff* are perforations in the tube D'', and communicating with the chamber formed by the cap D'. E is the filling or induction tube for filling the reservoir with liquid, and E' is a cap attached to the top of the tube E by screw attachment or by a ground joint so as to be air-tight. F is an eduction-pipe, and F' is a gas-tip mounted thereon. The float device D D' D'' is arranged about the tube B in the manner shown, and so as to rise and fall in the tube E as the reservoir is filled or emptied.

The reservoir is filled by removing the cap E' and pouring the liquid through the tube E. The tube D'', by being closed at the top, prevents the liquid from entering the tube B, and the latter, by extending to or nearly to the top of this reservoir, admits of the reservoir being filled, and prevents the float device from floating away from the said tube B.

It is obvious from the foregoing description that the capillary attraction will be through a medium, *d'*, suspended at an unvarying distance in and above the liquid within the reservoir. For the purpose of carbureting the reservoir is filled with hydrocarbon liquid. When the gas is turned on it passes from the tip C through the tube B, dives over the top of the latter, passes down through the tube D'', through the perforations *ff* into the chamber of the cap D, through the perforations *ee* into the reservoir, and from thence, through the pipe F and tip thereon, to the flame. The process of carbureting is facilitated by reason of the capillary attraction of the material *d'*, which, being constantly saturated, increases the exposed surface of the hydrocarbon fluid at a point where the gas from the tip C comes in contact with it. The tube D'', by extending below the lower surface of the float D, prevents a suction at that point, which the passage of the gas through the carbureter would otherwise tend to create. The tube E, besides furnishing a convenient means of filling the reservoir, serves also to protect the float device. By removing the flame from the reservoir by means of the pipe F the danger of overheating the contents of reservoir is prevented, and an opportunity is provided for

attaching a cock or shut-off between the reservoir and the flame, if such attachment is deemed desirable.

I am aware that carbureters have heretofore been made with a float, and therefore I do not claim such broadly; but,

Having described my invention, what I claim is—

A carbureting attachment for a gas-burner, consisting of the reservoir A having the float

D, with its cap D' attached to the perforated tube D'', arranged therein as set forth, the whole constituting a new article of manufacture, for attaching to ordinary gas-burners, as described.

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