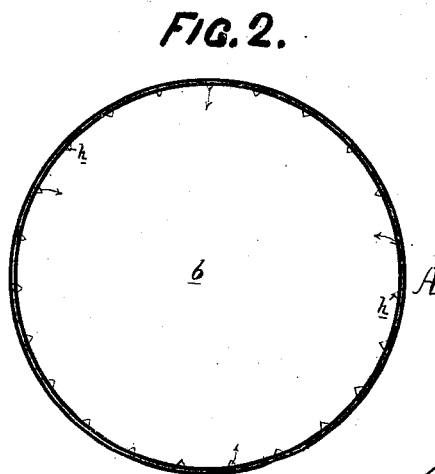
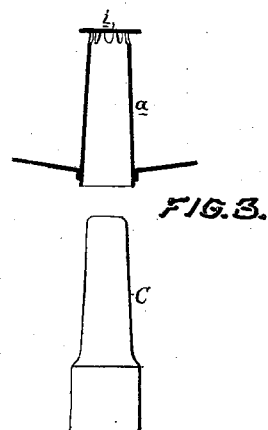
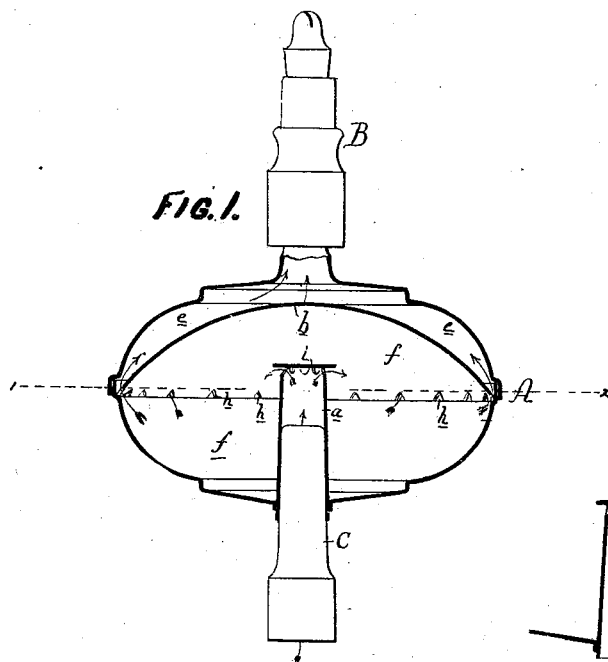


J. H. STEINER.  
CARBURETING ATTACHMENT FOR GAS BURNERS.  
No. 108,844.                      Patented Nov. 1, 1870.



WITNESSES { *Wm. A. Steel.*  
*John Parker*

*John H. Steiner*  
*by his Atty.*  
*Howson and Son*

# UNITED STATES PATENT OFFICE.

JOHN HENRY STEINER, OF READING, ASSIGNOR TO HIMSELF AND  
CHRISTIAN SHARPS, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN CARBURETING ATTACHMENTS FOR GAS-BURNERS.

Specification forming part of Letters Patent No. 108,844, dated November 1, 1870.

I, JOHN HENRY STEINER, of the city of Reading, county of Berks, State of Pennsylvania, have invented an Attachment for Gas-Burners, of which the following is a specification:

### *Nature and Object of the Invention.*

My invention relates to a carbureting attachment for gas-burners, consisting of a casing or reservoir containing a mass of cotton or wool to be saturated with gasoline or naphtha, and arranged for tight attachment to and detachment from a gas-burner, the said casing having also at the top a tip or burner, so that the gas, when enriched by passing through the saturated cotton or wool, may be immediately ignited and consumed.

### *Description of the Accompanying Drawing.*

Figure 1 is a sectional view of my attachment for gas-burners; Fig. 2, a sectional plan on the line 1 2, Fig. 1; and Fig. 3, a view of part of Fig. 1, showing the method of connecting the attachment to an ordinary gas-tip.

### *General Description.*

The attachment or carbureter consists, mainly, of a sheet-metal casing or reservoir, A, surmounted by a tip, B, which is the burner proper.

At the bottom of the casing A, and extending into the interior of the same, is a tube, *a*, which is made slightly tapering, as best observed in Fig. 3, so that it may be adapted to and fitted accurately and tightly over the tapering end of an ordinary gas-tip, C.

The interior of the casing A is divided by a curved partition or diaphragm, *b*, into upper and lower compartments, *e* and *f*, communicating with each other through perforations or slits *h*, formed at or near the edge of the diaphragm, and the upper of these compartments communicating directly with the interior of the burner B.

The lower compartment, *f*, of the casing, which is of greater capacity than the compartment *e*, is filled with wool, cotton, or equivalent absorbing material, and communicates freely with the interior of the tube *a* through the perforations formed at the top of the latter beneath its cap or disk *i*.

In preparing the attachment for use it is

disconnected from the gas-tip C and inverted, a quantity of gasoline or naphtha being then poured into the tube *a* and suffered to pass through the perforations of the same until the wool or cotton contained in the compartment *f* is completely saturated. The attachment is then turned to its former upright position and fitted tightly to the gas-tip C, when it is ready for use.

When the gas is turned onto the tip C it will pass upward into the tube *a*, and thence through the perforations of the latter into the compartment *f* of the reservoir, the arrangement of the overhanging disk *i* at the top of the tube being such as to prevent the gas from rising directly toward the diaphragm, but causing it to pass horizontally in all directions, as indicated by the arrows, into and through the mass of saturated cotton or wool. The gas thus diffused becomes combined or intimately mixed with the vapor of the gasoline or naphtha, and is thus enriched, it escaping finally through the perforated diaphragm into the upper compartment or reservoir, *e*, and being thence fed directly to the burner B, the result of this mixing of the gas and vapor being a considerable increase in the volume and brilliancy of the flame.

The pressure of the gas from the tip C will be sufficient to cause it to pass freely through the burner, and to effect the above-described mixing of vapor with the same; but as soon as the gas is turned off and this pressure removed there will be no objectionable tendency of the vapor to escape from the tip B.

One of the principal advantages of my invention is, that it is complete in itself, and can be entirely detached from the gas-tip, so that the latter may be used independently, if desired.

Another advantage, arising from the fact that the gas and vapor are mixed within the burner, and close to the point of and immediately before ignition, is that no opportunity is afforded for the formation of tarry deposits, which clog and interfere with the operation of apparatus in which gas and vapor are mixed at a distance from the burner.

### *Claims.*

1. A reservoir, A, surmounted by a burner,

B, and having a tube, *a*, for tight attachment to and detachment from a gas-tip, all substantially as set forth.

2. The arrangement within the said reservoir of a perforated or notched diaphragm, *b*, substantially as described.

3. The arrangement of the disk *i* on the upper notched or perforated edge of the tube *a*, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN HENRY STEINER.

Witnesses:

S. M. HOLLENBUSH,  
WM. B. SCHOENER.