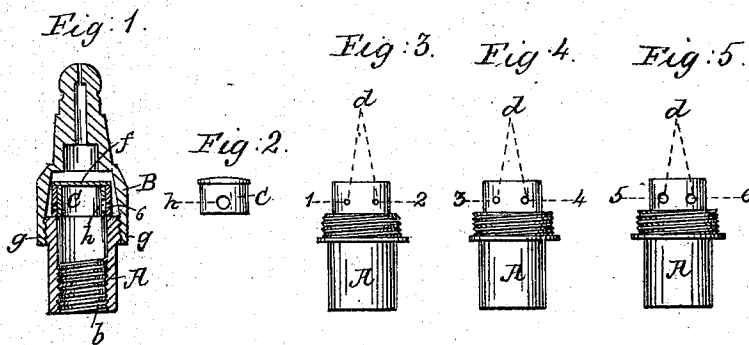


G. S. FORD.

Gas Burner.

No. 104,723.

Patented June 28, 1870.



Witnesses.  
Thomas P. Dewey.  
Isaac C. C. C.

Inventor  
Charles S. Ford.  
By his Attorney  
Stephen Ustick.

# UNITED STATES PATENT OFFICE.

CHARLES S. FORD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND CHARLES YOUNG, OF SAME PLACE.

## IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. 104,723, dated June 28, 1870.

I, CHARLES S. FORD, of the city of Philadelphia, and State of Pennsylvania, have invented certain Improvements in Gas-Burners, of which the following is a specification:

The object of this invention is to enable those who use the burner to determine accurately the number of cubic feet of gas registered or consumed per hour.

The nature of this invention consists in the construction of a tube, or the pillar of the burner, with a series of perforations of different sizes in the same horizontal plane, near the top, and combining therewith a valve with a single perforation of at least equal size to that of the largest perforation in the tube, so that, by adjusting the valve to bring its perforations in communication with either perforation in the tube, the exact number of cubic feet of gas registered or burned per hour is accurately determined, the quantity burned being estimated by the size of the perforation in the pillar with which the perforation in the valve is brought into connection.

To enable others skilled in the art to which my invention appertains to make and use my invention, I will now give a detailed description thereof.

In the accompanying drawing, which makes a part of this specification, Figure 1 is a vertical section of the improved burner. Fig. 2 is a side elevation of the hollow valve C. Figs. 3, 4, and 5 are like views of the tube or pillar A, in which is represented a series of perforations, *d*, of six different sizes.

Like letters in all the figures indicate the same parts.

A is the pillar, which has in its lower end a female screw, *b*, for connecting it with the top of the gas-pipe, in the usual manner.

For accurately registering or determining the number of feet of gas consumed per hour, and adapting one burner to the use of burners of different sizes, I construct the top of the pillar with a series of perforations, *d*, in the same horizontal plane, which are numbered 1, 2, 3, 4, 5, 6, or any other number desired, which communicate, outside of the pillar, with the chamber *f* formed by connecting the cap B with the pillar, by means of the screw-threads *g*, and combine with the pillar the adjustable hollow-valve C, which has a single perfo-

ration, *h*, larger than either of the perforations *d*, so as not to require an accurate adjustment to open fully the perforation of the pillar. The cap B terminates with the tip D, for the outflow of gas from the chamber, *f*.

The operation is as follows: If the consumer wishes to burn but one foot per hour, he unscrews the cap B, and adjusts the valve C by turning it partly around, so as to bring its perforation *h* into communication with the perforation 1 of the pillars A, and then screws the cap in place. Or, if he wishes to consume two, three, four, or any higher number of cubic feet of gas per hour, he sets the perforation *h* of the valve C to the perforation of the pillar having a like number. Thus he registers or determines accurately the number of feet of gas consumed per hour.

Hence, it will be seen that the exact number of cubic feet of gas consumed per hour may be accurately registered or determined by this improved burner, and that is adapted to be used in place of different sizes of tips, thus simplifying the matter of accommodating the burners to the wants of the community.

I have represented six different sizes of perforations, by which the burner is adapted for consuming respectively the different amounts of gas passing through six different sizes of tips, and the number of perforations may be extended in accommodation to any capacity of pressure of gas, thus making one burner accomplish, as to adaptation, what ordinarily requires a plurality of burners.

What I claim as new, and desire to secure by Letters Patent, is—

The combination and arrangement of the adjustable hollow valve C, with the pillar A, having a series of perforations, *d*, of different sizes, in the same horizontal plane, the said valve having a single perforation, *h*, of greater size than the largest perforation *d*, substantially as described.

In testimony that the above is my invention I have hereunto set my hand and affixed my seal this 30th day of March, 1870.

CHARLES S. FORD. [L. S.]

Witnesses:

THOMAS J. BEWLEY,  
RICH. HACKETT,