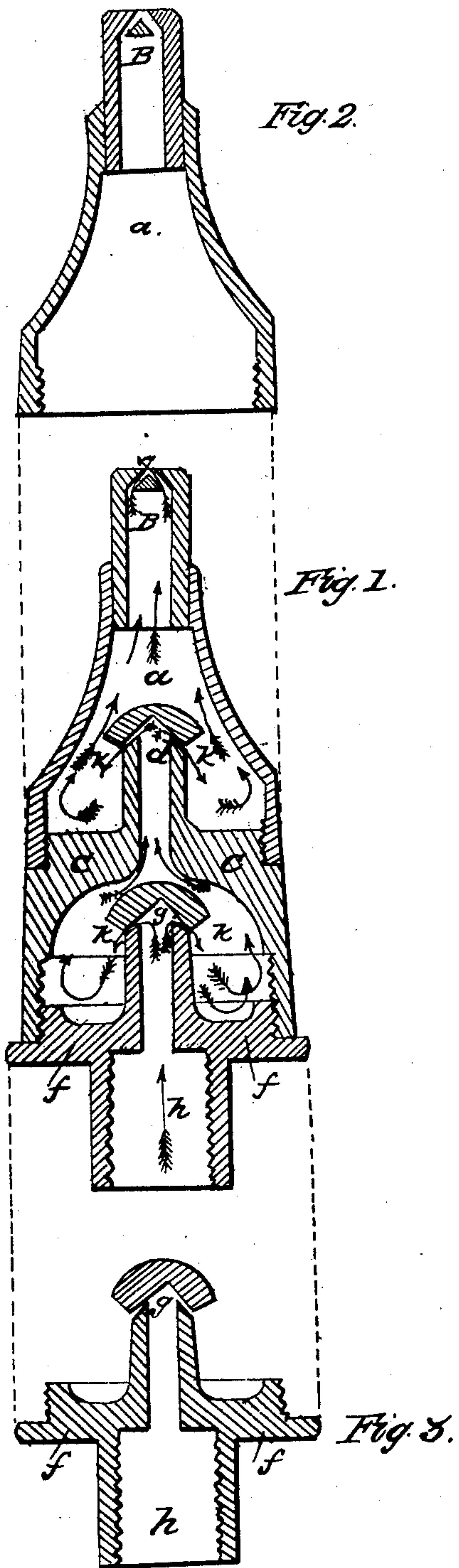


J. C. WALSH.

Gas Burner.

No. 17,530.

Patented June 9, 1857.



UNITED STATES PATENT OFFICE.

JOHN C. WALSH, OF LOCKPORT, NEW YORK.

GAS-BURNER.

Specification of Letters Patent No. 17,530, dated June 9, 1857.

To all whom it may concern:

Be it known that I, JOHN C. WALSH, of Lockport, in the county of Niagara and State of New York, have made certain new
5 and useful Improvements in Gas-Burners; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, and
10 to the letters of reference marked thereon.

Similar letters refer to like parts.

The object of my improvement is to break the momentum of the current of the gas, as it passes through the burner, while the
15 ordinary pressure is on the gasometer so that no more gas will escape from the burner than will be fully consumed and at the same time give a steady unflickering light, by the means employed of supplying the burner
20 with a steady constant easy flow of gas. The means accomplishing this is effected by so constructing the parts of the body of the burner so that counter currents of the gas will be produced as it passes through the
25 body of the burner to the tip and thereby break the momentum of the main-current for purposes before mentioned, and is effected by providing the body of the burner with two or more chambers, and the said
30 chambers with hollow pillars projecting up in and near the top of the said chambers,—and holes are made obliquely in the top of said pillars, which holes project down for conducting the gas to the bottom of the
35 chamber as it escapes from the pillar, and as the gas rises in each chamber, after leaving the pillar, it meets descending currents coming into the burner from the pillar, and its force is thereby impeded or broken in
40 each chamber as it approaches the tip of the burner by the counter current of the gas. By the time the gas rises at the tip of the burner the current is so much broken in its force and impeded in its flow that it will
45 all be fully consumed, as it escapes from the burner, and at the same time give a steady unflickering light.

To enable others skilled in the art to make and use my improvement I will proceed to describe its construction and operation by referring direct to the accompanying drawings.

Figure 1, represents a sectional elevation of the improved burner in a complete state.
55 Fig. 2 is a sectional view of the upper part

forming the upper chamber, and Fig. 3 is a sectional view of the lower part forming the bottom of the lower chamber.

(A) represents the upper part of the burner with a fish-tail tip, or burner, B. 60 The part (A) is hollow and when screwed to the middle portion (C) it forms the upper chamber in which chamber the hollow pillar (d) projects.

f, f, represents the lower part of the body 65 of the burner and is screwed into the middle piece (C) which forms the lower chamber of the burner, by the middle piece C, being hollowed out as represented in Fig. 1, and in which lower chamber the hollow pillar g, 70 projects. h, represents the portion of the burner for attaching to the piping.

The lower pillar g, is attached to, and a portion of, the lower part of the burner f, f, and the upper part d, is attached to and a 75 portion of the center piece c, c, of the burner as Fig. 1 fully represents.

The entering, course, and action, of the gas through the burner is fully represented by the direction denoted with the red ink 80 darts.

In constructing burners there may be used two or more chambers provided with hollow pillars. The number of chambers and pillars will be governed by the amount of 85 pressure exerted on the gas which varies in different localities.

Having thus fully described the nature of my invention, I would state that I am aware many devices have been used for retarding 90 the flow of gas through a burner, such as deflectors, or circuitous passages. I lay no claim to these things. But

What I do claim as my improvement and desire to secure by Letters Patent is— 95

The arrangement within the burner of two or more hollow pillars (d) and (g) extending up in the chambers of the burner, with holes K, made obliquely into the upper end of said pillars as represented, for pro- 100 ducing counter currents of gas, as it flows through the burner to break its force and regulate the supply of gas to the tip of the burner for purposes mentioned in the foregoing specifications.

JOHN C. WALSH.

Witnesses:

WM. COLBY,

CHARLES H. FOX.