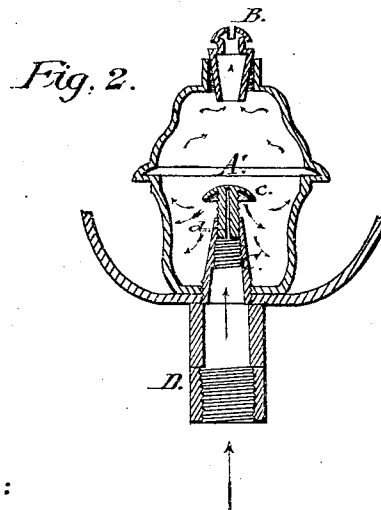
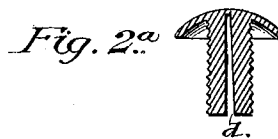
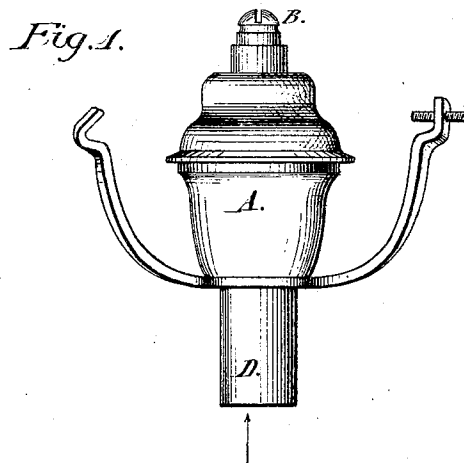


C. C. BINGHAM.

Gas-Burners.

No. 147,234.

Patented Feb. 10, 1874.



Witnesses:

Chas. C. Voffherman
J. W. Voffherman

Inventor:

C. C. Bingham

UNITED STATES PATENT OFFICE.

CALVIN C. BINGHAM, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. 147,234, dated February 10, 1874; application filed November 28, 1873.

To all whom it may concern:

Be it known that I, CALVIN C. BINGHAM, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Gas-Burners, of which the following is a true and exact description:

My invention relates to an improvement in gas-burners, by which an even flow of gas is obtained and perfect combustion secured with a brilliant light. It consists essentially in an auxiliary burner with an adjustable concave cap, secured to the body of the burner by screw-threads surrounding the short extending tube from said cap downward. In this short tube is a slot or slots, through which the gas is allowed to flow slow or fast, it being regulated by tightening or loosening the screw, and thereby closing or opening the slots comparatively. Surrounding the auxiliary burner is a chamber, into which the gas is deflected from the concave cap, and then heated before coming in contact with the flame, to secure more perfect combustion without waste.

Figure 1 is an elevation of burner complete; Fig. 2, a vertical section of same; Fig. 2^a, detail to an increased scale, showing the exact form of inner burner.

Similar letters of reference denote like parts in all of the figures.

A is the jacket surrounding the inner burner, and forming the chamber A', where the gas is heated indirectly from the flame previous to passing out through the lava tip B. C is the inner or auxiliary burner, surmounted by the concave cap c. d is the slot in the stem of the cap c, which may form the increased or diminished opening in either side of said stem for the passage of the gas as it is pressed from the tubes. D is the gas-tubing connected with an ordinary fixture.

The operation of my device may be stated

as follows: The gas enters the auxiliary burner by way of the tube D, is pressed upward and out through the slot in the stem of cap c, and is deflected in the direction shown by arrows. The match having been already applied, the heat conducted by the metal of the jacket warms the chamber A', and, consequently, expands the gas and prepares it for the blaze. The concave cap has an effect to break the force of the pressure as the gas comes in contact with it, and, consequently, it is retarded in its progress to the outer burner, which gives it an opportunity to be thoroughly affected by the heat, and be prepared for the blaze.

It is useless to suggest that preheated gas burns with a purer flame and more perfect combustion, as this, by experiment, is well established.

I am aware that a slotted screw having a flat cap, in connection with a gas chamber and burner, is not new, being shown in the patent of J. H. Jennings, March 8, 1870. I do not, therefore, broadly claim a slotted screw having an enlarged head; but

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The herein-described attachment for gas-burners, consisting of the vertically-slotted regulating-screw, provided with an interiorly-concaved head, c, in combination with the auxiliary tip C and gas-chamber A, as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

C. C. BINGHAM.

Witnesses:

M. GARDNER,
EDW. W. DONN.