F. A. FISHER.

Gas-Burner.

No. 127,329. Patented May 28, 1872.

Fig. 1.

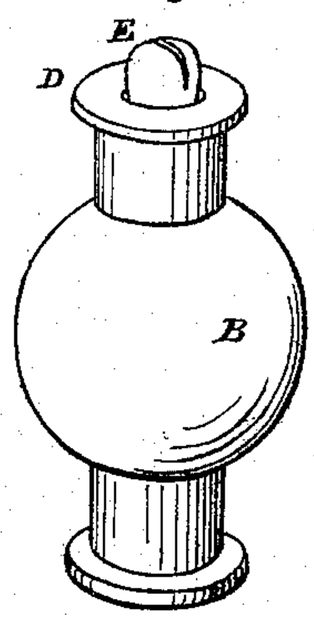


Fig. 2.

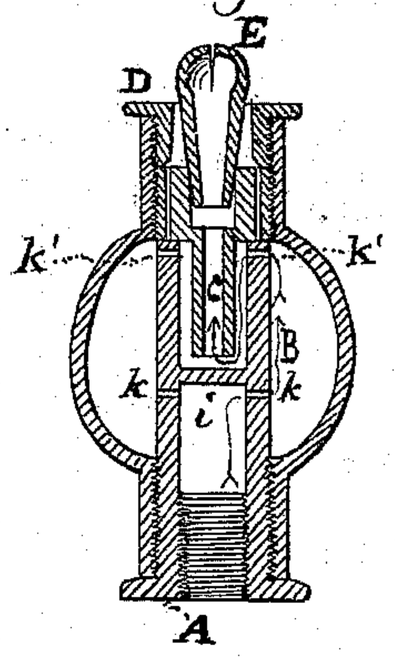


Fig. 3.

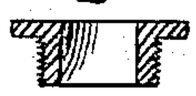


Fig. 6

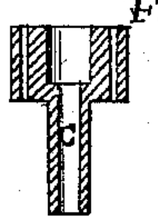


Fig 4.

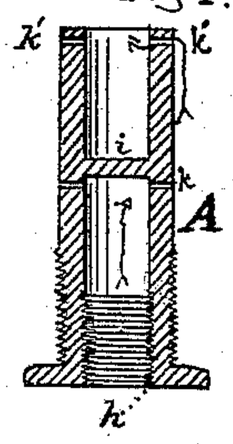
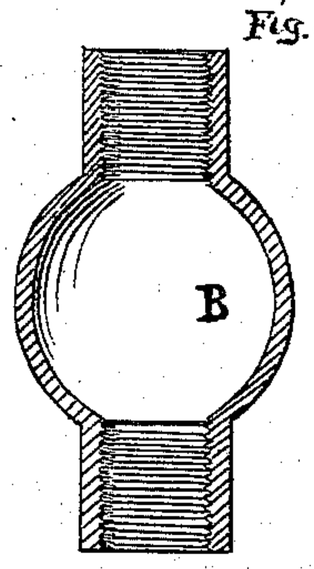


Fig. 5.



Witnesses.

A. E. Gale

W. D. Gale

A. L. Green

Inventor.

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per Sweetland Gale & Co

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127,329

UNITED STATES PATENT OFFICE.

FISHER AMES FISHER, OF CRANFORD, NEW JERSEY.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. 127,329, dated May 28, 1872.

Be it known that I, FISHER AMES FISHER, of Cranford, Union county, State of New Jersey, have invented a new and Improved Gas-Burner; and I hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawing and references making part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a longitudinal elevation, in section, through the center. Fig. 3 is a section of cap-piece D, screwing into the burner. Fig. 4 is a section of the vertical tube A received within the globe B. Fig. 5 is a section of globe B and its parts, containing tube A and tube C. Fig. 6 is a section of tube C by itself.

The nature of the invention consists in so constructing the burner, herein fully described in detail, that the gas in its passage through the same shall be highly heated and prepared for more perfect combustion, and prevented from rushing out with full force upon the outlet E, and thereby causing, in combination with the heating power, a more perfect combustion and greater illuminating power.

To enable others skilled in the arts to make and use my burner, I proceed to describe its construction and operation.

The center tube A is divided in its middle by a cross-partition, *i*, into two compartments, the upper and lower. The lower has a screw-thread, *h*, on its inner surface for attaching the burner to a bracket-cock connected with the supply-pipe. This center pipe has also small holes *k* communicating from its lower compartment and entering into the globe-vessel B, as seen in Fig. 2. There are also similar holes *k'* from the upper part of globe-chamber B, into the upper compartment of chamber A, through which gas may pass while the burner is in operation. Within the tube A, represented by itself in Fig. 4 and in its working position in Fig. 2, within the globe B, there will be seen the tube C, with its shoulders or flanged periphery resting on the upper end of tube A and just above holes *k*. Vertically through the shoulders of tube C are bored several (four or more) small holes, not unlike those in the compartments of the tube A.

While the cap D, seen in Fig. 3, and also in position in Fig. 4, is screwed down in its place, the vertical holes in the shoulder of tube C are firmly closed, and no gas can pass through them; but if we now grasp by the hand tube and globe B, and screw the globe upward, it will carry along with itself tube C and cap-piece D, already partly unscrewed, and leave the shoulder of C on its lower face uncovered, as well as the upper end of tube A, so that the gas in the globe B, passing upward, will pass directly through the vertical holes in the shoulders C, and take the shorter course through the inner periphery of the cap D, and escape between the inner edge of the cap and the outer surface of the tip E, and take fire as it passes into contact with the external air, and so heat the tip E and the contiguous metal, thereby increasing the amount of heat and light in the central jet. This burner is regulated by the screwing or unscrewing of B, and the tightening or loosening of the screw-cap D.

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

1. The combination of the several parts of the burner, as B A C D, uniting to prevent direct pressure on the tip E, substantially as set forth.

2. I also claim the construction of the tube C, resting on tube A, and operated by means of globe B to produce an elevation of the temperature of the burner.

3. I also claim the combination of the partition *i*, hole *k*, and hole *k'* for diverting the current of gas from A to B and from B to A, as described.

4. I also claim the combination of the elongated gas-passages through A and C with the chamber formed by cap D and the sides of tip E, substantially as described.

FISHER AMES FISHER.

Witnesses:

WM. W. TALLMAN,

WM. H. DARBY.