

A. FULTON.
Gas-Burners.

No. 158,582.

Patented Jan. 12, 1875.

Fig. 1.

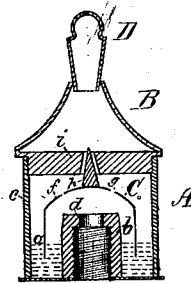


Fig. 2.

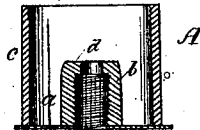


Fig. 3.



Fig. 4.

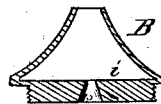


Fig. 5.



WITNESSES
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IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. 158,582, dated January 12, 1875; application filed December 21, 1874.

To all whom it may concern:

Be it known that I, ANDREW FULTON, of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Gas-Burners; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 in the drawing represents a vertical section of my improved gas-burner. Fig. 2 represents a detached vertical section of the main body of the burner; Fig. 3, a sectional view of the float and valve; Fig. 4, the top or cap formed with the diaphragm and valve-seat; Fig. 5, a sectional view of the burner-tip.

Similar letters of reference indicate corresponding parts.

This invention has relation to that class of gas-burners in which is used a float-valve; and my invention consists in the construction, and combination of the several parts, whereby a simple, cheap, and effective burner is produced, as will be hereinafter more fully set forth.

A in the drawing represents the base or main body of my burner, formed at its lower end with an annular chamber, *a*, by the upward extension of the screw-nipple *b* and outer wall, *c*, the upper rim of said wall being provided with suitable screw-threads for the attachment of the cap B. This nipple *b* has screw-threads, and is provided with a projecting rim or shoulder, *d*, on its upper end, so that when the burner is screwed upon the end of the gas-pipe the face of the latter will press up against said shoulder or rim, and make a perfect and tight-fitting joint, preventing the escape of gas between the screw-threads of the pipe and nipple.

Within the base or main body A of the burner is a cylindrical float, C. This float C has a convex top, *f*, forming a space sufficiently large for the gas as it passes from the pipe into the burner, assuring the more perfect operation of the float and valve. The convex top *f* is provided with outlet-openings

g g for the escape of the gas, and a long conical valve, *h*, which works in a conical valve-seat in the diaphragm *i* of the hollow cap B, the valve being of sufficient length to guide the float as it is acted upon by the pressure of gas. A burner-tip, D, is inserted in the top of the hollow cap B.

The operation of my gas-burner is as follows: After the necessary quantity of glycerine or other suitable fluid is placed within the annular chamber *a*, the float C is then inserted, the glycerine forming a tight joint between the nipple *b* and float C, preventing the escape of gas. The cap B is now secured to the top of the main body or base A, and the burner is ready to be attached to the gas-pipe. As the gas passes from the pipe into the chamber, between the nipple and float, it finds an outlet through the openings *g g* in the convex top *f* of the float C, filling the chambers equally upon either side of the float, and preventing the displacement of the glycerine and escape of gas. From the outer chamber, formed by the wall *c* and float C, the gas passes into the hollow cap B through the valve-opening in the diaphragm *i* to the burner-tip D.

If, at any time, the pressure of gas should become too great, the pressure against the convex top of the float C will cause the same to be raised sufficiently to partially close the opening in the diaphragm *i* by the valve *h*, and thus making the supply of gas uniform.

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

The body or base A, with an annular chamber, *a*, for the reception of glycerine or other suitable fluid, and an upwardly-projecting screw-nipple, *b*, formed with an annular rim or shoulder, *d*, in combination with the hollow cap B, diaphragm *i*, having a conical valve-seat, and the float C, with conical valve *h*, as and for the purpose described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

ANDREW FULTON.

Witnesses:

ISAAC BATTIN,
J. M. EHRENDORF.