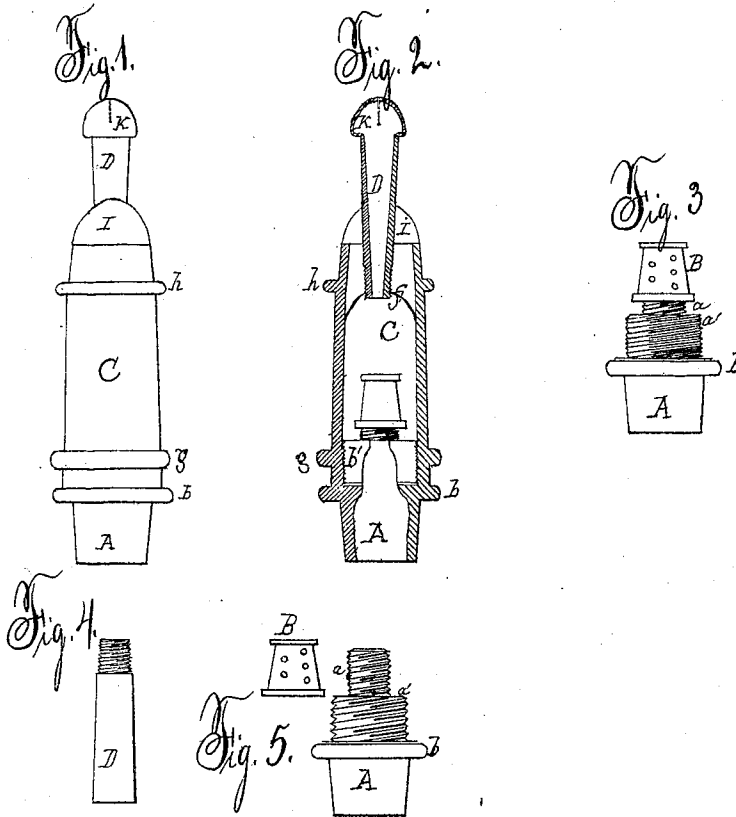


Wm B. Stofen.

Gas Burner

Patented Oct. 3, 1871.

No. 119,480.



Witnesses  
Louis Pabst.  
H. C. Upferman

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# UNITED STATES PATENT OFFICE.

WILLIAM B. STOFER, OF MEMPHIS, TENNESSEE.

## IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. 119,480, dated October 3, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM B. STOFER, of Memphis, in the State of Tennessee, have invented certain Improvements in Gas-Burners, of which the following is a specification:

Figure 1 is an elevation embodying my invention. Fig. 2 is a vertical transverse section. Fig. 3 is a plan view, showing that part of the machine by which the gas is adjusted. Fig. 4 is an elevation of the tubular burner with the globular bulb omitted. Fig. 5 is an elevation of the combined tube, cylinder, and thimble for adjusting the supply of the fluid.

My invention relates to an improvement in gas-burners, whereby gas is economized, and the quantity supplied to the flame regulated and controlled; it consists in an improved construction of the burner and arrangement thereof, as more specifically hereinafter set forth and claimed.

A is a cylinder and tube combined, the said cylinder extending to the thumb-*rim*, *b*, and being provided with a female screw therein for securing or attaching the same to the supply-pipe. The orifice provided in cylinder A partially ceases as to diameter at the point designated by thumb-*rim* *b*, where it abruptly terminates in a smaller orifice formed in the tube *a*. Although the orifice is much smaller, the diameter of the tube at *a'* is similar to that of the cylinder A, and is threaded for screwing into the female screw *b'* of the main cylinder C, but terminates in a small threaded tube, *a*, the thread being designed for adjusting thereon the thimble B. A washer is also provided at *a'* for the prevention of the escape of the fluid. The thimble B is perforated on the surface thereof with small apertures at varying intervals, and is threaded in the interior thereof with a female screw for adjusting the same on the tube *a* to any desired point or altitude. When it is designed to admit but a small supply of gas to the burner the thimble is screwed down closely to the tube at *a'*, which latter then projects above and closes several of the small apertures in the thimble B, thereby preventing the egress of the gas in large quantity; but when said thimble is partially unscrewed, said orifices are in the same ratio there-

by unclosed and freely admit the flow of the fluid into the main cylinder C. C is the main cylinder of the burner, and it is threaded or provided with a female screw therein in the lower part thereof, into which screws the combined tube and cylinder A with thimble B. This cylinder partially closes at *f*, where a threaded orifice or female-screw, much smaller than its greatest diameter, is provided for the reception of the burner D, which is screwed therein. Cylinder C is provided with the thumb-*rim* *g* and rim *b*, beyond which latter the cylinder projects a short distance, encircling the burner D, and the space thus formed is filled in and tapered as shown with silver or other suitable solder, or the cylinder may be tapered or funnel-shaped at this point and then soldered, the letter I representing the solder or tapered cylinder, as may prove preferable in practice. The tube of the burner D is threaded at its smallest end, and screws into the female screw of the main cylinder C. Its diameter is unequal, as it gradually enlarges from the thread aforesaid to its apex, whereto is rigidly attached the semi-globular bulb K, which latter has a deep transverse vertical incision therein for the escape of the fluid, and its diameter is greater than that of the tube connecting therewith. The tube of the burner D is made tapering or flaring and enlarging from the lower extremity upward, and smallest at the lower end, in order to afford a check upon the pressure of gas. For a like purpose, and to spread the flame, the bulb K is made larger in diameter than the tube connecting with it. The solder filling I about the tube is intended to hold it firmly in its place and make a close connection or junction with it.

I claim—

The tapering tube D, enlarging upward and provided with bulb K, in combination with cylinders A and C, when constructed and operating as described.

In testimony of this my application for Letters Patent for an improvement in gas-burners I have hereunto affixed my name.

WM. B. STOFER.

Witnesses:

A. G. WHEATON,  
JAMES ROSE.