

E. JONES.

Gas Burner and Stop Cock.

No. 50,302.

Patented Oct. 3. 1865.

FIG. 1.

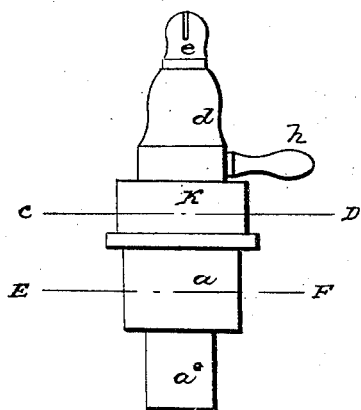


FIG. 3.

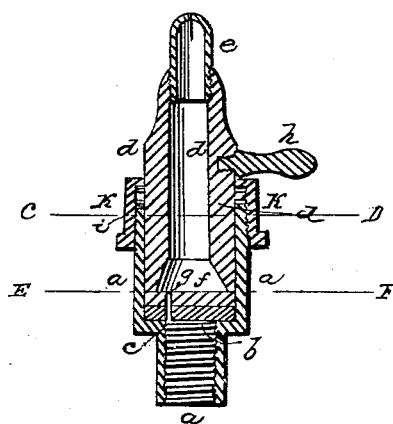


FIG. 5.



FIG. 2.

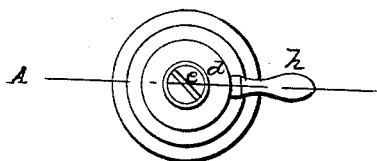
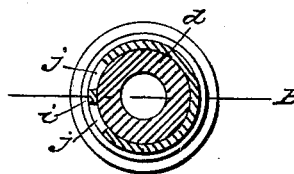


FIG. 4.



WITNESSES:

Luther Briggs  
Amherst Wellington.

INVENTOR.

Eduard Jones.

# UNITED STATES PATENT OFFICE

EDWARD JONES, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND EDWD. JONES DAVENPORT, OF SAME PLACE.

## IMPROVED GAS-BURNER AND STOP-COCK.

Specification forming part of Letters Patent No. 50,302, dated October 3, 1865.

*To all whom it may concern:*

Be it known that I, EDWARD JONES, of Boston, in the county of Suffolk and State of Massachusetts, gas-manufacturer, have invented a new and useful Self-Sealing Gas-Burner and Stop-Cock Combined; and the following description, with the accompanying drawings, forms a full, clear, and exact specification thereof.

In burners as ordinarily arranged the gas-cock is inserted in the supply-pipe at some convenient distance below the burner, and as usually constructed, being in form substantially the same as the common steam and liquid cocks, from corrosive action of the gas, whereby the moving surfaces of contact become roughened, and the frequent use to which it is subjected in house-burners, is exceedingly liable to leak so subtle a fluid as gas, and some other and better arrangement for securing a more perfect and self-sealing cock in connection with the burner is a great desideratum. This I claim to have effected in my present invention.

The accompanying drawings represent my invention.

Similar letters represent similar parts in all the views.

Figure 1 is an exterior side elevation. Fig. 2 is a top view. Fig. 3 is a vertical section on line A B of Figs. 2 and 4. Fig. 4 is a horizontal section on line C D of Figs. 1 and 3. Fig. 5 is a horizontal section on line E F of Figs. 1 and 3.

*a* represents the supply-pipe, to the upper end of which is soldered a disk, *b*, with its upper surface ground perfectly true and smooth, through which is a port, *c*.

*d* represents the mouth-piece of the burner, having a tip, *e*, of lava or other material.

To the bottom of the piece *d* is also soldered a disk, *f*, similar to the disk *b*, and having its lower surface ground perfectly true and smooth, and having a port, *g*, passing through it. These disks I usually make of a composition of tin and antimony, or some other equivalent composition more perfectly adapted to resist

the corrosive action of the gas than the copper or brass or other metal of which the cock is usually composed.

In my arrangement for opening and closing the cock for letting on and shutting off the gas from the burner, instead of keeping the mouth-piece of the burner stationary, as usual, I construct mine with a lateral vibratory motion operated by the lever *h*, the range and extent of said motion being limited by the pin *i* in the slot *j*.

It will be perceived that the upper disk, *f*, being attached to and vibrating with the mouth-piece of the burner, while the lower disk, *b*, is fixed to the stationary supply-pipe, that the ports or apertures *c* and *g* coincide or otherwise, according to the relative positions of the disks *b* and *f*, as regulated by the lever *h*, and thus either freely admit or completely cut off the flow of gas from the supply-pipe to the mouth-piece of the burner.

I usually lubricate the surfaces of motion between the two disks *b* and *f* with oil, which, in this position, will remain a long time without renewing.

*k* represents an annular cap-piece, which I usually screw onto the outer end of the supply-pipe to retain the burner in place and make the apparatus more firm and complete, though it is not an essential part of the machine, as the weight of the burner is amply sufficient, at the low pressure gas is ordinarily used at.

The chief points of novelty of my invention consist in the combination of the stop-cock and burner, and letting on and shutting off the gas by means of the lateral vibratory motion given to the mouth-piece of the burner; and its chief advantages are its great simplicity and its far greater durability and facility of keeping in repair, from the fact that its surfaces of motion are simple plain surfaces instead of the conical or more complex forms of ordinary stop-cocks, and, moreover, the arrangement is such as greatly to facilitate the making of the moving surfaces of contact, on which the perfection and durability of the cock

depends, of some metal better adapted to resist the corrosive action of the gas than that of which the rest of the cock is composed.

I claim—

1. The combination of the gas-burner and stop-cock, in the manner and for the purposes set forth, substantially as described.

2. In my combined gas-burner and stop-cock, making the disks or moving surfaces of

contact of a composition of tin and antimony, or some metal equivalently adapted to offer greater resistance to the corrosive action of the gas than that of which the rest of the apparatus is composed.

EDWARD JONES.

Witnesses:

LUTHER BRIGGS,  
AMBROSE WELLINGTON.