

J. COOPER.  
Regulator for Gas-Burners.

No. 197,998.

Patented Dec. 11, 1877.

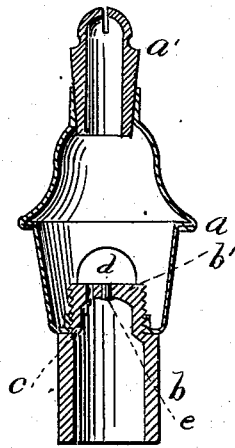


Fig. 1.

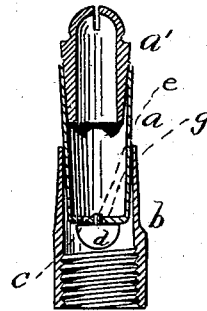
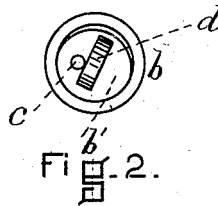


Fig. 3.

WITNESSES

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INVENTOR

# UNITED STATES PATENT OFFICE.

JOHN COOPER, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN REGULATORS FOR GAS-BURNERS.

Specification forming part of Letters Patent No. 197,998, dated December 11, 1877; application filed November 16, 1877.

*To all whom it may concern:*

Be it known that I, JOHN COOPER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Regulators for Gas-Burners, which improvement is fully set forth in the following specification and accompanying drawing.

The nature of my invention consists in providing the base of the burner or the cup holding the tip, as may be most convenient, with a piece of metal attached to said base or cup, in such a manner that it may be easily turned, so as to cover, uncover, or partially cover one or more holes, through which the gas flows, thus checking and regulating the flow of the gas toward the tip.

The main advantages arising from this invention are its simplicity and cheapness. Its practicability is apparent.

Figure 1 is a vertical section of a burner provided with my invention. In this figure the check or regulator is represented as applied to the base of the burner. Fig. 2 is a plan view of the base in Fig. 1, the cup having been removed. Fig. 3 is a vertical section of a burner provided with my device, the check being applied to the cup holding the tip.

In Fig. 1, *a* represents the cup holding the tip *a'*, and *b* represents the base. The upper or horizontal wall *b'* of the base *b* is provided with a hole, *c*, by means of which the gas passes from the base to the tip. A check, *d*, is at-

tached to the part *b'*, and turns upon the point *e*. By turning the said check *d* more or less over the hole *c* the gas is regulated in its flow in a simple and cheap manner. The same device is well represented in Fig. 2.

In Fig. 3, *a* represents the cup holding the tip *a'*, and *b* the base. The under or horizontal wall *g* of the cup is provided with a hole, *c*, through which the gas flows, and the check *d* turning upon the pin *e*, as in Fig. 1. Thus the object is accomplished by means of the same device, applied in Fig. 1 to the base, and in Fig. 3 to the cup.

This contrivance, being very simple and small, takes very little room in the burner, and enables it to be made very small or short, if desired.

Of course, as many holes may be provided as deemed desirable, provided they are all accessible to the check.

Having thus fully described my improvement, what I claim, and desire to secure by Letters Patent, is—

In combination with the base or cup of a gas-burner, provided with one or more holes, *c*, through which the gas flows, the check *d*, arranged to be rotated as described, all substantially as and for the purpose herein set forth.

JOHN COOPER.

Witnesses:

HENRY W. WILLIAMS,  
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