

No. 626,099.

Patented May 30, 1899.

F. O. ROBBINS.
REGULATOR FOR GAS BURNERS.

(Application filed May 31, 1898.)

(No Model.)

Fig. 1.

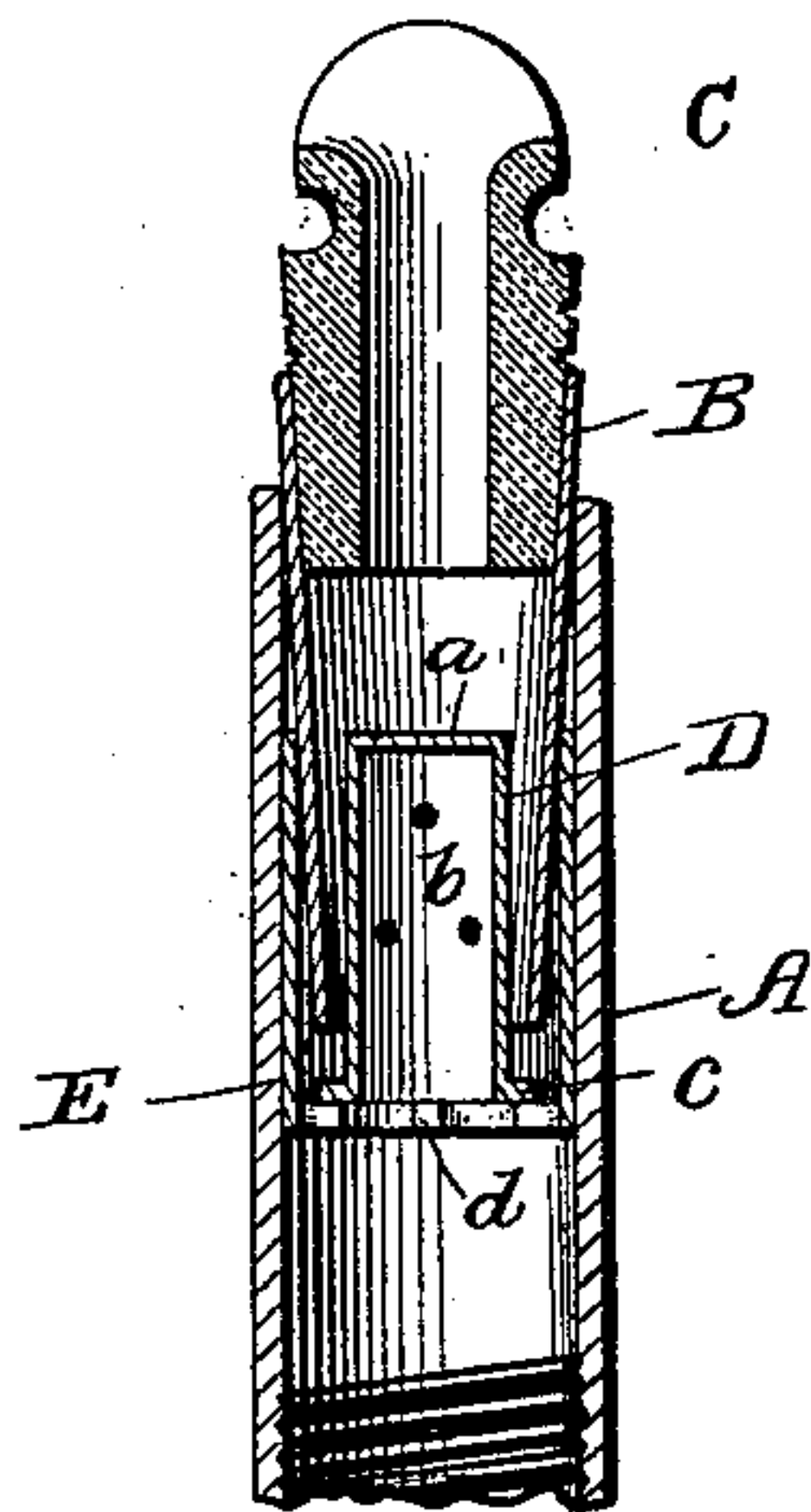


Fig. 2.

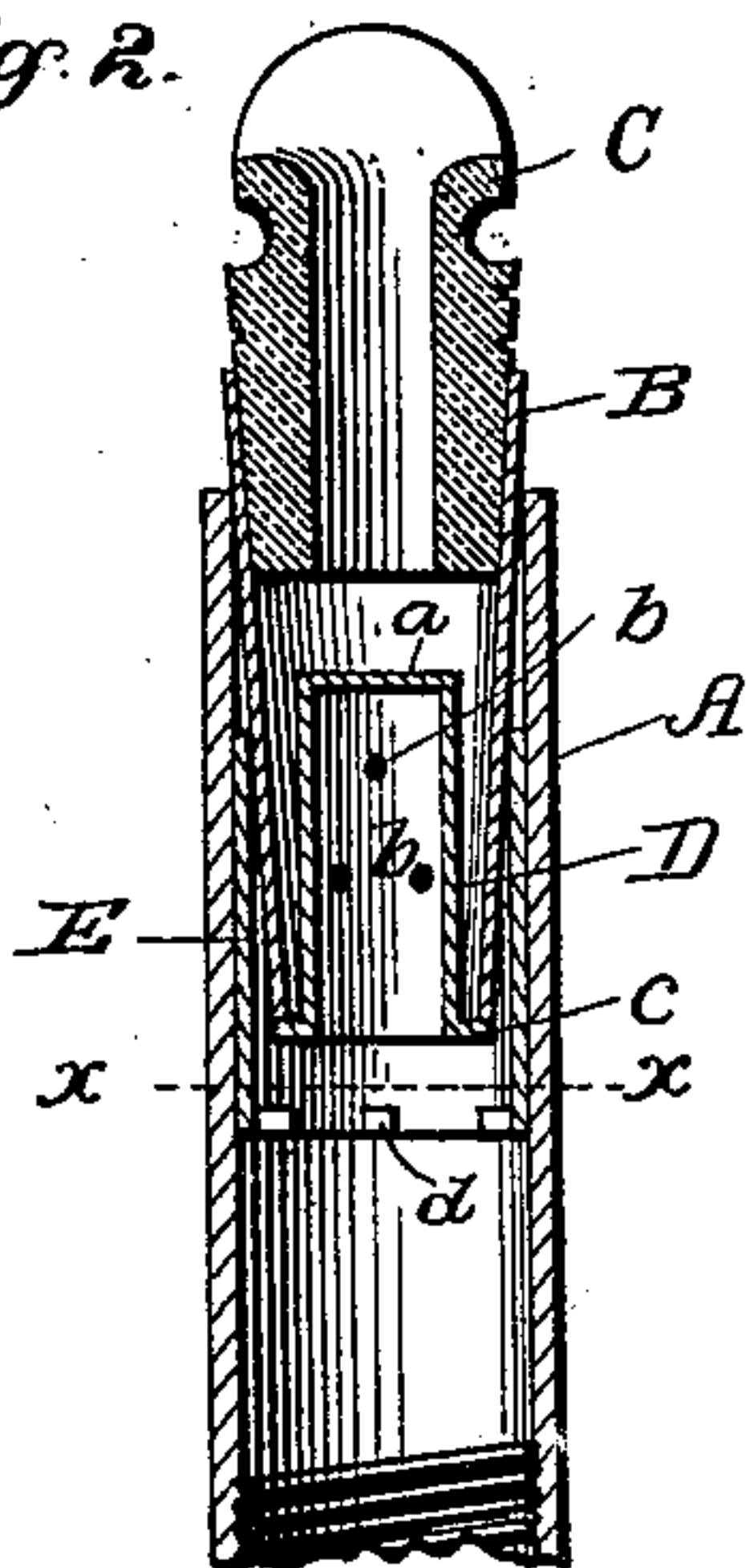


Fig. 3.

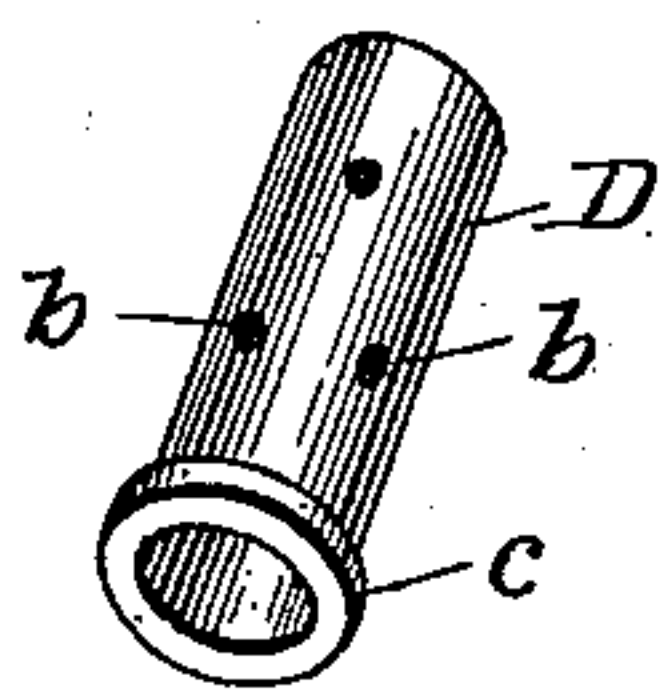
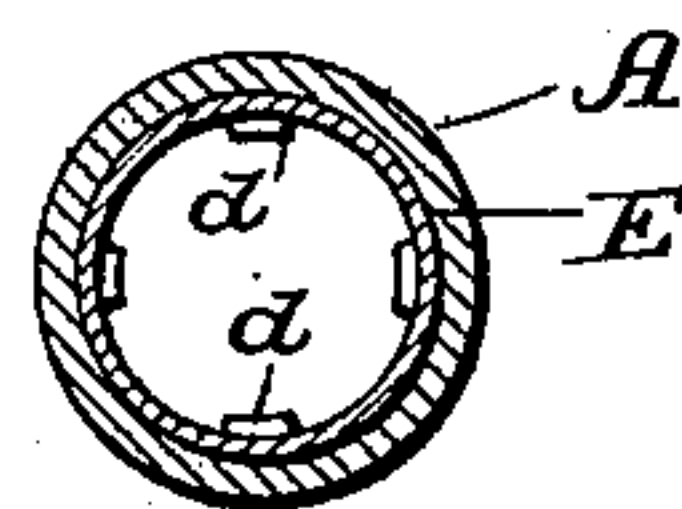


Fig. 4.



Witnesses
Victor J. Evans
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UNITED STATES PATENT OFFICE.

FREDERICK OLMSTEAD ROBBINS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE TOWNSEND MANUFACTURING COMPANY, OF SAME PLACE.

REGULATOR FOR GAS-BURNERS.

SPECIFICATION forming part of Letters Patent No. 626,099, dated May 30, 1899.

Application filed May 31, 1898. Serial No. 682,169. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK OLMSTEAD ROBBINS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Regulators for Gas-Burners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to gas-burners, and particularly to devices for regulating the supply of gas to the tip of the burner; and it has for its object to provide a simple, durable, and comparatively inexpensive device for the purpose adapted to automatically control the flow of gas to the tip, and thus provide a uniform flame; and it consists in the parts and combination of parts hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a vertical section through my device in position in a pillar of a gas-fixture, showing the valve in its lower position; Fig. 2, a similar view showing the valve raised; Fig. 3, a detail perspective of the valve; and Fig. 4, a section on the line *x x*, Fig. 2.

Similar letters refer to similar parts throughout all the views.

A represents an ordinary pillar for a gas-fixture, and B a tapered or conical tube into which an ordinary "lava" tip C is inserted.

E is a cylindrical collar surrounding the lower end of the tube B and having any desired number of inturned projections *d* formed at its lower end, said collar being of a size to fit on the lower end of tube B, as shown, and to project beyond the lower end of the said tube B. Within the tube B is placed the cylindrical valve D, said valve having a closed upper end *a* and a peripheral flange *c* at its lower end, and is adapted to have free vertical movement in said tube the distance limited by the projections *d* in one direction, as shown in Fig. 1, and by the flange *c*, engaging the end of the tube B, in the other direction, as shown in Fig. 2. In the wall of the valve is formed any desired number of perforations *b* for a purpose to be described.

My device is placed in the pillar of a gas-fixture and pressed closely in place in a manner similar to the arranging of a lava tip in a pillar. When the pressure of gas is low, the valve drops to and rests on the projections of collar E, thus permitting the gas to flow to the tip around the valve and also through the perforations *b* in its wall, thus providing increased space for the escape of the gas to the tip; but when the pressure is high the valve is lifted or raised by the gas until its flange *c* seats tightly against the lower end of the tube B, as shown in Fig. 1, and thus reduces the feed to the minimum quantity that may pass through the perforations *b* in the valve, which will give the required gas-supply for the burner. The movement of the valve also serves to keep the device free from dirt or soot.

It is evident that the collar E may be dispensed with, as its only purpose is to limit the downward movement of the valve and prevent it dropping wholly out of the tube, and other means may be employed to accomplish this purpose—as, for instance, the projections may be the inturned ends of depending bars from the tube B, or the projections may be formed on the interior of the pillar, and I do not desire, therefore, to be limited to the exact construction and arrangement of the parts described.

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

1. A regulator for gas-burners, comprising a tapered tube provided with a tip and adapted for insertion in the pillar of a gas-burner, a cylindrical valve formed with perforations and arranged loosely in said tube and adapted to seat against the lower end thereof, and means for limiting the downward movement of said valve.

2. A regulator for gas-burners, comprising a tube adapted to receive a burner-tip and for insertion in the pillar of a gas-burner, a valve formed with perforations and extending in said tube so as to provide a space therebetween and having a flange at one end, and means for preventing the valve dropping wholly out of said tube, whereby the degree of pressure of the gas flowing into the pillar

of the burner operates the valve to control the admission of the gas into the tube through the space surrounding the valve therein.

3. A regulator for gas-burners comprising
5 a tapered tube, a cylindrical valve formed with perforations and with a flange at one end arranged loosely in said tube, and a collar having inturned projections and fitting over the lower end of said tube.

10 4. A regulator for gas-burners, comprising a tapered tube, provided with a burner-tip and adapted for insertion in the pillar of a gas-burner, a cylindrical valve formed with

perforations and arranged loosely in one end of said tube, and means for limiting the ver- 15 tical movement of the valve in both directions, whereby the pressure of the gas flowing to the pillar of the burner controls the admission of the gas to the tip through the space between the tube and the valve. 20

In testimony whereof I affix my signature in presence of two witnesses.

FRED. OLMSTEAD ROBBINS.

Witnesses:

- CHARLES F. WILSON,
ERNEST FORBES.