W. ANDERSON.
Gas-Burner.

No. 204,278. Patented May 28, 1878.

Fig. 1.

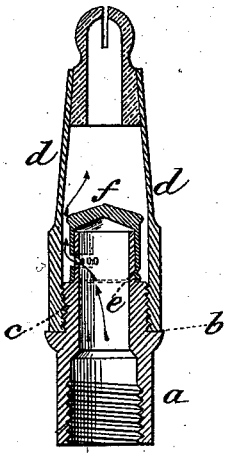


Fig. 2.

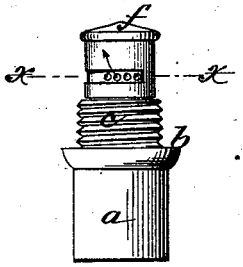


Fig. 3.

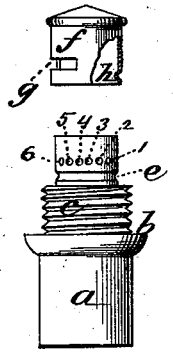


Fig. 4.

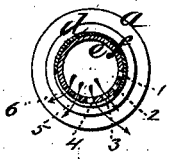


Fig. 5.

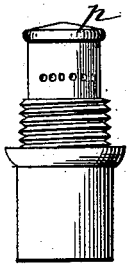


Fig. 6.

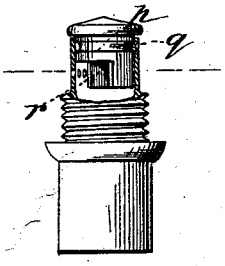
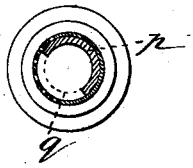


Fig. 7.



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UNITED STATES PATENT OFFICE.

WALTER ANDERSON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **204,278**, dated May 28, 1878; application filed May 14, 1878.

To all whom it may concern:

Be it known that I, WALTER ANDERSON, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification:

Inconsiderate persons, especially those to whom gas-light is a novelty, are disposed to give full vent to the flow, thereby entailing great waste of gas. In hotels, lodging-houses, and buildings rented in apartments for offices this is especially prominent.

The object of this invention is to remedy such evil by a device of the simplest construction and most effective in its results, and which is not liable to be accidentally displaced or forced out of position by the pressure of a full head of gas, however strong. The gas-flow, as it passes through the burner to be burned, is controlled and regulated by the novel construction hereinafter described.

Reference being had to the drawings, Figure 1 represents a vertical sectional view of a gas-burner embracing the improvements claimed; Fig. 2, a side view, the burner-tip being removed; Fig. 3, views of the burner-base and its regulator-cap; Fig. 4, a transverse view on the line *x x*, Fig. 2; Figs. 5, 6, and 7, views of modifications of my invention.

In these drawings, *a* is the burner-base, which is provided with an internal screw-thread, whereby to fasten it to the pipe or bracket, as in common use, and is formed or cast with a seat, *b*, and screw-thread *c*, to permit of the attachment of the burner-tip *d*; but the flow of gas through such burner-base to the burner-tip is interrupted, regulated, or controlled, and only permitted in substantially ascertained measurement by means of the following construction: On the burner-base, just above the screw-thread *c*, is a peripheral groove, *e*, the function of which will presently appear. Immediately above this groove is a series of holes, 1 2 3 4 5 6—in the example shown, six—and these holes, 1, 2, 3, 4, or 5, are covered by a check or regulator-cap, *f*, covering the open end of the burner-base, and which has a slot, *g*, capable, when the cap is rotated, to leave open any one or all of said holes; but, of course, if all are left open the flow of gas will be uninterrupted. This regulator-cap *f* is held from coming off by an inner projection or teat, *h*, which extends into the peripheral groove *e* on the burner-base before alluded to, the cap being forced downward in placing it in position and sprung to its place. This arrangement prevents the cap from being accidentally displaced or gradually forced upward by the gas-pressure, so as to cover the escape apertures or leave the base, and is the feature of my improvement.

The manner of effecting the control of the flow of the illuminating-gas to the burner-tip, by the means described and shown, is as follows: The burner-tip being removed the check or regulator-cap is rotated or turned on the axial line of the burner, so that its slot shall leave uncovered one, two, three, or more of the holes. These holes are of a diameter sufficient to permit the passage of one foot of gas an hour, so that, if one hole be uncovered, one foot of gas shall be burned, and if two be uncovered two feet of gas, and so on. The measured flow is, of course, in ratio to the pressure of gas. The desired flow being obtained by such adjustment, the burner-tip is screwed on.

In appearance, when the tip is screwed on, no person would perceive any special difference between this device and the ordinary gas-burner. Thus, unathorized interference would not be likely.

The check or regulator-cap may also be made to fit within the neck of the burner-base, the peripheral holes whereof are the same as in the example shown and described; but an opening may be left in said cap equal to the length of said series of holes, or the half of its wall may be cut away. Thus, when the cap is rotated within the neck of the burner-base, said opening or cut-away portion may be operated to leave one or more of the peripheral holes in the burner-base closed. Said cap is provided with a surrounding groove to hold it in place. This modified construction is shown in Figs. 5, 6, and 7 of the drawings, wherein *p* represents the cap; *q*, the groove thereon, and *r* the opening or cut-away portion.

The operation and results obtained are, essentially, the same as those described as of my preferred construction.

The teat or projection may be indented from the outside of the cap-neck to fit in the groove described.

What I claim is—

In a gas-burner, the combination of the check or regulator-cap, having the slot and inner projection, a burner-base having the series of holes and peripheral groove, and the burner-tip, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

WALTER ANDERSON.

Witnesses:
JOHN SIMMONS,
THOS. CROCKER.