E. BLACKMAN.

Gas-Burner.

No. 168,554. Patented Oct. 11, 1875.

Fig. 1.

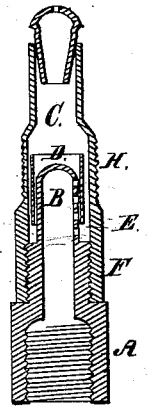

Fig. 2.

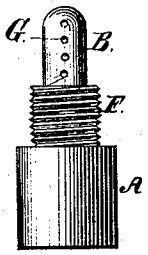

Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

EBENEZER BLACKMAN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **168,554**, dated October 11, 1875; application filed July 30, 1875.

To all whom it may concern:

Be it known that I, EBENEZER BLACKMAN, of the city of Brooklyn, county of Kings and State of New York, have invented a new and useful Improvement in Gas-Burners; and I hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings making part of this specification, and to the letters of reference marked thereon.

Figure 1 is a central longitudinal section of a gas-burner having my improvement applied thereto. Fig. 2 is a perspective view of the same without its outside burner, and showing the graded holes for the outlet of the gas. Fig. 3 shows the construction of the spring-slide or regulator.

It is a matter of considerable importance, on the ground of economy, to have a simple, effective, and durable means of permanently adjusting the burner, so as to regulate the quantity of gas passing through it to suit the particular necessities of the location of the burner; and the object of the present invention is to prevent a person from burning more gas than will pass through one or more adjustable openings, permanently secured by an external spring-slide or regulator, or one that cannot be removed for the purpose without using a nipper or its equivalent.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

It consists, substantially as hereinafter described and specified, in the application and use of a spring-slide or regulator, placed on or upon an inner tube, having one or more holes in its sides, said tube rising from the base of the burner, and having its upper end closed, as shown in Fig. 1. The spring-slide or regulator is usually made of spring metal, tubular in form, with one side open, as shown at Fig. 3, and is operated by sliding up or down on the inner tube, and exposing one or more of the holes. Each hole represents a given quantity of gas under the ordinary pressure.

It will therefore be evident that the outlet for the gas can be adjusted with perfect accuracy and facility without the parts becoming impaired by friction in use, and requiring only that the external burner C, which covers the same, be removed for the purpose, and afterward replaced. The spring-slide or regulator will adjust itself to the size of the tube, and always be tight.

In the drawings, A is the base of the burner, and B the inner tube, with closed top on the same; C, the external burner, and D the spring-slide or regulator, which fits the tube B. The base A is tubular throughout nearly its length, the upper end being closed, and a screw cut in its lower end, so that it can be secured to the usual gas-supplying pipe, as heretofore. It also has a screw cut on it, as shown at F, Fig. 2, for the purpose of securing the external burner C to the base A. Its upper part B is reduced in diameter, as shown in the drawings, and receives over or upon it the spring-slide or regulator D, which is retained in its place by friction. The tube B has one or more holes through its side, as shown at G, Fig. 2. The said holes are opened or closed by moving up or down the spring-slide or regulator D, as above described. The external burner C is provided at its upper end with outlet holes or slits, in the usual manner, and is made so as to leave a gas-space, E, around and above the tube B, and its spring-slide or regulator D, when secured gas-tight to the base A, which is adapted at F for the purpose, as shown in Fig. 1. It also has an inside screw, in the usual manner, and also an outside screw near the center of the burner, as shown at H, Fig. 1. The object of this outside screw is to screw on a globe-holder.

The operation is as follows: The parts A, B, and C being secured and adjusted together as shown in Fig. 1, and applied to a gas-supplying pipe, it will be seen that the gas will flow through the burner with a copiousness proportionate to the pressure and the size of the outlet-holes; but if the spring-slide or regulator be pressed down sufficiently to cover one or more of the holes in the base tube B, as shown in Fig. 1, the current of gas flowing through the said holes will be reduced in proportion to the number of holes closed.

The improvement is simple, and can be cheaply and easily constructed and applied.

I do not claim, in a gas-burner, the com-

bination of an adjustable hollow valve with a pillar having a series of perforations of different sizes in the same horizontal plane, the said valve having a single perforation of greater size than the largest perforation in the pillar; neither do I claim an adjustable gas-burner, consisting of a tapered interior perforated cap and a tapered interior perforated tube, operating together, and inclosed in an external burner screwed permanently down upon a base or pillar.

Having thus fully described my improved gas-burner, and pointed out its advantages or utility, what I claim as new therein, and desire to secure by Letters Patent, is—

The spring-slide or regulator D, in combination with gas-burners, for the purpose of regulating and measuring the quantity of gas passing through graduated openings, substantially as described.

EBENEZER BLACKMAN.

Witnesses:

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