

I. W. SHALER.  
GAS-BURNER.

No. 178,339.

Patented June 6, 1876.

Fig. 1.

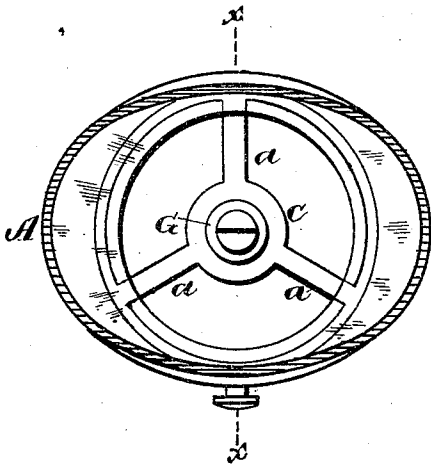


Fig. 2.

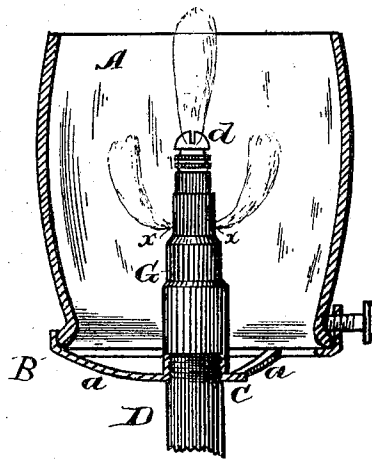
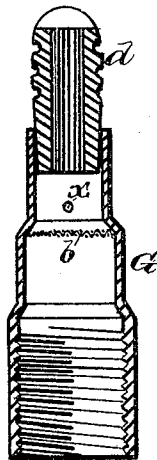


Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

IRA W. SHALER, OF NEW YORK, N. Y.

## IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **178,339**, dated June 6, 1876; application filed May 5, 1876.

*To all whom it may concern:*

Be it known that I, IRA W. SHALER, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification:

My invention relates to gas-burners; and it consists in certain improvements upon the Letters Patent Nos. 107,824 and 137,964, granted to me, respectively, September 27, 1870, and April 15, 1873, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this invention, and in which—

Figure 1 is a top view of the glass shield. Fig. 2 is a vertical section taken on the line *x x*, and showing the burner in place. Fig. 3 is a vertical section of the burner.

A represents the shield of glass or other transparent or translucent material, contracted and of cylindrical form at the base, from whence it widens on two sides toward its upper end, so that its top or mouth shall have an elliptical shape.

The longer sides of ellipse are also contracted slightly toward the top, so that while the inner and outer surfaces of the ends of the ellipse are straight, or nearly so, (though inclined,) the inner surfaces of the sides are concave and the outer surfaces convex. This, I have found by experiment, gives a much better light than as formerly constructed, besides simplifying the form, so as to make it both easier and cheaper to manufacture. This shield is held in an ordinary holder, B, connected, by arms *a a*, with a central socket, *c*, having female screw-threads. This socket or collar is screwed upon the end of the pipe D, said pipe projecting sufficiently above said socket to receive the burner G, which is also screwed thereon.

The burner G is of ordinary construction, provided with interior wire-gauze *b*, and with the tip *d*, having the usual elongated slot to form a "bat's-wing" flame. Between the screen *b* and tip *d*, in opposite sides of the burner, are small apertures *x x*, through which the gas is allowed to pass out, forming two tiny jets below the main flame, and the tip should be so placed in the burner that said jets will be opposite the center of the side of the main flame. As the cold air passes upward to the flame it first encounters these small jets and becomes heated to a certain degree, so that when the air encounters the main flame a perfect combustion will take place, and thereby all flickering of the flame be prevented.

I am aware that it is not new to construct a gas-tip with an opening in the side, (see Letters Patent No. 137,964, dated April 15, 1873, issued to me,) and do not desire to broadly claim such.

The merit of my present invention is in its simplicity and cheapness of construction, my former device being composed of several parts and expensive.

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

1. The gas-burner G, provided with tip *d* and side passages *x x*, as and for the purposes set forth.

2. The combination of the shield A, constructed as shown and described, the holder B, with arms *a* and screw-collar C, pipe D, and the burner G, provided with tip *d* and side apertures *x x*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

IRA W. SHALER.

Witnesses:

H. P. HERDMAN,  
JOHN ALLEN.