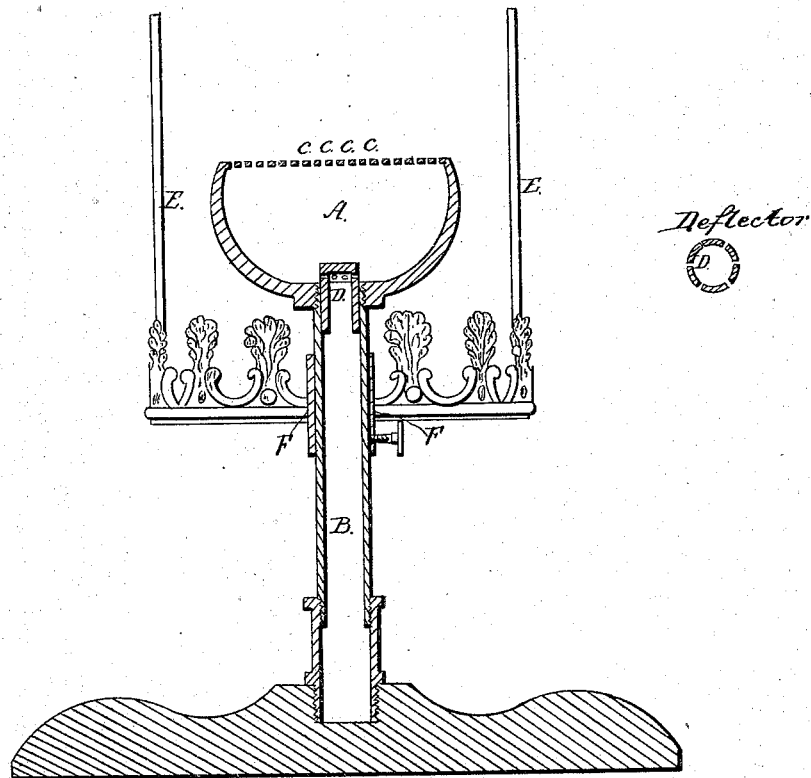


J. A. BASSETT.  
GAS BURNER.

No. 47,786.

Patented May 23, 1865.



Witnesses

*T. B. Russell*  
*Arab book*

Inventor:

*John A. Bassett*

# UNITED STATES PATENT OFFICE.

JOHN A. BASSETT, OF SALEM, MASSACHUSETTS.

## IMPROVED GAS-BURNER.

Specification forming part of Letters Patent No. 47,786, dated May 23, 1865.

### *To all whom it may concern:*

Be it known that I, JOHN A. BASSETT, of Salem, in the county of Essex and State of Massachusetts, have invented a new and Improved Gas-Burner; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is to arrange a burner for burning carbureted air or gases deficient in illuminating-power, so that the flame will not be materially affected by the varying degrees of carburation of the gases and will burn steadily. When benzine is used for impregnating air for illuminating purposes, the gas produced has not the same photometric power through the whole period of the carburation. The lighter portions of the hydrocarbon pass off, leaving the heavier portions, which do not vaporize so quickly. This makes a poorer gas toward the close of the process. Ordinary gas-burners do not answer the purpose of burning carbureted air at all. Argand burners with large openings are better, but are objectionable for many reasons.

The nature of this invention consists in the arrangement of a burner for this purpose with a single straight row of apertures, in combination with a short oval chimney, the chimney being adjustable for the purpose of varying the height of the flame to make it burn steadily. The height of the flame may be varied as desired.

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

I make the burner, by preference, of brass, but other materials may be used if desired, the body of the burner A being cast separately from the stem B. The top of the burner is flat and narrower than the base, and is perforated with holes *c c c c* bored vertically into the top of the burner. In the mouth of the

inlet to the burner I place a plug, D, which fits into the top of the tube B, and which is perforated round its periphery with small holes, the object being to prevent the gas from escaping directly up through the holes, but spreading and distributing the gas so that it escapes regularly through all the holes in the burner.

The chimney consists of an oval glass shade, E, placed in an adjustable holder, F, and corresponding to the size of the burner. It may be below the flame entirely, or even with it, or above it, as may be desired. The best result will be obtained by placing it so as to encircle about half the height of the flame. Of course a circular glass may be used, but an oval one is not only a better shape for the burner, but gives the steadiest flame.

With carbureted air this burner gives a steady rich flame, no smoke is emitted, and the combustion is perfect. Its economy is also important. With from two to two and one-half feet of gas per hour a large and elegant flame is produced, burning perfectly steady, and the most perfect light for reading, working, &c. This result has never been attained in any except an Argand burner in the use of carbureted air.

The cost of the burner is small, and it may be made with facility by ordinary workmen, presenting a great advantage in this respect over the Argand burner, which is not only expensive, but burns a large portion of gas.

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

A burner for burning carbureted air or gas, having the parts arranged and constructed substantially as herein described and set forth.

JOHN A. BASSETT.

Witnesses:

T. B. RUSSELL,  
ARIEL COOK.