

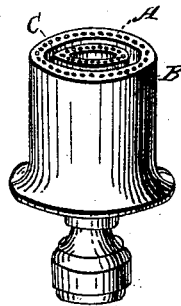
A. E. DUPAS.

Gas Burner.

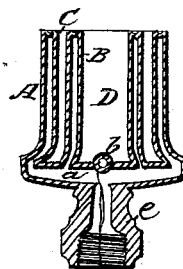
No. 107.234.

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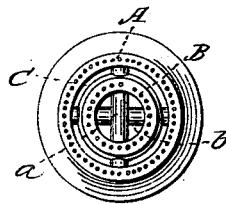
*Fig. 1*



*Fig. 2*



*Fig. 3*



*Witnesses:*

*Rufus R Rhodes*  
*Arthur Garbarn*

*Inventor:*

*A. E. Dupas*

# United States Patent Office.

ANTOINE ERNEST DUPAS, OF NEW ORLEANS, LOUISIANA.

*Letters Patent No. 107,234, dated September 13, 1870.*

## IMPROVEMENT IN GAS-BURNERS.

The Schedule referred to in these Letters Patent and making part of the same

I, ANTOINE ERNEST DUPAS, of the city of Paris, France, but now residing in the city of New Orleans, State of Louisiana, have invented certain Improvements in Gas-Burners, of which the following is a specification.

My invention is a new article of manufacture, and

It consists of a burner in which there are two concentric annular chambers or distributors, the one about twice the diameter of the other, so as to provide a considerable annular space between them, which said chambers are perforated at their tops with minute holes for the escape of the gas, and connected with the pipe which supplies them with gas by two small pipes that cross each other at right angles at their bottoms.

The object of my invention is to produce a light or flame which shall produce the greatest possible measure of power and brilliancy that is attainable with any given consumption of gas, and be especially adapted to locomotives as a head-light, to steamboats, hotels, theaters, and all other public places where one or a few lights of great illuminating power serve a better purpose than a number of small lights.

My invention is particularly designed to be used in connection with atmospheric air carbureting-machines, but it is equally well adapted to all kinds of gases that are used for illuminating or heating purposes.

Figure 1 of the accompanying drawing is a perspective view of my improved burner as when complete and ready to be attached to a gas-pipe for use;

Figure 2 is a vertical section of it; and

Figure 3, a plan or top view.

A is the outer concentric annular chamber, and

B the inner chamber.

C is the annular open space between said chambers.

The diameter of the chamber A is about twice as great as that of the chamber B, and hence the space C is abundantly sufficient for the admission of all the air that is needed between the rings or circles of flame, to support the most active combustion.

The central opening, D, affords the necessary ventilation on the inside of the circle of flame issuing from chamber B, or, more accurately, which is produced by the burning of the gas issuing therefrom, while, of

course, the enveloping air yields the requisite quantum of oxygen on the outside of the outside ring of flame.

To prevent the flame from my burner from being extinguished by draughts of wind, I depress the middle of the tops of both chambers, so as to give them groove-forms, as clearly shown at fig. 2, and make the perforations for the issue of the gas at the bottoms of said grooves. This arrangement interposes slightly-raised walls, so to speak, on each chamber, to prevent the wind from striking against the gas at the points of its issue through the perforations, and hence effectually prevents the light from being blown out.

Pipes *a b*, which cross each other at right angles, establish a communication between the gas-pipe to which the part E is screwed or attached, and both the chambers A and B.

I have found by actual experiment and admeasurement that my burner will throw the direct and positive rays from a flame produced by the burning of carbureted atmospheric air over five hundred feet from the burner.

Under certain circumstances, and for special purposes, I may increase the number of concentric chambers to three or more, in which case it will, of course, be understood that the same relations and proportions must be maintained, which obtain with respect to and between the two that are herein described.

I am aware that it is not new to make gas-burners having two or more concentric rings or shallow annular chambers with open spaces between them, and I do not, therefore, claim such an arrangement.

What I do claim is—

Depressing the middle of the tops of such concentric chambers, so as to make such tops of grooved form, and making the perforations at the bottoms of said grooves, as herein described, when said chambers are supplied by cross-pipes *a b*, as specified, for the purpose set forth.

A. E. DUPAS.

Witnesses:

RUFUS R. RHODES,  
ARTHUR BARBARIN.