

(No Model.)

A. WASSERMAN.

GAS BURNER.

No. 355,805.

Patented Jan. 11, 1887.

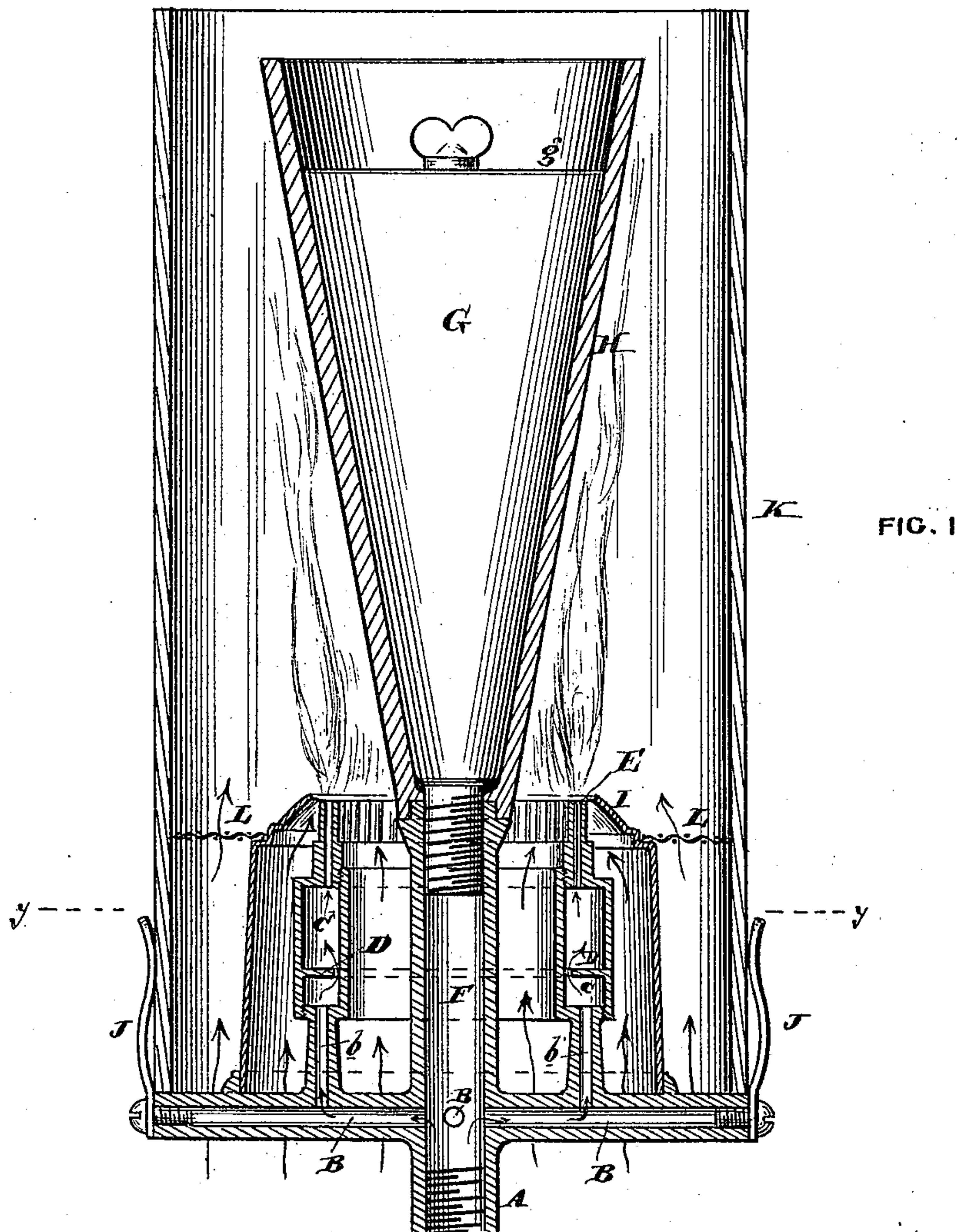


FIG. 1

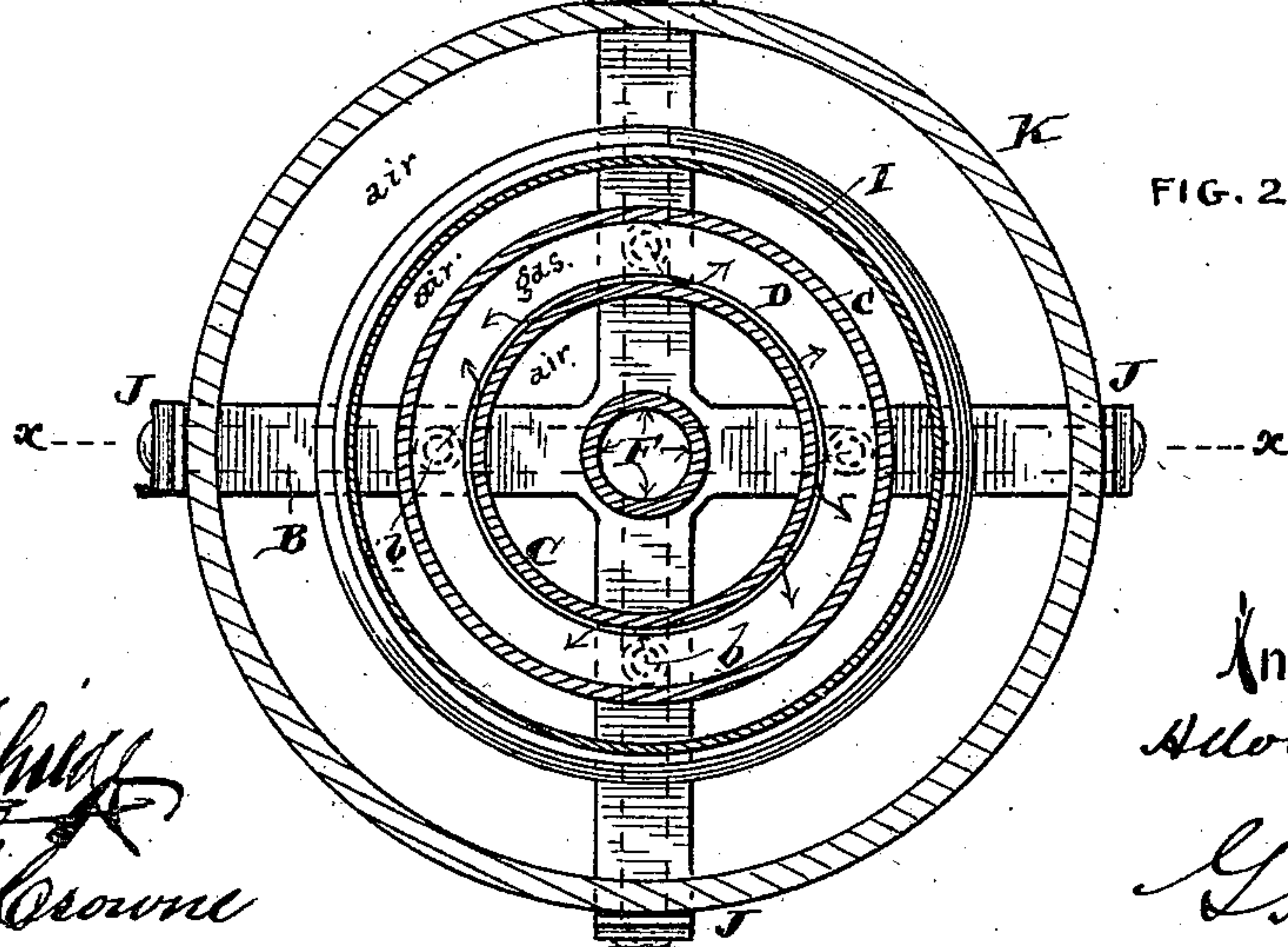


FIG. 2

Attest
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UNITED STATES PATENT OFFICE.

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GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 355,805, dated January 11, 1887.

Application filed April 29, 1886. Serial No. 200,498. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH WASSERMAN, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Gas-Burners, of which the following is a true and exact description, due reference being had to the drawings which accompany this specification and form part of the same.

In my invention I heat the air used for combustion during its passage to the burner and prior to its admixture with the gas, and, combining this with various devices hereinafter set out, I am enabled to obtain perfect combustion.

In the accompanying drawings, Figure 1 represents an elevation of my improved gas-burner on the line *x x*, and Fig. 2 represents a plan of my improved gas-burner in line *y y*. Similar letters denote similar parts.

A represents the supply-pipe, which is connected with the supply-pipe of an ordinary bracket or chandelier.

B are four radial arms, along which the gas passes, each arm having openings *b*, which open into the burner E.

D represents a diaphragm of metal, which rests above the openings *b*, and which forces the gas to pass under and around this diaphragm before reaching the burner.

F represents a metal pipe or rod, upon which is attached a metallic core, preferably in the shape of an inverted cone. Surrounding this metallic core is a reflector, preferably in the shape of an inverted cone, made of glass, porcelain, or any incandescent material.

I is an air-deflector, which surrounds the burners, and which is supported upon the radial arms B, the upper portion of said air-deflector having a conoidal shape commencing at the bottom of the burners and ending in a line with the top of said burners.

L represents a metallic gauze, which is placed under and surrounding the burners resting upon the deflector I, and which, if desired, may be retained in place by lugs or projections, and which prevents a too rapid cur-

rent of hot air reaching the burners, and admits only a certain quantity to the outside of the burners.

The burners E consist of a number of tubes.

K represents an ordinary glass chimney, which is supported in place by springs placed upon the radial arms.

I can, if desired, dispense with the iron core G, in which case the reflector H acts as an absorber of heat.

The operation is as follows: The gas enters through the pipe A and radial arms B, and thence through the orifices *b* through the regulators D, and thence into the burners E. The burning gas and products of combustion heat the metallic core G to a very high heat. This heated metallic core by conduction raises the pipe or rod F and the metallic parts B to a very high heat. The air in passing up from below becomes highly heated before it reaches the point where it mixes with the gas, and I thus produce a perfect combustion.

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

1. In a gas-burner, the combination, with the gas-supply pipe A, having the hollow radial arms B, branches *b*, burners E, and hollow upper portion, F, extending above said arms and forming a gas-regenerating chamber below the burners, of the reflector H and the metal core G, connected with the upper part of said chamber F, substantially as and for the purposes set forth.

2. In a gas-burner, the combination, with the gas-supply pipe A, having the hollow radial arms B, branches *b*, diaphragm D, burners E, and hollow upper portion, F, extending above said arms and forming a gas-regenerating chamber below the burners, of the reflector H and the metal core G, connected with the upper part of said chamber F, substantially as and for the purposes set forth.

ADOLPH WASSERMAN.

Witnesses:

RICHD. S. CHILD, Jr.,
FRANK CROWNE.