

No. 628,155.

Patented July 4, 1899.

E. BAUWERAERTS.
INCANDESCENT GAS BURNER.

(Application filed Nov. 26, 1898.)

(No Model.)

Fig. 1.

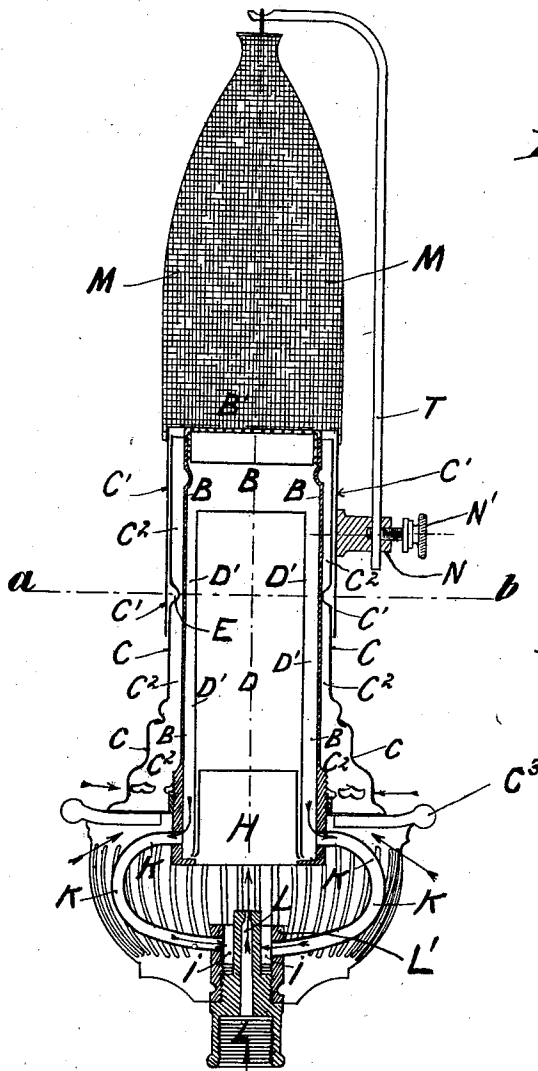
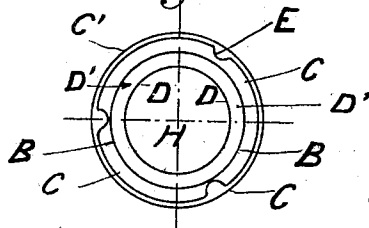


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

EMILE BAUWERAERTS, OF BRUSSELS, BELGIUM.

INCANDESCENT GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 628,155, dated July 4, 1899.

Application filed November 26, 1898. Serial No. 697,493. (No model.)

To all whom it may concern:

Be it known that I, EMILE BAUWERAERTS, gas-engineer, a citizen of Belgium, residing at 55 Rue des Fabriques, Brussels, in the Kingdom of Belgium, have invented certain new and useful Improvements in Incandescent Gas-Burners, of which the following is a clear description.

This invention relates to gas-burners provided with incandescent mantles; and the object of the invention is to provide a gas-burner of this nature of such construction that in addition to the mixing-passage proper other passages communicating therewith at the top and having their discharge-openings situated in proximity thereto at the bottom will be provided for, so that a further and better mixing of the air and gas can be accomplished and the maximum state of incandescence thus effected.

The invention consists in the improved incandescent gas-lamp and in the combination and arrangement of the various parts thereof, substantially as will be hereinafter pointed out and finally embodied in the clauses of the claim.

The invention is fully illustrated in the accompanying drawings, wherein—

Figure 1 is a vertical sectional view of my improved incandescent gas-lamp, and Fig. 2 is a horizontal sectional view of my invention on the line *a b* in Fig. 1.

L in said drawings designates a gas-tip that is surrounded by a suitable sleeve L' near its upper end and forming therewith an annular cavity I.

K designates a series of short tubes whose lower ends are secured to and communicate with the sleeve L', extending radially and being curved upwardly therefrom.

B indicates the main tube or chimney of the lamp, and it is sustained near its lower end by the tubes K, being surmounted by a perforated cap B'. The tubes K communicate with said chimney B.

C is an annular casing surrounding the chimney B and sustained by a suitable bracket C³, carried by the tip L. Said casing is provided with inwardly-extending projections E, formed by stamping the metal of which it is composed inwardly, the projections being adapted to space the chimney from said cas-

ing and maintain these two elements in concentric arrangement.

M designates the mantle. It is supported by the usual upwardly-extending overhanging arm T, from which it is suspended and which is adjustably mounted in a lug N, that it penetrates and that is provided with a set-screw N', adapted to engage the arm. The lug N projects from a sleeve C', to the upper end of which is secured the lower end of the mantle, and which snugly fits over the upper end of the tubular casing C, being thereby freely adjustable thereon.

D is the main mixing-tube. Said mixing-tube is inclosed by the chimney, but is of somewhat smaller diameter than the same, there being thereby formed an annular passage D'. Since the mixing-tube D is somewhat shorter than the chimney B, the passage D' is open at the top. It should be remarked, however, that with the exception of the tubes K, with which it has communication, said passage D' is closed at the bottom in any suitable manner.

By providing communication between the upper portion of the chimney B and the annular cavity I, surrounding the mouth of the tip, means is afforded whereby circulation may be effected and a better mixture be produced than would otherwise be the case.

It should be remarked that the perforations in the cap B' should not be so large, but that the cap will act to appreciably retard the flow of the illuminating mixture. If this is so and the force of gas is sufficient, the partially-mixed air and gas initially collected in the top of the chimney beneath said cap will gradually be crowded, by new volumes of the mixture that are rising, downwardly through the passage D' and the tubes K into the cavity I, whence it will be immediately drawn up by the action of the gas escaping from the tip L, and thereby further agitated and mixed. This action of course depends mainly upon the force of the gas-supply. This should be adjusted by manipulating the usual valve whereby the gas-supply is regulated.

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

1. In an incandescent gas-lamp, the combination, with a suitable gas-discharge, of a

vertical tubular structure disposed above the same and open at both ends, a perforated element situated above said tubular structure and a passage or passages communicating
5 with the space between said perforated element and the tubular structure and having a discharge outlet or outlets in proximity to the discharge, substantially as described.

2. In an incandescent gas-lamp, the combination of a gas-tip, a vertical mixing-tube
10 open at both ends and disposed above said tip, a chimney surrounding and spaced from said tube and projecting above the top of the same, a perforated cap surmounting said
15 chimney, and tubes communicating with said chimney near its lower end and discharging in proximity to the tip, substantially as described.

3. In an incandescent gas-lamp, the combination of a gas-tip having an annular cavity surrounding it, a vertical mixing-tube
20 open at both ends and disposed above said tip, a chimney surrounding and spaced from said tube and projecting above the same, a

perforated cap surmounting said chimney, 25 and tubes affording communication between the lower end of said chimney and said cavity, substantially as described.

4. In an incandescent gas-lamp, the combination of a gas-tip having an annular cavity surrounding it, a vertical mixing-tube
30 disposed above the same, a chimney surrounding and spaced from said tube and projecting above the same, tubes affording communication between said chimney and said cavity, a casing surrounding said chimney, a
35 sleeve inclosing said casing, an overhanging arm adjustably secured to said sleeve, and a mantle suspended from said arm and connected to said sleeve at its lower end, substantially as described. 40

In testimony that I claim the foregoing I have hereto set my hand this 10th day of November, 1898.

EMILE BAUWERAERTS.

Witnesses:

J. P. H. POHLER,
GREGORY PHELAN.