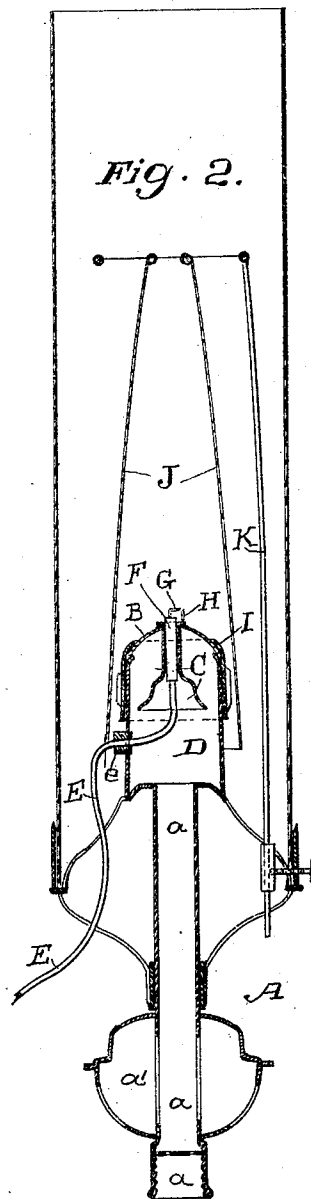
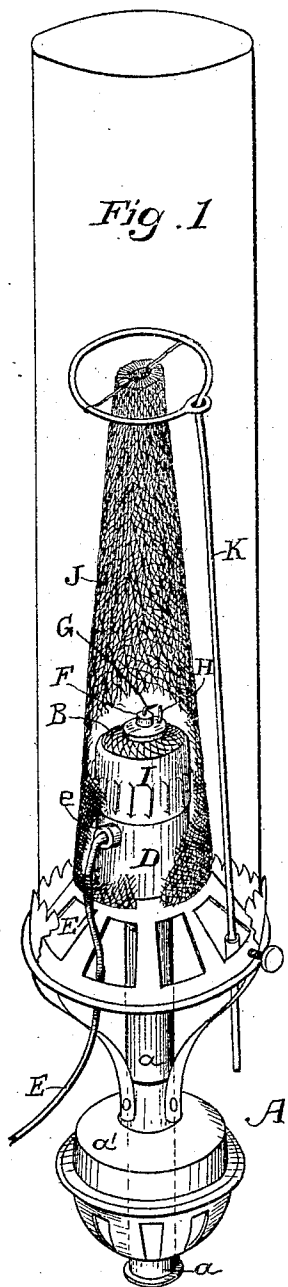


(No Model.)

P. MEYER.  
ELECTRIC GAS LIGHTER.

No. 552,384.

Patented Dec. 31, 1895.



Witnesses,

*J. A. Morse*  
*J. A. Bayless*

Inventor

*Philip Meyer*  
*By Dwyer & Co. atty*

# UNITED STATES PATENT OFFICE.

PHILIP MEYER, OF ALAMEDA, CALIFORNIA.

## ELECTRIC GAS-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 552,384, dated December 31, 1895.

Application filed September 20, 1895. Serial No. 563,117. (No model.)

*To all whom it may concern:*

Be it known that I, PHILIP MEYER, a citizen of the United States, residing at Alameda, county of Alameda, State of California, have invented an Improvement in Electric Gas-Lighters; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of electric gas-lighting devices in which opposing electrodes are located in proximity to the ignition-point of the burner, whereby, when the spark is generated, the gas is lighted.

My invention is applicable to that class of burners known as "atmospheric" burners, and in which the lighting surface or point of a Bunsen burner is enveloped by a mantle of a material so constructed or treated as to become incandescent under the heat of the ignited gas; and my invention has for its object the provision of a suitable electric-lighting device for a burner of this character, special reference being made to the burners of the Welsbach type.

My invention consists in the novel construction and arrangement of parts relating to the proper course of the inleading-wire and the disposition of the two electrodes, as I shall hereinafter fully describe.

Referring to the accompanying drawings, Figure 1 is a perspective view, a portion of the mantle being broken away in order to show the electrodes. Fig. 2 is a vertical section.

A is a burner of the ordinary Bunsen type, comprising a gas-inlet pipe *a* from which the gas issues into an encircling space *a'* through which the air enters and mixes with the gas. The point of ignition or issuance of the burner may be of any suitable and ordinary character, usually in this class of lamps consisting of a gauze diaphragm B, and such diaphragm may be duplicated, if desired; but in its best form, there should be under the gauze diaphragm a deflector C, located within an extension D sufficiently raised from the burner to afford enough space for the inleading wire E. This wire leads inwardly through the side of the extension D, and is properly insulated therein, as by a surrounding sleeve *e* of suitable insulating material, and the wire thence leads centrally upwardly through the burner

and deflector, and is also insulated therefrom in suitable manner if said deflector is made of conducting material, such as metal, or passes directly through it if it be made of non-conducting or insulating material. In the former case, a glass or other insulating-tube F lies in the center of the deflector, and the inleading wire E passes centrally upwardly through it and forms or joins above the gauze diaphragm B the electrode G. The other electrode H is secured to or formed with the cap-plate I, which holds the gauze diaphragm to the deflector, and this electrode has electrical connection through the fixture itself.

Around the point of issuance or ignition of the burner (in this case around the upper portion of the extension D thereof) is fitted the mantle J of a material adapted to be rendered incandescent under the heat of the ignited gas, said mantle being supported by the upright bracket K in the usual manner. It will be seen that the electrodes are both within the area inclosed by the mantle, and are in sufficiently close proximity to the exit of the burner to permit the spark generated between them to ignite the escaping gas.

The electrodes may be of any suitable character, those here shown being both stationary ones, and adapted to operate under a powerful current; but it is obvious that electrodes may be used one of which is properly movable to create the spark by coming in contact with the opposing electrode and breaking said contact—as, for instance, a vibratory movement, as in the ordinary automatic lighter, or a swinging movement of any kind, as in the various forms of the ordinary pull or pendent lighters. I do not confine myself to any of these forms, as I consider all adapted to my invention.

The form of burner here shown, by which the inleading wire is centrally disposed of without interfering with the flow of gas, and in the coolest place, and by which, being centrally located, both electrodes are out of the way of the mantle, and are in the coolest place because of the diversion of the inflammable mixture by the deflector below, is especially adapted for the purposes of my invention.

I do not claim herein the deflector and the

extension D alone, as these form the subject-matter of another application, filed November 8, 1895, and pending herewith.

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

1. In combination with an atmospheric or Bunsen burner, having its surface of ignition enveloped by a mantle adapted to be rendered incandescent under heat, electrodes centrally disposed upon said ignition surface and suitable electrical connections for said electrodes.

2. In combination with an atmospheric or Bunsen burner, having its surface of ignition enveloped by a mantle adapted to be rendered incandescent under heat, electrodes centrally disposed upon said ignition surface, and suitable electrical connections for said electrodes, including an inleading wire passing from without through the side of the burner, at a point below the mantle, and centrally upwardly through the burner to the electrode.

3. An atmospheric or Bunsen burner having an extension above the point of mixture of gas and air, and a gauze diaphragm on top of said extension, an electrode on top of said gauze diaphragm, an electric wire leading into the

extension and centrally up through it, and properly insulated therefrom, an electrode of said wire centrally disposed above the diaphragm, and a mantle of material adapted to become incandescent under heat, said mantle enveloping the igniting surface of the burner and the electrodes.

4. An atmospheric or Bunsen burner having an extension above the point of mixture of gas and air, a central deflector within said extension and a gauze diaphragm above said deflector on top of the extension, an electrode on top of said diaphragm, an electric wire leading into the tubular extension and centrally up through the deflector and properly insulated from both, an electrode of said wire centrally disposed above the diaphragm, and a mantle of material adapted to become incandescent under heat, said mantle enveloping the igniting surface of the burner and the electrodes.

In witness whereof I have hereunto set my hand.

PHILIP MEYER.

Witnesses:

S. H. NOURSE,  
JESSIE C. BRODIE.