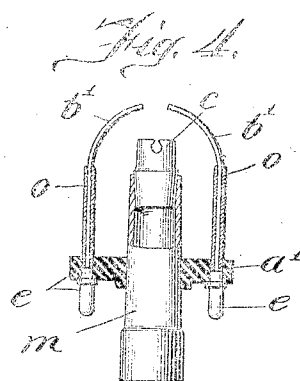
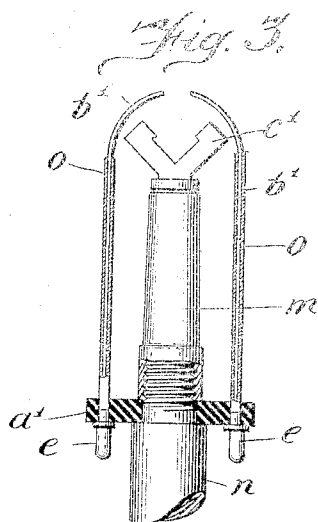
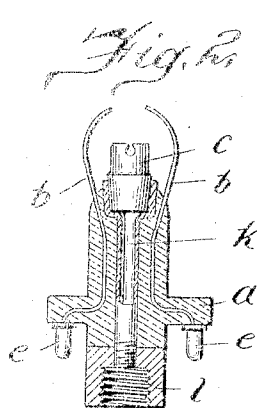
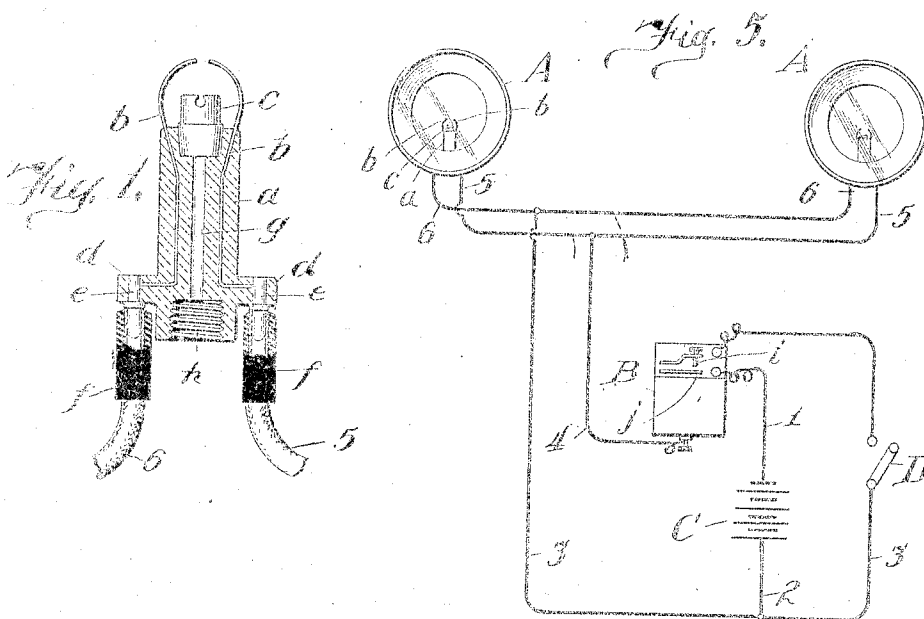


E. J. GOLDBLATT.
ELECTRICALLY-IGNITED BURNER.
APPLICATION FILED FEB. 21, 1910.

977,521.

Patented Dec. 6, 1910.



Witnesses
Milton Lenoir
M. Allen

Inventor
Edward J. Goldblatt,
By *Heideman & Street*,
Attorneys

UNITED STATES PATENT OFFICE.

EDWARD J. GOLDBLATT, OF CHICAGO, ILLINOIS.

ELECTRICALLY-IGNITED BURNER.

977,521.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed February 21, 1910. Serial No. 545,179.

To all whom it may concern:

Be it known that I, EDWARD J. GOLDBLATT, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Electrically-Ignited Burners, of which the following is a detailed description, reference being had to the accompanying drawing, which forms a part of my specification.

The object of the invention is to provide a burner especially intended for use in connection with illuminating gas or vapor, which is so constructed as to adapt it to be connected with any suitable source of electrical energy whereby an intermittent current may be passed therethrough when it is intended to ignite the vapor or gas issuing from the burner, as will be more fully set forth in the following detailed description of the different styles of burner shown in the accompanying drawing used as exemplifications of my invention.

In the drawing:—Figure 1 is a vertical sectional view of one style of burner with my improvement; the electrodes and burner-tip being shown in full lines. Fig. 2 is a similar view of a modified form. Fig. 3 is an elevation, partly in section, of another burner employing my invention. Fig. 4 is a partial sectional view of still another modification. Fig. 5 is a diagrammatic view of one manner of forming an electric circuit to control the burners.

My invention is more especially adapted for use in connection with the acetylene lamps of an automobile, although it is equally as well adapted for other uses, as is readily apparent.

The invention consists in providing a body-portion *a*, made of suitable insulating material, as for example glass as shown, in which are embedded the electrical conductors or electrodes *b*, *b*; the terminals, in this construction shown in Fig. 1, are led outward away from the burner-tip *c*, and similarly bowed over the tip, terminating within close proximity of each other, thus leaving a spark-gap for the arcing or sparking of the electric current made to pass through the electrodes.

In the construction shown in Fig. 1, the

body-portion or housing *a*, is provided with the shoulder-portion *d*, which is provided with holes or sockets to receive the plugs *e*, 55 whose ends protrude beneath the shoulder *d*, in order to receive the socket-ends *f*, of the conductors. The electrodes *b*, are led into contact with the plugs *e*, as clearly shown. The body *a*, is of course provided with the 60 gas-passage or channel *g*, which terminates in or beneath the tip *c* and communicates therewith, and at the bottom terminates in the pipe or gas-tube receiving orifice *h*, and which is shown screw-threaded to permit its 65 being secured in the usual manner to the gas or vapor conduit. The relation between the electrodes *b*, and the burner-tip is such that the former will be presented toward the flat side of the flame and thus not interfere with or come into contact with the 70 flame.

As my invention is more especially adapted for use in connection with the acetylene or gas lamps of an automobile, I have illustrated, in Fig. 5, a method of operating my improvement when applied to the lamps of an automobile. *A*, *A*, represent two lamps of any of the well-known constructions, provided with my improved burner. *B*, represents any well known type of coil or vibrator which is provided with the spring-platinum points as at *i*, and *j*; *C*, represents suitable batteries; while *D*, is a switch. Battery or batteries *C*, are connected up with the coil 75 *B*, through line 1, and also through line 2, which connects with line 3, and through switch *D*, when the latter is closed. Coil or vibrator *B*, is also connected up through line 4, with line or conductor 5, whose ends 80 are preferably provided with the plug-receiving sockets *j*, as shown in Fig. 1. Line 3, also connects with line 6, whose ends may also be similarly provided with the sockets *j*, heretofore mentioned. With this method 85 of operation, it is apparent that when switch *D*, is closed the coil *B*, will be energized and the platinum points *i*, and *j*, made to vibrate and thereby intermittently brought into contact with each other, causing a frequent 90 "make" and "break" of the circuit which is flowing through the various wires or leads to the electrodes *b*, and this making and breaking of the circuit will cause the spark-

ing or arcing at the ends of the electrodes *b*, above the burner-tip *c*. In the meantime it is understood that the supply of vapor or gas has been turned on, so that the moment switch *D*, has been closed, the sparking across the burner-tip from one electrode to the other, will cause ignition.

In Fig. 2, I have illustrated a modified form of my construction. In this figure, the terminals or electrodes *b*, of course terminate above the burner-tip *c*, which latter has been shown as taking in a metal conduit *k*,—which is shown partly in cross-section. In this construction, the insulating material *a*,—made of any suitable material—has the electrodes *b*, embedded in it as before mentioned, except I have shown them terminating in the plugs or terminals *e*, instead of abutting against as shown in Fig. 1. The metal portion *k*, of the burner may screw into the cap or collar *l*, which in turn may screw onto a supply-pipe leading from some suitable source. This cap or collar *l*, will also serve the purpose of retaining the insulating material in place, as is readily apparent from the drawing.

Fig. 3, illustrates another style of burner, more especially adapted for use in connection with acetylene, and also shows a modified form of the invention. The usual metallic gas conduit *m*, is used, provided with a different but well known style of burner-tip *c'*. In this construction the burner body *m* screws onto the reduced screw-threaded portion of the supply pipe *n*; reducing the pipe *n* as shown and described, leaves a shoulder on which the insulating and laterally extending block *a'*, rests, surrounding the supply-pipe. By screwing burner *m*, down onto the pipe *n*, it is evident that the insulating block *a'*, will also be securely held in place. This block *a'*, is provided with the insulating tubes or conduits *o*, through which the two electrodes *b'*, take. These tubes or conduits *o*, extend up a sufficient distance to prevent any possibility of the current crossing the space between the electrodes and the metallic burner; and at the same time the electrodes are held in place over the burner-tip as shown; the lower ends of the electrodes preferably extending beneath the member *a'* and terminating in the terminals *e*, as before described and which are suitably secured in place.

In Fig. 4, another style of burner is shown in which the manner of insulating and maintaining the electrodes *b'*, *b'*, in position above the burner-tip *c*, is similar to that illustrated in Fig. 3, except that in this construction the electrode-maintaining device with its electrodes is simply slipped onto the burner; as these burners are usually

tapered or provided with a shoulder, the device will be held in proper position by either seating on the tapered wall or shoulder.

It is quite essential in constructing an electrically ignited burner, that, when the current flows through the conductors and terminals, it shall not come into contact with the metallic portion of the body of the burner—when metal is used—as the current made to flow through the conductors and the lower part of the electrodes would be short circuited and the burner rendered inoperative; at the same time it is important that the electrodes be sufficiently insulated from each other in the body of the burner or housing, so as not to present a shorter path of the same or less resistance before the intermittent current reaches the tips of the electrodes where the spark-gap is produced in the path of the discharged gas.

In applying the invention to an automobile where the gas is stored in a tank or tanks, and the gas conducted to the lamps through suitable conduits, the gas-conveying conduit is brought from the tank up into reach of the operator on the seat and there provided with a valve of any of the well-known types, so that the flow of the gas to the burners may be controlled from the seat without leaving the machine. The flow of gas having been regulated, the operator throws switch *D*—which may be of the usual push-button type—(also located within reach of the operator while on the seat) causing a current to flow from the battery or batteries through the coil causing the platinum points to vibrate and thus intermittently make and break circuit, which induces the current to spark at the electrode-tips and ignite the gas.

I have shown the burner made entirely of glass,—see Fig. 1—but porcelain or other non-conducting material may be employed; and instead of having the entire burner made of such material, the electrode-containing portion or housing may be made in the nature of a sleeve to be slipped over the ordinary style of burner, as the example shown in Fig. 2; or it may be made in the nature of a ring provided with the flange or laterally extending arms to hold the electrodes into position, as for example shown in Figs. 3 and 4. It is also apparent that any style of burner may be employed and the electrodes be made to conform therewith, and I do not wish to be understood as limiting myself to the exact constructions shown and described, as it is merely essential to have the portions of the electrodes connected with the gas-conveying portion insulated therefrom, which, as shown, can be accomplished without having the entire

body of the burner made of non-current conducting material.

What I claim as my invention and wish to secure by Letters Patent, is:—

- 5 As an article of manufacture, a housing of non-conducting material provided with a passage for the gas and a pair of electrodes embedded in the material of said

housing and terminating at the sparking-ends in proximity to the burner-tip and having at the opposite ends circuit connecting 10 plugs.

EDWARD J. GOLDBLATT.

Witnesses:

M. C. ALLEN,
GEORGE HEIDENAN.