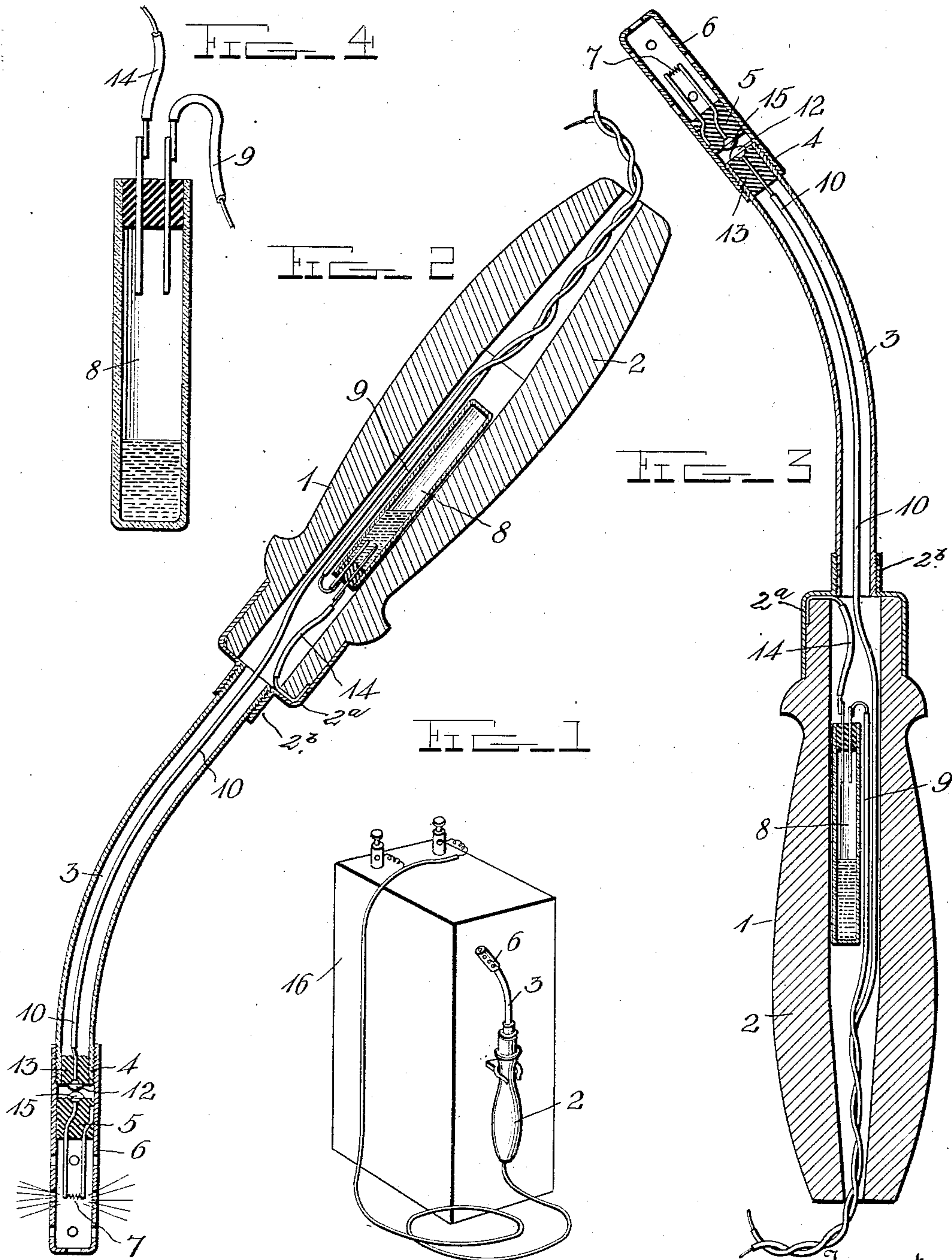


M. L. GANSER.
 AUTOMATIC ELECTRIC GAS RANGE LIGHTER.
 APPLICATION FILED AUG. 12, 1907.

908,238.

Patented Dec. 29, 1908.



Witnesses

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MONTGOMERY L. GANSER, OF NORRISTOWN, PENNSYLVANIA.

AUTOMATIC ELECTRIC GAS-RANGE LIGHTER.

No. 908,238.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed August 12, 1907. Serial No. 388,258.

To all whom it may concern:

Be it known that I, MONTGOMERY L. GANSER, a citizen of the United States, residing at Norristown, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Electric Gas-Range Lighters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in electrical gas lighters.

The object of the invention is to provide a device of this character adapted particularly for use in lighting gas ranges, and having an automatically operating switch or circuit closer arranged therein, whereby when the device is held in an operative position, the circuit will be automatically closed to cause a spark, and when the device is hung up in an inoperative position, the circuit will be automatically broken.

With this object in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a perspective view of the device, showing the preferred arrangement of the same when not in use; Fig. 2 is a vertical longitudinal sectional view of the lighter when in position for use; Fig. 3 is a similar view showing the circuit closing mechanism in inoperative position; and Fig. 4 is an enlarged detailed sectional view of the circuit closing mechanism removed from the handle.

Referring more particularly to the drawings, 1 denotes the lighter, which consists of a handle, 2, preferably formed of a suitable non-conducting material. On one end of the handle is arranged a metallic ferrule, 2^a, having a sleeve 2^b, which is interiorly screw threaded to which is secured a screw threaded metallic tube, 3, which may be of any desired length, and is preferably curved as shown. On the outer end of the tube, 3, is arranged a threaded socket, 4, into which is adapted to be screwed a conducting plug, 5, on which is arranged a hollow perforated tip, 6, in which are arranged the terminal circuit wires, which are connected by a coiled sparking wire, 7, in the usual manner.

Arranged in the hollow handle, 2, is an

automatic circuit closing device, consisting of a short tube, 8, which is preferably formed of glass, but which may be constructed of any suitable non-conducting material. In one of the closed ends of the tube is adapted to be inserted the end of one of the circuit wires, 9, the other circuit wire 10 extending forwardly through the tube 3 and connecting with a contact point, 12, arranged in a plug, 13, which is disposed in the end of the tube, 3, and suitably insulated therefrom adjacent to the end of the threaded socket, 4. Also inserted in the closed end of the tube 8 is a short conducting wire, 14, said end of the wire 14 is secured between the handle and its ferrule and being insulated from the end of the wire 9 by means of the plug which closes the end of the tube, said plug being formed of a suitable insulating material. The outer end of the short conducting wire 14 is electrically connected to the tube, 3, which is adapted to form a conductor through which the current is carried to the plug 5 in the socket 4, and from said plug the current is transferred to one of the terminal wires in the tip, 6. The electrical current is transferred to the other terminal wire in the tip through a contact point, 15, on the end of said terminal wire, said point being adapted to engage the contact point, 12, in the plug, 13, which is arranged in the end of the tube, 3.

In the tube 8 is placed a small quantity of mercury, which, when permitted to drop to the forward end of the tube, will surround the end of the circuit wire, 9, and the short conducting wire, 14, whose outer end connects with the metal portion of the tube, 3, thereby completing or closing the circuit between said ends of the wires and permitting the current of electricity from the batteries to pass through the coiled sparking wire connecting the ends of the short terminal wires in the tip and causing a spark to form on said coil. The arrangement of the tube 8 in the handle 2 is such that when the handle and tip are held downwardly, the mercury will move forwardly in the tube, 8, and thus complete the circuit as hereinbefore described. When the handle and the tip are again elevated, the mercury will roll back to the opposite end of the tube, thereby breaking the circuit and preventing the sparking of the coil.

The ends of the conductor wires 9 and 10 are connected to a suitable electrical supply, the same being shown in the present instance

as being connected to the poles of a battery arranged in a casing, 16, upon which the lighter is adapted to be hung or otherwise supported when not in use, the lighter being
5 hung upon the casing, 16, with the tip end projecting upwardly, thus causing the mercury in the tube 8 to break the circuit. When it is desired to use the lighter, it is simply necessary to take the same down
10 from its support on the casing, 16, and turn the tip thereof downwardly, which operation automatically completes the circuit and causes a spark to form in the tip in the manner hereinbefore described.

15 An electrical gas lighter constructed as shown and described herein, will be simple, strong and durable in construction, practical, reliable and automatic in operation, and well adapted to the purpose for which it is intended.
20

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

25 An automatic gas range lighter comprising a hollow handle, with a ferrule thereon, having an internally screw threaded sleeve therewith, a tube detachably connected to said sleeve, a mercurial tube in said handle, having a plug therein for closing the same,

circuit wires, one of which is connected to 30 the plug of the mercurial tube, the other being arranged in the detachable tube and both twisted together and projecting through the handle, a short conducting wire having one end thereof connected to the plug of the 35 mercurial tube, its other end being secured between the handle and ferrule, a plug in the outer end of the detachable tube having a contact point therein, the circuit wire in the detachable tube being inserted in the plug of 40 the detachable tube and contacting with said point, a perforated socket connected to the outer end of the detachable tube and having a plug therein which is spaced from the 45 plug of the detachable tube, said plug of the socket having a contact point which engages the contact point in the plug of the detachable tube, and said plug of the socket having terminal contact wires therein which are connected together by a coiled sparking wire, 50 substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MONTGOMERY L. GANSER.

Witnesses:

WM. C. LOVETT,
JOHN MCKIBBIN.