(No Model.)

# F. N. PIKE.

## ELECTRIC GAS LIGHTER.

No. 578,420. Patented Mar. 9, 1897.

Fig. 1

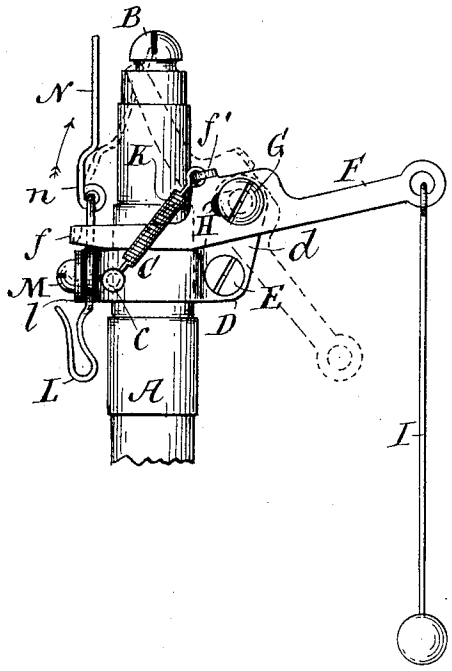
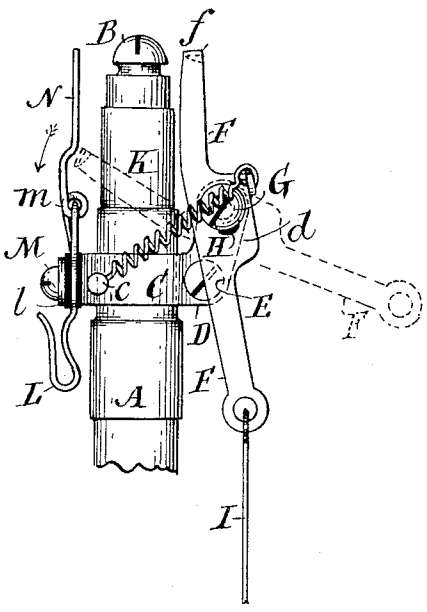



Fig. 2



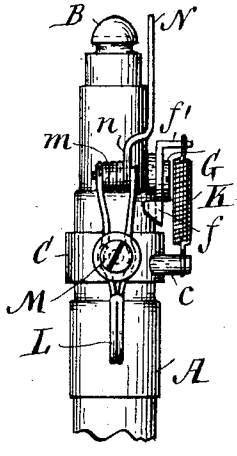




Fig. 3

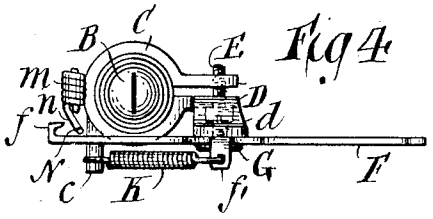



Fig. 4

Witnesses
Geo Wadman
Ernest Hopkinson

Inventor
Frederick N. Pike
by E N Dickerson
Attorney

# UNITED STATES PATENT OFFICE.

FREDERICK N. PIKE, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO EDWARD N. DICKERSON, OF SAME PLACE.

## ELECTRIC GAS-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 578,420, dated March 9, 1897.

Application filed March 11, 1896. Serial No. 582,715. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK N. PIKE, of the city, county, and State of New York, have invented a certain new and useful Improvement in Electric Gas-Lighters, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

The present invention relates to electric gas-lighting devices which are adapted to be secured to a gas-jet.

More particularly my invention relates to that class of such devices which are provided with terminal points connected, respectively, to the positive and negative poles of an open-circuit battery, such terminal points being so arranged as to engage with each other to close the electric circuit and disengage each other and break circuit to ignite the gas by sparking at a point close to the point of emergence of the gas from the burner.

In the drawings, Figure 1 is a side view showing the engaging terminal points in their first position ready to be operated to engage each other. Fig. 2 is a view similar to Fig. 1, showing the terminal points in position after having been operated to ignite the gas. Fig. 3 is an edge view, the several parts being in the position shown in Fig. 1; and Fig. 4 is a plan view.

Referring to the drawings in detail, A is a section of a gas-pipe provided with a burner-tip B. Upon the pipe A is a collar C. The collar C has flanges D, provided with screw-threaded holes, through which passes a screw E, whereby the collar C is removably secured to the pipe A. One of the flanges D carries an upwardly-projecting arm *d*.

F is a lever pivoted on the arm *d* by means of a pin G, passing through a longitudinal slot H, formed in the lever F. One end of the lever F is provided with an engaging catch *f*, the other end of said lever having a pendant I, by means of which the devices are operated. A projection *f'* is formed on the lever F, to which is attached a coiled spring K, whose other end is secured to a stud *c* on collar C, the spring K serving to return lever F to its first position after it has been operated to ignite the gas.

L is a spring-wire loop to which the line-wire is connected. This wire loop L is insulated from the collar C and pipe A by means of insulating-washers *l*, the loop L being secured to the collar C by screw M. This spring-loop L is shown in the drawings as consisting of a wire bent upon itself, one end of which passes up above the screw M and is bent at right angles to form a core about which the other end of the wire is coiled to form coil *m* to give spring action to the upstanding wire N. The terminal contact-wire N is bent toward the lever F and at the same time toward the pipe A to form loop *n*, (see Fig. 4,) so as to give clearance to the lever F on its return movement after having been operated to ignite the gas.

The operation of the device is as follows: Assuming the parts to be in the position shown in full lines in Fig. 1, upon pulling down on the pendant I the lever F (which is in electrical connection with one pole of the battery) will be tilted so that the engaging catch *f* engages the wire N, (which is in connection with the other pole of the battery,) drawing such wire N to position close to the burner B in the position shown in dotted lines. While the lever F and the terminal N are in engagement with each other, the pin G is at the end of the slot H nearest to the pendant I. Drawing the pendant I down farther from the position shown in dotted lines in Fig. 1 releases the lever F and wire N from engagement with each other, thus breaking the electrical circuit and causing a spark which ignites the gas issuing from burner B. Immediately upon the disengagement of lever F and wire N the lever F is drawn down, sliding on its pivotal point G, so that pin G rests in the end of slot nearest the engaging catch *f*, and the wire N is returned to its first position by the coiled spring *m*, the parts assuming the position shown in full line in Fig. 2. Upon relieving the pendant I from tension the lever F is returned by spring K, while the pin G remains in the end of the slot nearest the engaging catch *f*, so that the lever F is returned to its first position without passing through the flame and at the same time clears the wire N, (see Fig. 2,) and when the lever-arm F assumes an approximately horizontal position it is drawn by spring K into its first

position, as shown in Fig. 1, ready to engage the wire N upon operating the lever F. By these means it will be seen I provide a cheap, simple, and efficient igniting apparatus, which may be secured to any gas-burner.

What I claim as new is—

1. An electric gas-igniter consisting of a support for the terminals of an electric circuit, one of said terminals consisting of an arm pivotally mounted on said support and provided with a slot at its pivotal point and a catch at one end adapted to engage and draw the other terminal to a point close to the point of emergence of the gas where engagement is broken, and means for automatically returning the pivoted arm to its normal position, through another path of movement, so that it will not pass through the flame, substantially as specified.

2. In an electric gas-igniter, the combination of a support or collar attached to the gas-fixture, an electric terminal consisting of a lever pivotally mounted on said support and provided with a slot, a second electric terminal mounted on said support and insulated therefrom, and consisting of a wire bent at a point to give clearance to the other terminal and normally maintained in an upright position, a catch on the end of the pivoted lever for engaging with the other terminal, whereby the pivoted lever engages the other terminal to draw the same to a point close to the point of emergence of the gas where contact is broken, and a spring secured to said lever and support to return the lever to its normal position through a lower plane of movement without passing through the flame, substantially as specified.

3. The combination in an electric gas-igniter of a terminal lever-arm F provided with slot H and pivoted to the collar C, a spring K attached to said arm F and to the collar C, a terminal N also secured to said collar and insulated therefrom, and adapted to be engaged by a catch *f* on said lever F to draw the terminal N to position close to the burner B, where contact is broken to ignite the gas, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK N. PIKE.

Witnesses:
ERNEST HOPKINSON,
S. V. ROBERTS.