

(No Model.)

F. N. PIKE.
ELECTRIC GAS IGNITER.

No. 582,085.

Patented May 4, 1897.

Fig. 1.

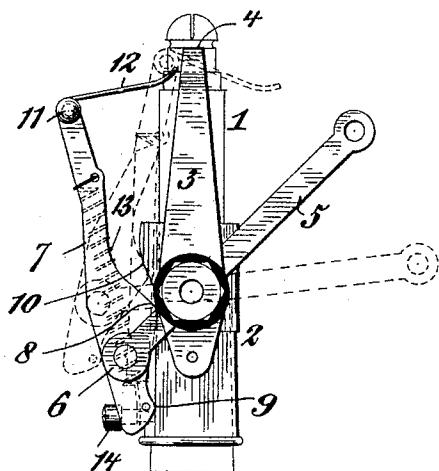


Fig. 3.

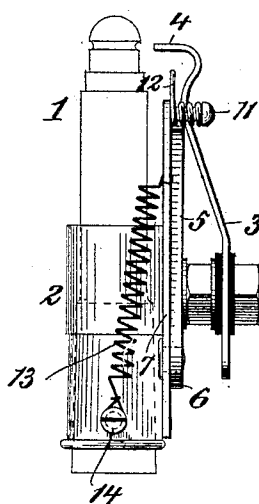
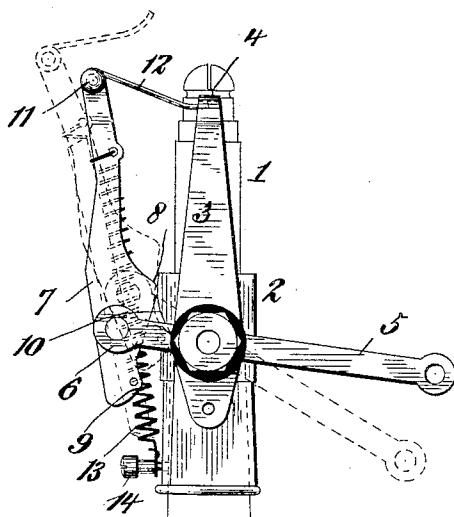


Fig. 2.



WITNESSES:

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FREDERICK N. PIKE, OF NEW YORK, N. Y., ASSIGNOR TO HARRY T. JOHNSON, OF JERSEY CITY, NEW JERSEY.

ELECTRIC GAS-IGNITER.

SPECIFICATION forming part of Letters Patent No. 582,085, dated May 4, 1897.

Application filed July 8, 1896. Serial No. 598,329. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK N. PIKE, of New York, in the county and State of New York, have invented a certain new and useful Improvement in Electric Gas-Igniters, of which the following is a specification.

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 to break circuit and ignite the gas by sparking at a point close to the point of emergence of the gas from the burner.

The object of the invention is to provide a simple and efficient igniting device which shall so operate that a moving terminal point shall pass through the gas at the point of emergence and only be in close proximity to the flame at the instant of ignition.

The drawings represent a construction embodying my invention, in which—

Figure 1 is a front elevation view, the relative positions of the parts during the operations of the device being shown in dotted lines. Fig. 2 is a view similar to Fig. 1, showing the moving electrode in full lines in a more advanced position than that shown in dotted lines in Fig. 1 and showing in dotted lines the position of said electrode at the limit of its forward movement. Fig. 3 is a side elevation or edge view, showing the parts in the position indicated in full lines in Fig. 1.

Referring to the drawings in detail, 1 represents a gas-burner, on which is mounted a sleeve 2, adapted to fit over the gas-jet. Suitably secured in position on this sleeve is a stationary electrode 3, having a bent or hooked tip 4. This electrode 3 is connected to one of the poles of a source of electricity and is insulated from the fixture on which it is mounted. An operating-lever having arms 5 and 6 is shown as pivoted on the same pin as carries the stationary electrode 3. One arm 5 of this lever is shown as provided with an eye, to which may be attached a pendant

or cord for operating the same. To the other arm 6 is secured the moving electrode 7, which is provided with a cam-surface or points 8 9, adapted to coact with another cam-surface 10, formed on the sleeve. Upon the upper end of the electrode 7 is a pin 11, carrying a spring-contact piece 12. A coiled spring 13 is also secured to the upper part of the moving electrode, being secured at its lower end to a stud 14, formed on or screwed into the sleeve.

The cam-surface on the moving electrode is shown as having two operative points 8 and 9, one of which, 8, comes in contact and operates in conjunction with the cam-surface 10 on the upward movement of the electrode, and the other, 9, upon the downward movement.

The operation of the device will now be apparent.

Assuming the parts to be in the position shown in full lines in Fig. 1, (which is the first position,) the lever-arm 5 will be drawn downward, causing the electrode 7, carried on the arm 6, to be moved to the position shown in dotted lines, this movement being the combined effect of the rocking action of the lever, which causes the electrode to move in the arc of a circle, and the action of spring 13, which draws the upper end of the electrode toward the burner to the position shown in dotted lines. The further downward movement of lever-arm 5 will bring the point 8 on the electrode 7 into contact with the cam-surface 10, which will cause the said electrode to move outwardly and upwardly relatively to the burner, bringing the spring-contact piece 12 in contact with the bent or hooked portion 4 of the electrode 3, thus closing the electric circuit. This position is shown in full lines in Fig. 2. Continuing the downward movement of the lever 5 the cam-surface 10 will operate to push over the upper end of the electrode 7 to a point outside of the straight line joining the pivotal point of the electrode 7 and the lower point of spring 13, at which movement the spring-contact 12 will break contact with the bent or hooked portion of electrode 3, thus breaking circuit and causing a spark. By reason of the position of spring 13 at this point the electrode 7 will be drawn quickly

away from the flame to the position shown in dotted lines in Fig. 2. Upon releasing lever-arm 5 the electrode makes its return movement, the point 9 sliding along the straight portion of cam-surface 10 to the first position. (Shown in full lines in Fig. 1.)

I claim—

1. In an electric gas-igniter, the combination of a stationary electrode, a movable electrode oscillating about a pivotal point intermediate its ends, an operating-lever to which said movable electrode is positively secured, a cam which during the operation of the movable electrode to make contact causes said electrode to oscillate on its pivotal point toward the stationary electrode and then move away therefrom, substantially as specified.

2. In an electric gas-igniter comprising two electrodes, the combination of a movable electrode positively secured at only one point, an

operating-lever to which said electrode is positively secured, a cam controlling the path of movement of the movable electrode, and a spring controlling the free end of said movable electrode, substantially as specified.

3. The combination in an electric gas-igniter, of a sleeve, an electrode and a lever mounted thereon, an electrode attached to said lever, a cam-surface on said moving electrode, a cam-surface on said sleeve, and a spring attached to the moving electrode and to the sleeve, substantially as specified.

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

FREDERICK N. PIKE.

Witnesses:

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