

**No. 638,754.**

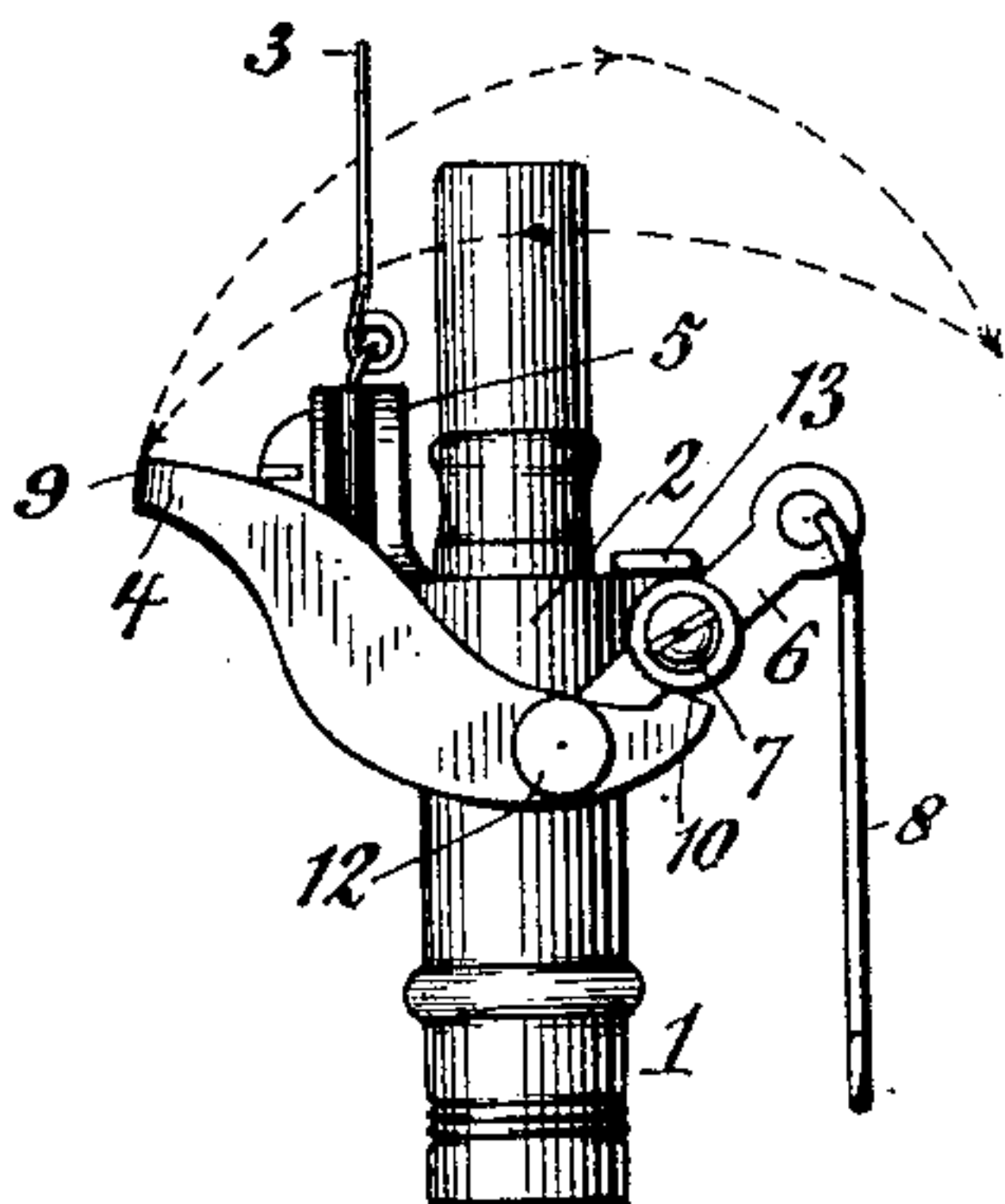
Patented Dec. 12, 1899.

F. N. PIKE.  
ELECTRIC GAS LIGHTER.

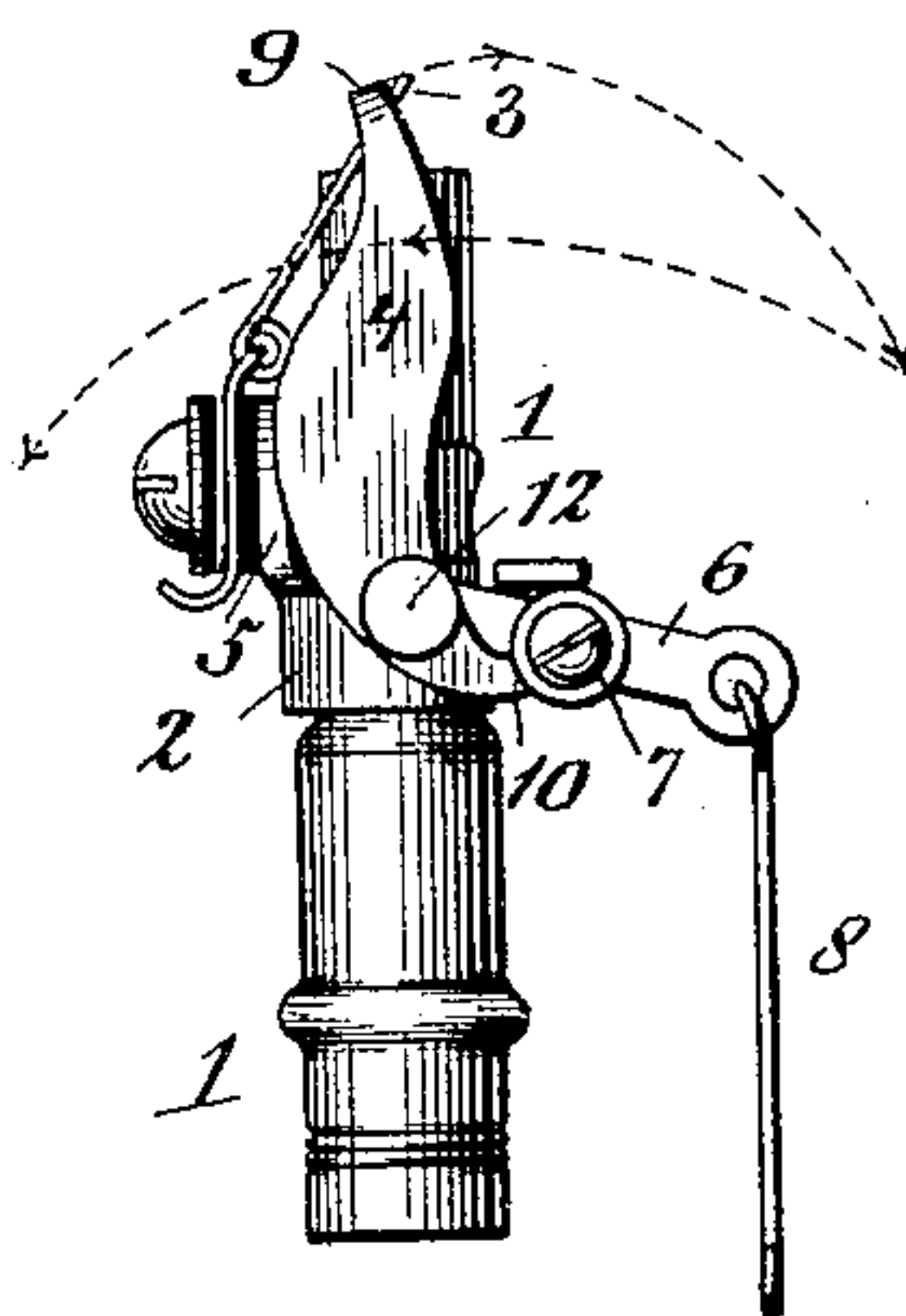
(Application filed Feb. 16, 1897.)

(No Model.)

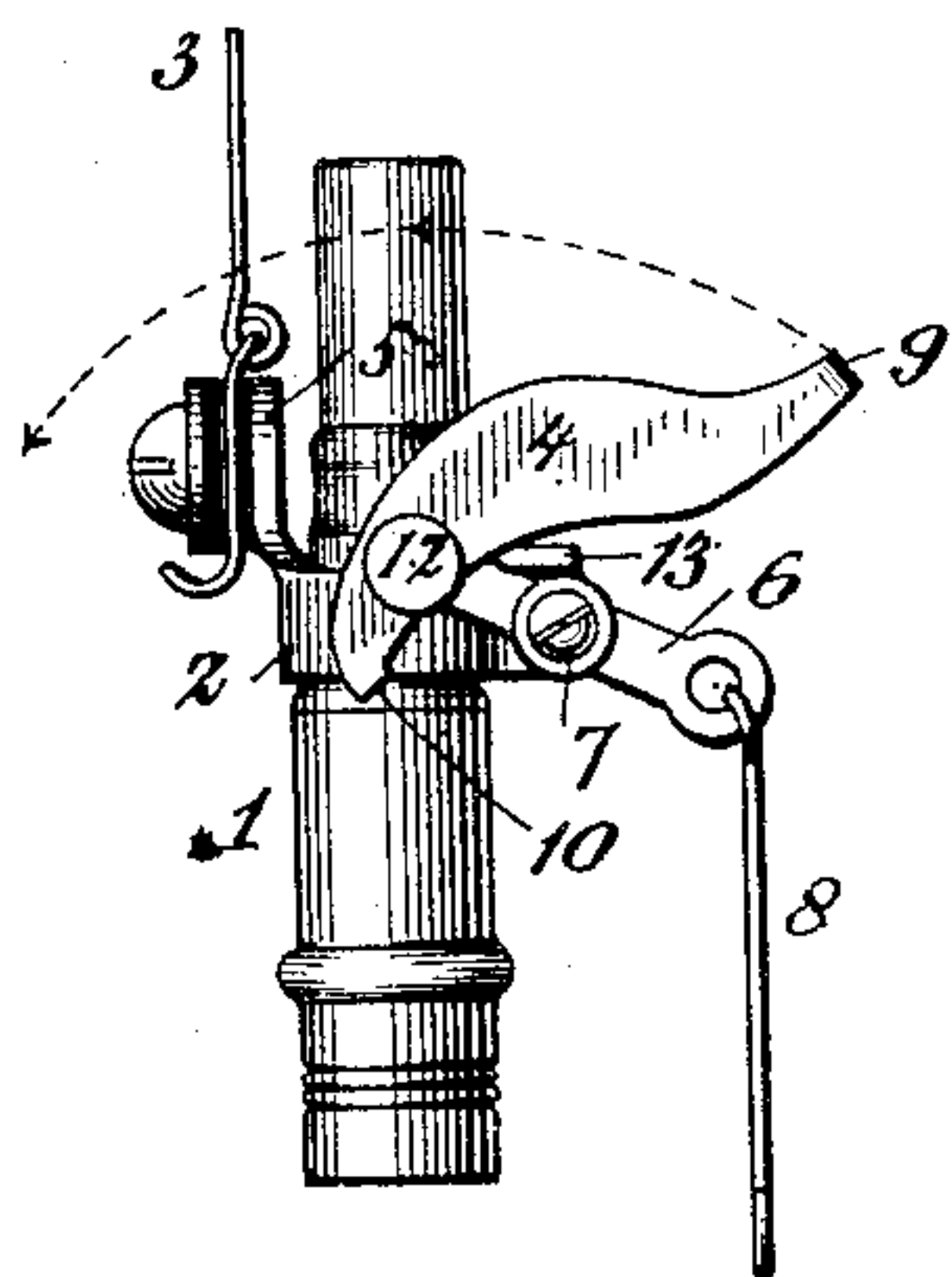
*Fig. 1,*



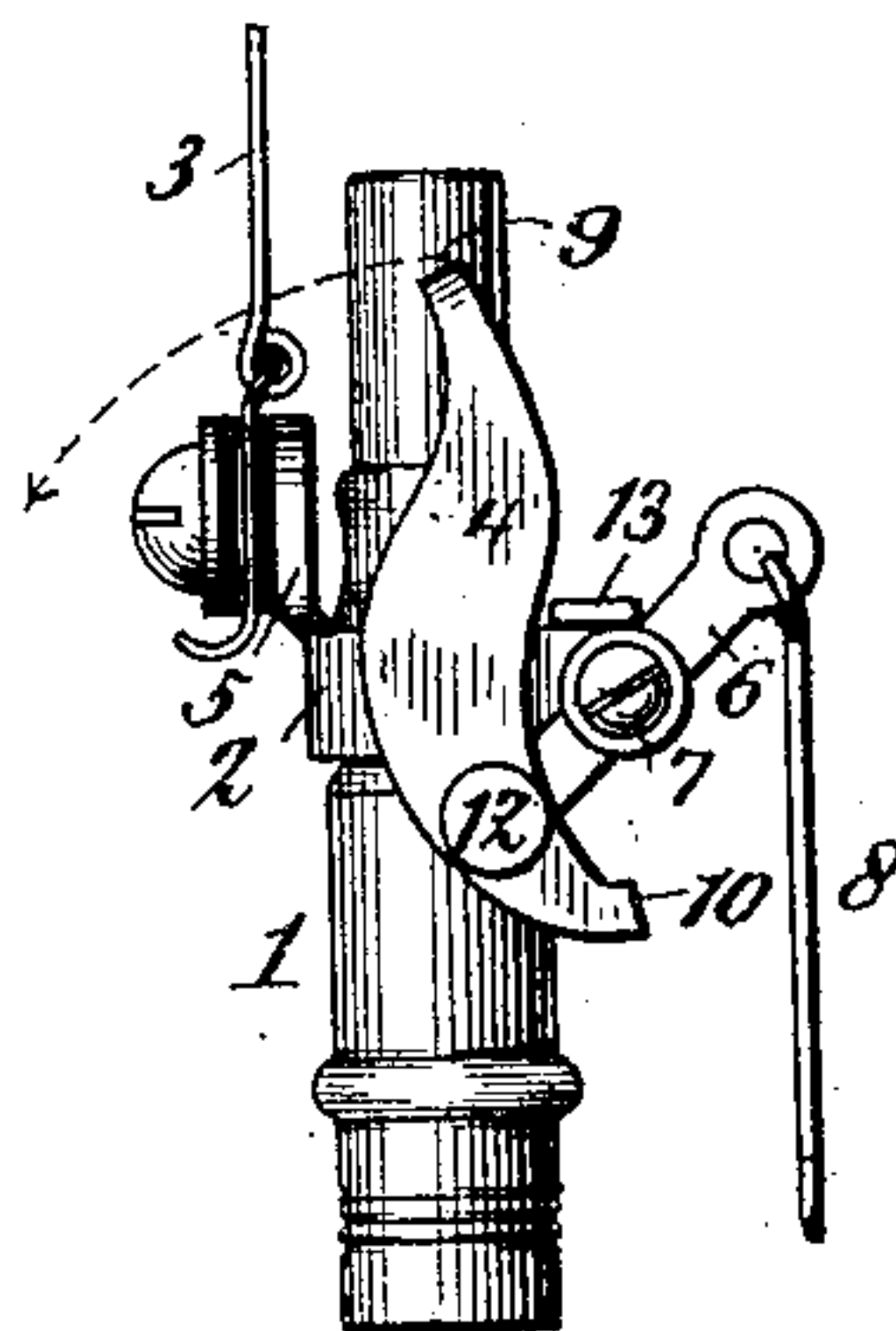
*Fig. 2,*



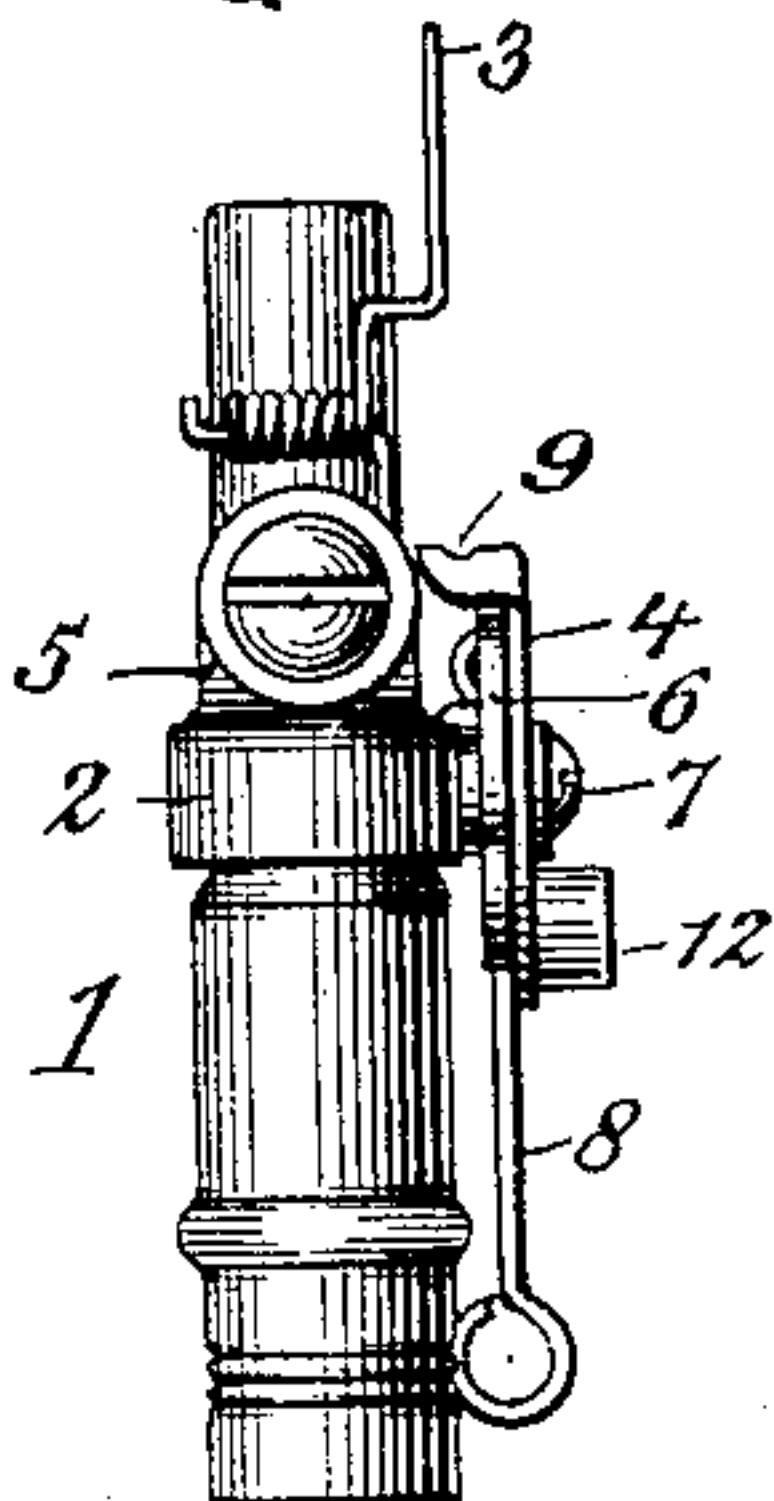
*Fig. 3,*



*Fig. 4.*



*Fig. 5.*



WITNESSES:

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# 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. 638,754, dated December 12, 1899.

Application filed February 16, 1897. Serial No. 623,704. (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 new and useful Improvement in  
5 Electric Gas-Lighters, of which the following is a specification, reference being had to the drawings accompanying and forming part of the same.

My present invention relates to electric  
10 gas-igniters 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,  
15 with 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 the circuit and ignite the gas  
20 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  
25 shall pass through the gas at a point close to the point of emergence and only be in close proximity to the flame at the instant of ignition.

Heretofore electric gas-igniting devices  
30 have generally been supplied with spring-actuated parts. This is objectionable because the heat generated by the ignited gas destroys the temper of the springs and materially affects the usefulness of the burner.

In the drawings I have shown a construction embodying my invention, in which—

Figure 1 is a side view in elevation of a burner-tip provided with igniting devices made according to my invention, the parts  
40 being shown in their first position. Fig. 2 is a view similar to Fig. 1, but showing the movable electrode in its second position or in engagement with the stationary electrode. Fig. 3 is a view similar to Figs. 1 and 2, but  
45 showing the electrode in its third position or after having disengaged the stationary electrode. Fig. 4 is a view similar to Figs. 1, 2, and 3, but showing the electrode on its return movement to the position shown in Fig. 1.  
50 Fig. 5 is an elevation view taken at right angles to the views illustrated in Figs. 1 to 4.

The dotted lines and arrows in the several positions indicate the path of movement and the direction of the movable electrode.

Numerals of reference refer to like parts  
55 throughout the several views of the drawings.

Referring to the drawings in detail, 1 represents a gas-burner carrying a collar 2, which collar supports the electrodes 3 and 4, electrode 3 being mounted on a projection 5 and  
60 insulated therefrom.

6 represents a lever pivoted at 7 to the collar 2. One end of this lever is provided with a pendant 8 for operating it, and the other end carries the movable electrode 4, pivoted  
65 near one of its ends and provided with a catch 9 at its other end for engaging the stationary electrode 3. The end near its pivot-point is provided with a stop 10, which impinges against the pivotal screw 7, it being  
70 held there by the weight of the other end of electrode.

The end of the lever 6 on which the electrode 4 is pivoted carries the weight 12, which, in coöperation with the gravity of the elec-  
75 trode 4, returns said electrode to the first position after engagement with the stationary electrode.

It will be seen that the portion of the movable electrode between its pivotal point and  
80 the engaging catch must be of such weight and the weight must be so disposed as to insure its falling back to its first position after engagement with the movable electrode.

The operation of the device is as follows:  
85 Assuming the parts to be in the position shown in Fig. 1, the operator draws down the pendant 8, which brings the movable electrode 4 into engagement with the stationary electrode 3, (which stationary electrode consists of a  
90 piece of spring-wire,) drawing it over to a point close to the point of emergence of the gas, as shown in Fig. 2. The pendant being drawn still farther down, the engagement of the electrodes is broken suddenly and the gas  
95 ignited by the spark consequent upon the breaking of the electric circuit, (it being understood that one terminal of the circuit is connected to the gas-fixture and the other to the insulated stationary electrode,) the posi-  
100 tion of the parts after the breaking of the circuit being shown in Fig. 3, where the elec-



trode 4 has reached the limit of its forward movement and is resting against the stop 13. On releasing the pendant the weight 12 causes the movable electrode to make its return path, 5 which return path is in a lower plane than its forward path, as shown in Figs. 1 and 4, so that the electrode escapes passing through the flame.

What is claimed as new is--

10 1. In an electric gas-igniter, the combination of a stationary electrode, a pivoted lever, a movable electrode pivoted near one of its ends to said lever, and a weight carried by said lever near the pivoted point of said 15 electrode, so that said electrode shall fall away from the flame after breaking engagement with the stationary electrode, and then return to its first position without passing through the flame, substantially as specified.

2. In an electric gas-igniter, the combination of a stationary electrode, a pivoted lever, a movable electrode pivoted near one of its ends to said lever, a weight carried by said lever near the pivoted point of said electrode so that said electrode shall fall away from the 25 flame after breaking engagement with the stationary electrode and then return to its first position without passing through the flame, and a stop for limiting the forward movement of said electrode, substantially as specified. 30

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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ERNEST HOPKINSON.