

No. 621,778.

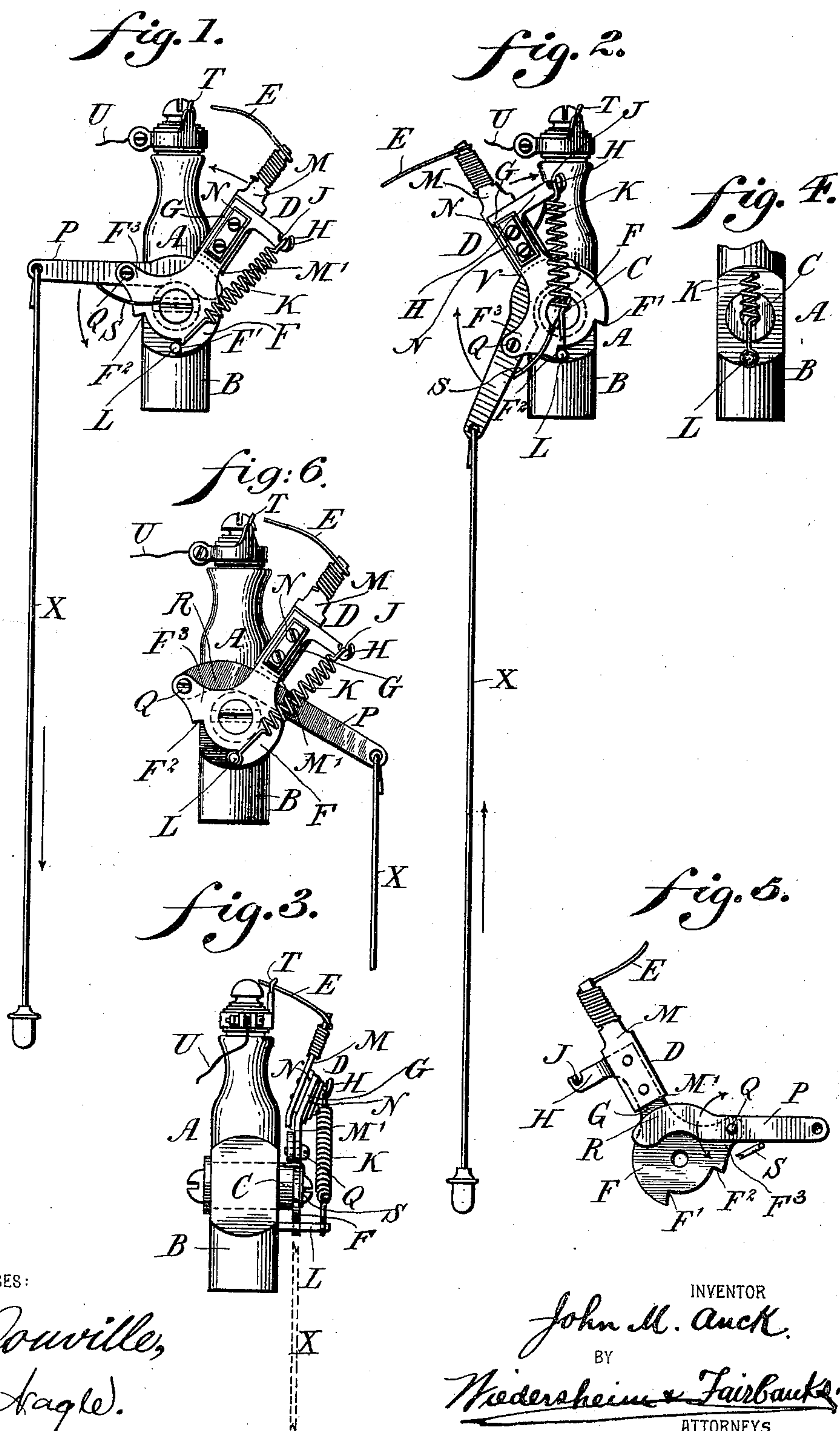
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J. M. ANCK.

ELECTRIC LIGHTING GAS BURNER.

(Application filed Mar. 24, 1898.)

(No Model.)



WITNESSES:

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JOHN M. ANCK, OF PHILADELPHIA, PENNSYLVANIA.

ELECTRIC-LIGHTING GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 621,778, dated March 28, 1899.

Application filed March 24, 1898. Serial No. 674,954. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. ANCK, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Electric-Lighting Gas-Burners, which improvement is fully set forth in the following specification and accompanying drawings.

My improvement relates to that class of gas-lighting apparatus in which a spark is produced adjacent to a gas-burner by the breaking of the circuit of two electrodes connected to a source of electrical energy; and its object is to at all times keep the circuit open except only when it is desired to light the gas, thus preventing the battery from grounding in case the movable electrode becomes caught and remains in contact with the fixed electrode, which object is accomplished by an improved mechanism, the novel details of which will be hereinafter fully set forth, and particularly pointed out in the claims.

Figure 1 represents a side elevation of a gas-burner embodying my invention, showing the operative parts in normal position with the gas turned off. Fig. 2 represents a side elevation showing the lever and adjuncts in the position they assume when the gas is turned on. Fig. 3 represents a side elevation of Fig. 1. Fig. 4 represents a side elevation showing particularly the location of the spring that retains the lever on either side of its center to the burner. Fig. 5 represents a side view of the lever and its adjuncts in detached position. Fig. 6 represents a side elevation showing the lever in reverse position to that shown in Fig. 1.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a gas-burner of usual construction provided with the body B and the cock C; but while I have shown and prefer to use a valved burner my invention is also adapted to be used on a valveless burner with the same results. Upon the valve-cock is mounted the electrode-lever D, consisting of the body portion F and arm G, the latter having secured thereto the laterally-extending member H, provided with

a recess J for the reception of one end of a spring K, the other extremity thereof being attached to any fixed point, as in the present instance to the pin L attached to the burner, the function of said spring being to retain said lever on either side of its center.

The body portion F is provided with stops F' and F², which are adapted to contact with the pin L when the lever is operated in either direction, and which determine the open and closed positions of the cock.

M designates the member carrying the movable electrode E, said member being secured to the arm G of the lever and insulated therefrom by the non-conducting material N, and having its lower end M' normally out of contact with the secondary or auxiliary lever P, as shown in Figs. 1, 3, and 5, which is pivoted to the extension F³ of the lever D by the pivot or pin Q, said lever P being adapted to be engaged by the rod X, said rod serving also in Fig. 6 by its own weight to keep the outer free end of the lever P depressed out of contact with the electrode member M, just described.

The inner end of the lever P is preferably curved, as shown at R; but it is obvious that any form which accomplishes the objects of my invention would not depart therefrom.

If desired, a spring S may be employed, having one end attached to the valve-plug or to any other suitable point and its other end adapted to operate upon the said lever P, its function being to assist in retaining said lever P out of contact with the point M' of the electrode member M as well as to overpower the weights of the operating-rod X when such rod is used. This spring S may be dispensed with without departing from the spirit of my invention, (not only when the lever P is arranged as shown in Figs. 1 and 2, but also when it is reversed, as shown in Fig. 6, in which latter the weight of the rod X will assume the function of said spring S in retaining the lever P out of contact with the member M.)

T designates the fixed electrode located in proximity to the burner or tip, said electrode having a wire U leading to any source of electrical energy.

The operation is as follows: In its normal po-

sition the valve-lever D appears as seen in Fig. 1 or Fig. 6, the gas being turned off and the lever P being out of contact with the member M, as shown in Figs. 1, 3, and 5. When it is
 5 desired to ignite the gas, the lever P is either pushed up, as in the case of the construction seen in Fig. 6, or pulled downwardly, as in the construction seen in Fig. 1, whereby said lever is caused to contact with the end M of
 10 the electrode member M, as shown at V in Fig. 2, thus making connection between said lever and member. The continued movement of said lever causes the lever D to be actuated, carrying the member M to the op-
 15 posite side of the fixed electrode T, whereupon the circuit is closed and the gas ignited, said gas having been turned on simultaneously with the movement of the lever in case my invention is attached to a valved burner.
 20 When the gas is turned on and ignited, the parts assume the position seen in Fig. 2, in which the lever P is held out of contact with the member M by the spring S, as in the other position of lever D, such being the case
 25 in any position said lever D assumes and the lever P never contacting with the member M unless force is initially applied to said lever.

It is obvious that by preventing the member M from being electrically charged only
 30 when it is desired to ignite the gas, as by the insulation N and lever P, an unnecessary use of the battery is prevented, for if the movable electrode should under any condition be caught in contact with the fixed electrode, as
 35 occurs in the ordinary gas-burner, the circuit would remain closed and the battery grounded; but by my improved construction this liability and disadvantage are absolutely avoided.

40 I prefer under certain conditions to employ the construction seen in Fig. 6, since in said construction it is not necessary to employ the spring seen in Figs. 1 and 2 especially, although in certain conditions the construction
 45 seen in Figs. 1 and 2 might be preferable.

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

1. In an electric-lighting gas-burner, an
 50 electrode-lever, an insulated member secured to said lever and carrying an electrode and an auxiliary lever pivotally attached to said electrode-lever, said auxiliary lever contacting with said member only when it is desired
 55 to close the circuit.

2. In an electric-lighting gas-burner, an electrode-lever an insulated member supported thereby and carrying an electrode, an
 60 auxiliary lever mounted on said electrode-lever and normally out of contact with said member, said auxiliary lever being adapted

to contact with said member, when the circuit is to be closed.

3. In an electric-lighting gas-burner, a fixed
 65 electrode, an electrode-lever mounted on said burner, an insulated member secured to said lever, an electrode upon said member, and an auxiliary lever pivoted to said electrode-lever and normally out of contact with said member.

4. An electric-lighting gas-burner consist-
 70 ing of a body A, a fixed electrode thereon, a valve-lever arranged to turn the gas on and off simultaneously with the movement thereof, means for determining and a spring for holding said lever in either of said positions,
 75 a member secured to said lever, insulation between said member and lever, an electrode secured to said member, a secondary lever pivotally supported and normally out of contact with said electrode member but adapted
 80 to contact with said member when it is desired to close the circuit, and means for retaining said secondary lever out of contact with said electrode member.

5. An electric-lighting gas-burner consist-
 85 ing of a body A, a fixed electrode thereon, an electrode-lever mounted on said burner, a member secured to said lever, insulation between said member and lever, an electrode secured to said member, a secondary lever
 90 pivotally supported and normally out of contact with said electrode member but adapted to contact therewith when the circuit is closed and means for retaining said secondary lever out of contact with said electrode member.

6. In an electric-lighting gas-burner, an
 100 electrode-lever mounted on said burner, an insulated member secured to said lever, said member carrying an electrode, an auxiliary lever pivoted to said electrode-lever and normally out of contact with said member, a pin located adjacent to said electrode-lever and a spring common to said pin and to said electrode-lever for holding the latter in either of its extreme positions.

7. In an electric-lighting gas-burner, an
 110 electrode-lever mounted on said burner, an insulated member secured to said lever, said member carrying an electrode, an auxiliary lever pivoted to said electrode-lever and normally out of contact with said member, a pin located adjacent to said electrode-lever and a spring common to said pin and to said electrode-lever for holding the latter in either of its extreme positions, said electrode-lever hav-
 115 ing stops thereon and said pin also serving as an abutment for said stops.

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Witnesses:

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