A. L. BOGART.

Electric Gas-Lighting Burner.

No. 202,694. Patented April 23, 1878.

Fig. 1.

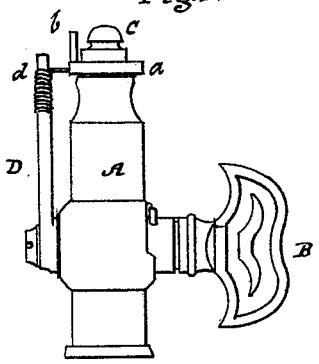
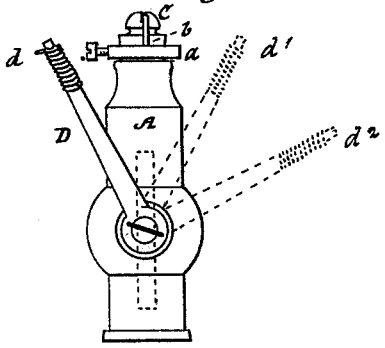


Fig. 2



Witnesses:

J. N. Patch

Theo. A. Friend

Inventor:

A. Livingston Bogart:

By his atty.

John S. Thornton.

UNITED STATES PATENT OFFICE.

A. LIVINGSTON BOGART, OF JAMAICA, NEW YORK, ASSIGNOR TO ABRAHAM L. BOGART, OF SAME PLACE.

IMPROVEMENT IN ELECTRIC GAS-LIGHTING BURNERS.

Specification forming part of Letters Patent No. **202,694**, dated April 23, 1878; application filed December 27, 1877.

To all whom it may concern:

Be it known that I, A. LIVINGSTON BOGART, of Jamaica, in the county of Queens and State of New York, have invented an Improved Electric Gas-Lighting Burner; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification.

The object of my invention is to construct an electric gas-lighting burner in such a manner that it shall be extremely simple and inexpensive, shall require no special care in its management, having but few parts, none of which are liable to become disarranged or to get out of order, and so that it shall be free from any liability or danger of having its points or electrodes left in contact after the gas has been lighted.

My invention consists in an electric gas-lighting burner having one vibrating and one fixed electrode, the vibrating electrode being attached directly to the stem of the plug in such position that, when the gas is fully turned on, the said vibrating electrode will be carried some distance beyond the fixed electrode, and so that, in turning off the gas, it must pass beyond the said fixed electrode on the other side thereof before the supply of gas begins to be diminished; and by means of this construction and arrangement of the parts there is no necessity for and very little danger of the electrodes being left in contact when the gas is turned down or partially shut off.

In the accompanying drawing, Figure 1 represents a front elevation of my improved burner, and Fig. 2 a side elevation of the same.

Similar letters of reference indicate the same parts in both the figures.

A is the ordinary pillar, of metal or other suitable material, which is fitted to the gas-fixtures in the ordinary manner. B is the ordinary knob attached to the end of the plug, for increasing or diminishing the supply of gas to the flame. C is an ordinary non-conducting gas-tip, upon which is secured a metallic ring, *a*, that carries the fixed electrode *b*, and which is insulated by the non-conducting tip C. D is an arm, rigidly secured to the stem of the plug, as hereinafter particularly described, at or near the upper end of which is secured a flexible and elastic point or electrode, *d*. This arm D is rigidly secured upon the stem of the plug and operated thereby, and is fixed in such position in relation to the opening in the plug through which the gas passes to the flame, or at such an angle with the same, that when the said opening is coincident with the opening through the burner, and the gas is fully turned on, the electrode *d* will be about the position shown in full lines in Fig. 2, or beyond the electrode *b*, and beyond a position in which it could come in contact therewith, and when the gas is fully turned off, it will assume the position shown by the dotted lines b^2. The opening in the plug is made somewhat larger than usual, so that there will be a full supply of gas while the electrode is at any point between *d* and d^1, and will not begin to be diminished until, by turning the plug, it begins to travel from d^1 to d^2, at which latter point the gas is entirely shut off.

By means of this arrangement of the arm D in relation to the plug and the opening therein, there is no necessity for and very little danger of the two electrodes being left in contact, for the reason that when the gas is fully on the electrode *d* will be beyond and at some distance from the electrode *b*, and, on the other hand, when it is desired to partially turn off the gas, so as to diminish the flame, the said electrode *d* must be brought into the position shown at d^1 before the supply begins to be diminished; and, by reason of this construction and arrangement of the parts, I provide an electric gas-lighting burner of extreme simplicity, and which may be handled by unskillful persons without danger of its being in any way injured or put out of order.

It will be understood that the spark is produced at the moment the vibrating electrode passes and breaks contact with the fixed electrode, so that the spark is produced and the gas lighted by the same movement that turns on the gas; and I do not wish to be understood as confining myself to the exact construction of the electrodes, nor to the exact mode of attaching the fixed electrode, herein described, nor to any particular mode of insulation, as these may be varied without de-

parting from the principle of my invention, as hereinbefore described; and I do not claim as my invention the fixed electrode *b*, nor the ring *a* fixed upon the insulating gas-tip and carrying the said electrode; nor do I claim the arm D secured upon the stem of the cock, nor its elastic contact-point *d*, except as hereinafter specifically claimed.

What I claim as my invention is—

An electric gas-lighting burner having one fixed electrode and one vibrating electrode, the latter being attached directly to the stem of the plug, substantially as described, in such position in relation to the opening through the plug that, when the gas is fully turned on, the said vibrating electrode will be carried some distance beyond the fixed electrode, and so that, in turning off the gas, it must pass beyond the said fixed electrode on the other side thereof before the supply of gas begins to be diminished, as and for the purposes specified.

A. LIVINGSTON BOGART.

Witnesses:

THEO. H. FRIEND,

JOHN S. THORNTON.