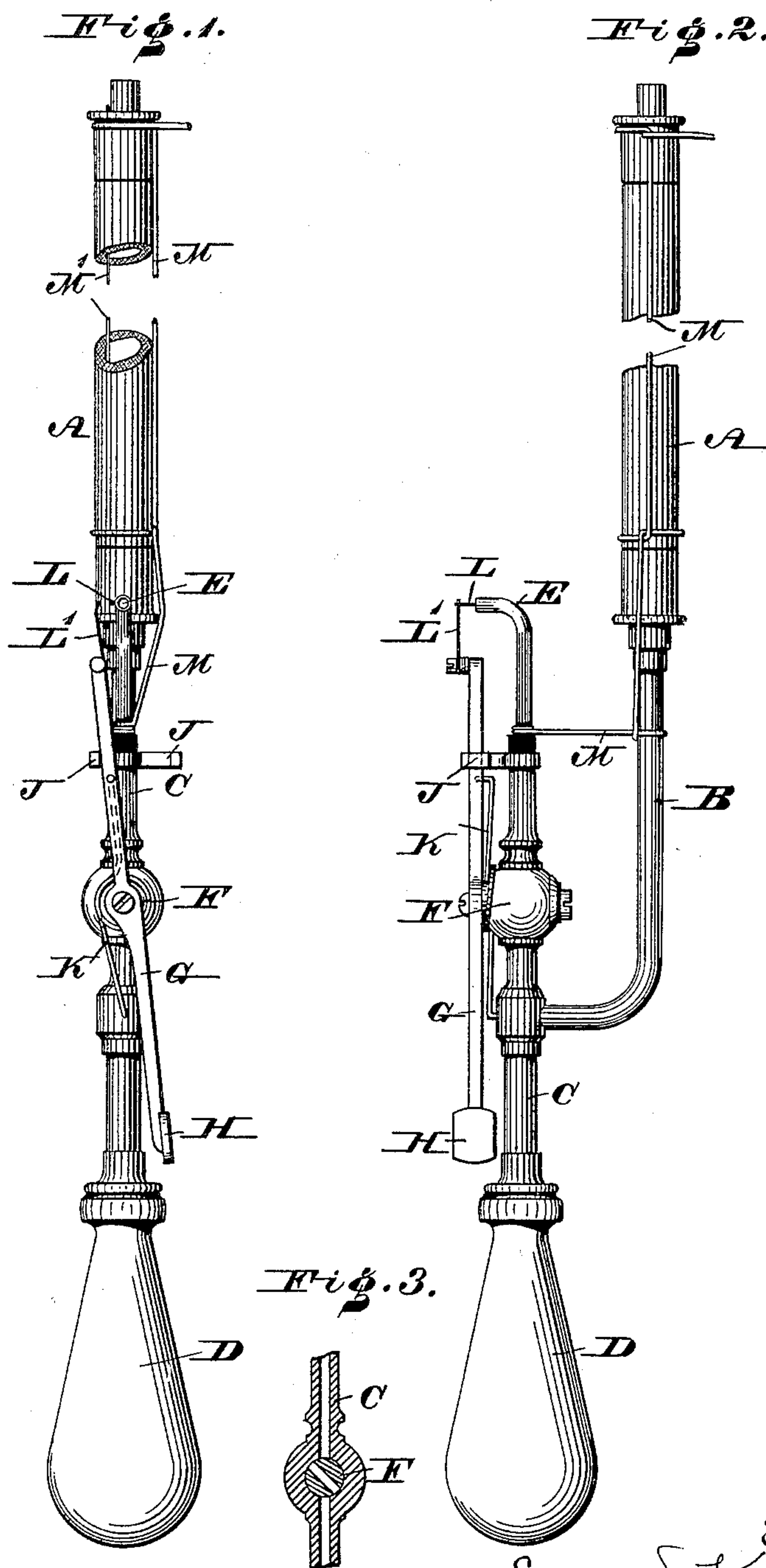


(No Model.)

E. KRONENBERG.
ELECTRIC GAS LIGHTER.

No. 399,416.

Patented Mar. 12, 1889.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD KRONENBERG, OF PHILADELPHIA, PENNSYLVANIA.

ELECTRIC GAS-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 399,416, dated March 12, 1889.

Application filed October 17, 1888. Serial No. 288,333. (No model.)

To all whom it may concern:

Be it known that I, EDWARD KRONENBERG, 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 Gas-Lighters or Lighting Devices, which improvement is fully set forth in the following specification and accompanying drawings.

10 My invention relates particularly to electrical igniting devices for use in lighting or igniting cigars, cigarettes, &c.; and its object is to provide means for wholly turning off the gas at the ignitor-jet, and to adapt it so as to
15 turn on the gas in the act of lifting the device to or near the mouth of the user, and at the same time producing one or more electrical sparks for igniting it, the device being
20 equally adapted to turn the gas off when allowed to assume its normal position. I accomplish these objects by the means hereinafter described, but particularly pointed out in the claims which follow.

Prior to my invention it was old in the art
25 to permit the gas to escape in a small amount, and to thus maintain a diminutive flame, which on lifting the device assumed sufficient proportions to perform the required service.

30 With my improvement I cut off the flow entirely when the device is inert and turn it on only when needed, igniting it at the pleasure of the user.

Figures 1 and 2 represent side elevations of an electric lighter or lighting device embodying my invention. Fig. 3 is a sectional
35 detail view showing the gas-cock and a portion of the pipe, the cock being in normal position, so that the gas is cut off.

40 Similar letters of reference denote corresponding parts in the several figures.

Referring to the drawings, A designates a pipe, preferably flexible—such as it is customary to use with drop-lights and cigar-igniting or analogous devices.

45 B represents a metal gas-pipe firmly secured in any desired manner in the lower end of the flexible pipe A, rigidly attached to which is a hollow stem, C, having a knob or handle, D, as in cigar ignitors or lighters.
50 At the upper end of the pipe C is the tip E, and near its center the cock F, fitted in the

usual manner, but carrying a lever, G, with a thumb-piece, H.

J designates an arm having shoulders or stops at the ends thereof, said arm being connected with the pipe C, for limiting the play of the lever G; and K designates a retractile spring attached to said pipe C and the lever G, and designed to hold the cock F under stress in its normal position, as shown in Fig. 60
3, so that the gas is cut off.

L L' designate electrical contact-wires of well-known form, the wire L being rigidly attached to the tip E near the gas-exit, and the wire L' to the upper end of the lever G as a
65 wiper.

M M' designate insulated wires, one located outside the flexible pipe A, and the other inside and running from a source of electrical energy, as a battery, (not shown,) to the tip E and lever G, respectively, said parts being insulated from each other in the well-known manner, as in electrical gas-lighting devices.

The operation is as follows: The user takes the device in his hand by the handle D, and
75 lifts it so as to bring the jet of tip E near the end of the cigar. He then vibrates the lever G a number of times and holds it against return motion. As the gas flows during the successive action of the lever and the wires
80 L L' come in contact a spark results, causing ignition of gas at the tip E. After the lighting has been effected the lever is released and the fixture allowed to assume its normal position. The spring K acts on the lever G
85 and cock F, and causes the latter to assume the position shown in Fig. 3, thus entirely cutting off the gas.

I am aware that electrical gas-igniting devices are old, and do not, therefore, claim
90 such features, broadly.

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

1. An igniting device for lighting cigars, 95 cigarettes, &c., consisting of a pendant, in combination with a gas-cock having an operating-lever carrying a movable electrode, and a burner-tip carrying a fixed electrode, the lever having a retractile spring for holding said
100 cock closed and the electrodes out of contact.

2. An igniting device for lighting cigars,

cigarettes, &c., consisting of a non-conducting pipe attached to a pendant and carrying a fixed and a wiping electrode, in combination with two insulated wires running one inside and the other outside of the pipe, said wires being attached, respectively, to the fixed and wiping electrodes, substantially as described.

3. A pendent igniting device having a burner and two electrodes, one fixed and the other movable, the former attached to the burner of the pendant and the latter attached to a lever carried by the gas-cock and lying in the plane of the body of the pendant, and having a retractile spring for holding the gas-cock normally closed and the electrodes out of contact, substantially as described.

4. In a pendent device for lighting cigars, &c., a cock-actuating lever lying substantially in the plane of the pendant, and having a spring under stress for holding the cock normally closed, and carrying a wiping-electrode at its free end, with a fixed electrode carried by the burner-tip, but insulated therefrom, and electrical connections, as described, the whole being so arranged that when the lever is actuated gas is allowed to flow and a spark is created, whereby ignition ensues, substantially as described.

EDWARD KRONENBERG.

Witnesses:

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