

J. B. FULLER.
Electric Lamps.

No. 218,375.

Patented Aug 12, 1879.

FIG. 1.

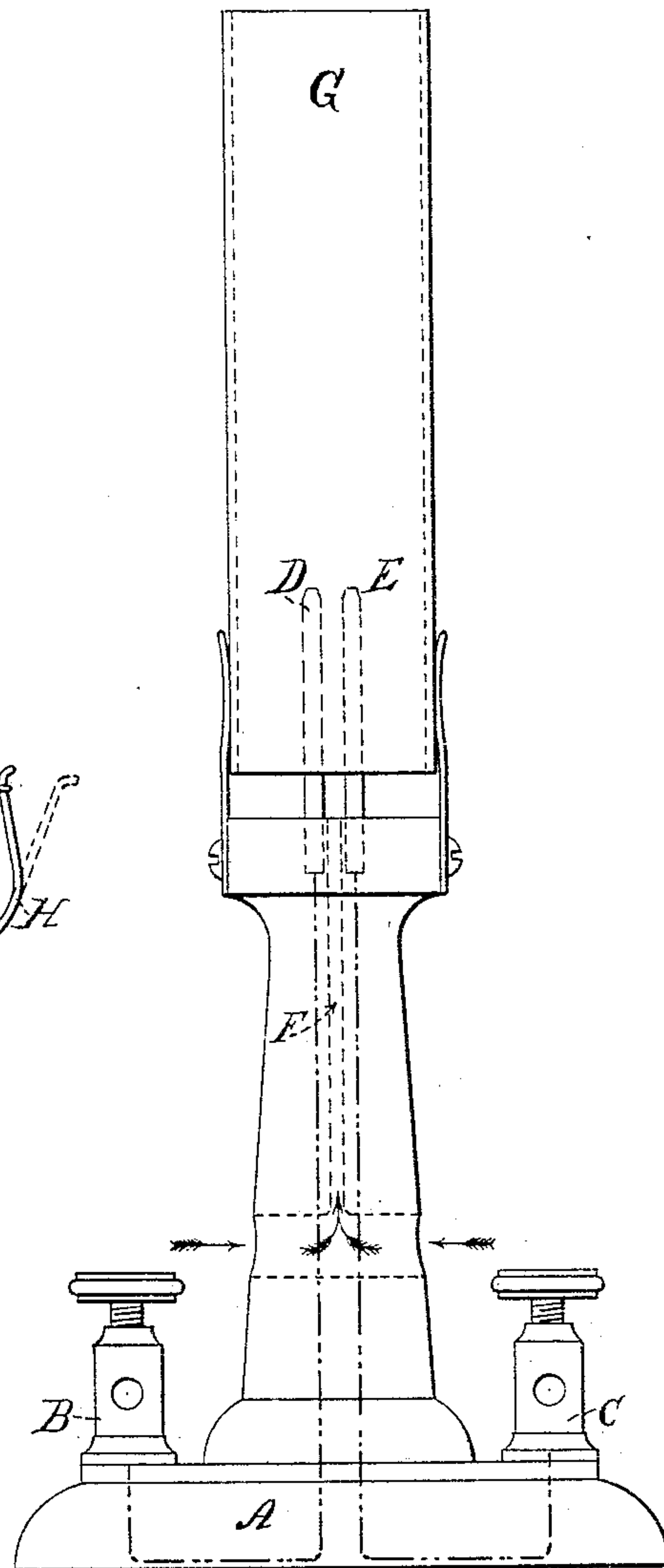


FIG. 2.

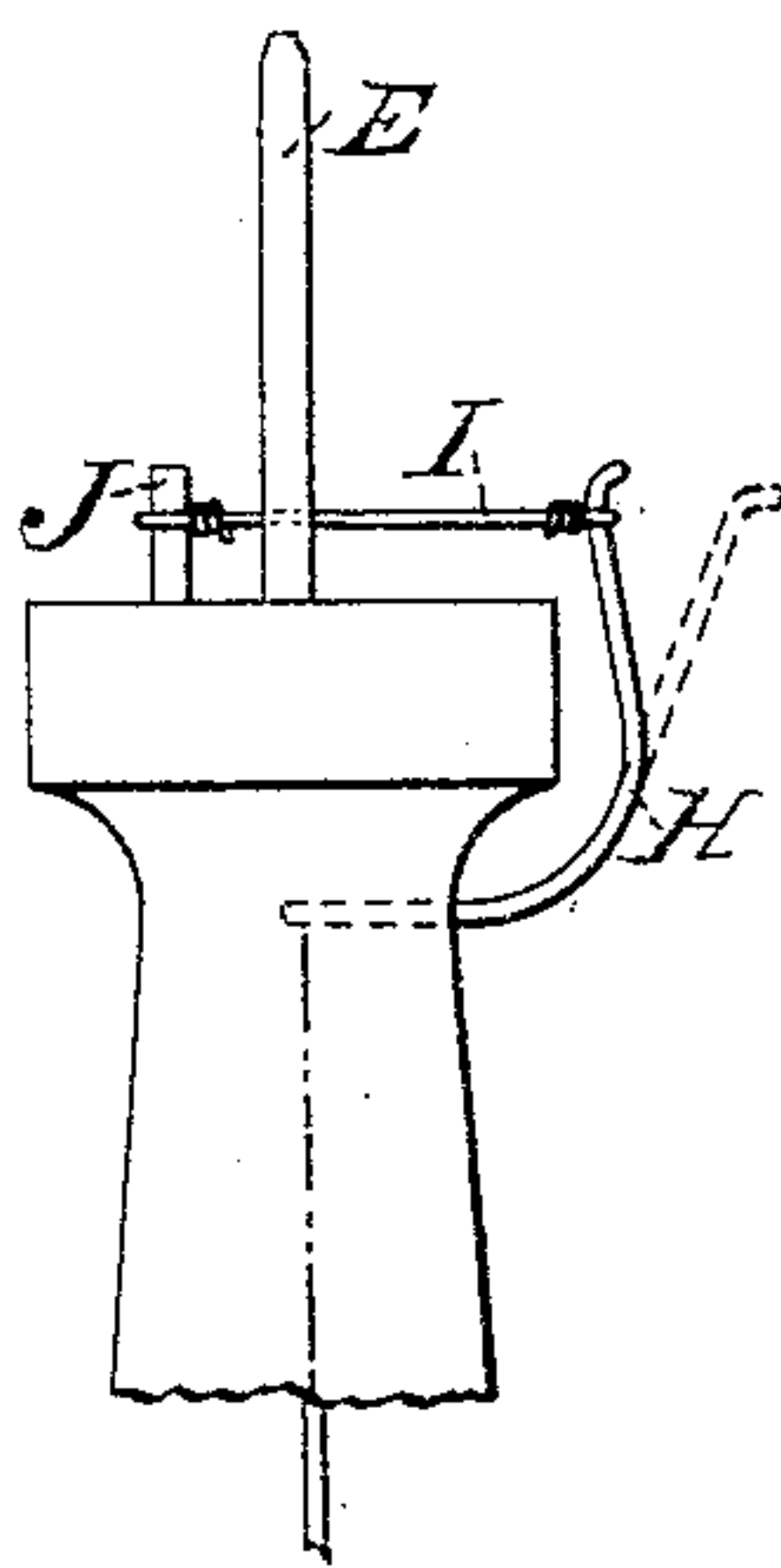
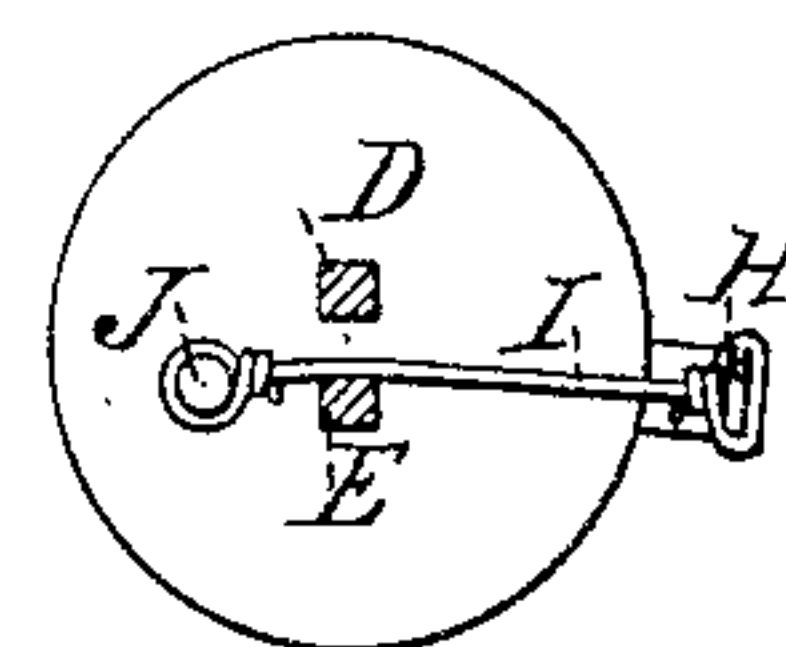


FIG. 3.



WITNESSES:

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INVENTOR.

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UNITED STATES PATENT OFFICE.

JIM BILLINGS FULLER, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENT, TO THE FULLER ELECTRICAL COMPANY, OF NEW YORK.

IMPROVEMENT IN ELECTRIC LAMPS.

Specification forming part of Letters Patent No. **218,375**, dated August 12, 1879; application filed January 30, 1878.

To all whom it may concern:

Be it known that I, JIM BILLINGS FULLER, of the city of New York, State of New York, have invented a new and useful Improvement in Electric Lamps, of which the following is a specification.

This improvement relates to electric lamps having carbons parallel to each other; and consists, first, in the employment of a current of air so directed as to flow around or between said carbons and toward their luminous points, for the purpose of preventing the electric flame from burning along the surface of the carbons, where there is the least electrical resistance, and of keeping the flame at the points of the carbons; second, in the peculiar means employed for extinguishing the light automatically, consisting in connections so arranged as to be burned off, and the electric circuit with the lamp opened, and the electric current interrupted by the action of the flame.

There are many ways in which a current of air may be applied in carrying out this invention, depending on the construction of the lamp and the position of the carbons.

I consider the manner herein described the most practicable when the carbons are placed in a vertical position, with the points upward.

Figure 1 is a side view of the lamp. Figs. 2 and 3 are a side view and section of the device for automatically extinguishing the light.

In the drawings, A represents the base of an electric lamp. The electric current from the generator is conducted to the binding-posts B and C, and thence to the carbons D and E. These carbons are separated a short distance apart, and the electric current flows through the electric arc formed between the points of said carbons.

F is a tube arranged so as to give direction to a current of air around or between the carbons toward their luminous points.

A chimney, G, is arranged around said carbons, so as to produce a draft of air from the heat of the electric flame.

When the carbons are used with their points downward, or in any position different from that above described, the air may be forced through the tube F by any convenient

means; or any substitute for the tube may be used which will give the current of air the necessary direction, as aforesaid.

H is a spring, and I is a wire or metallic strip, both of which are in circuit with one of the carbons, the wire being arranged so as to be burned off by the flame at the desired point, thereby breaking the circuit and extinguishing the light.

There are many ways in which the circuit may be broken by burning off a connection. A cord may pass between or around the carbons, holding the connecting mechanism in closed circuit until the burning off of said cord by the electric flame opens the circuit and interrupts the current. Therefore I do not confine myself to any particular mechanism for this purpose, provided the current is interrupted by the means described.

I am aware that glass globes have been placed around the carbons of electric lamps for the purpose of softening the light and protecting it from the wind and storm.

I claim—

1. An electric lamp in which the electric arc or flame is maintained at the points of the carbons, placed parallel with one another and vertical, or nearly so, by means of a current of air so directed and confined as to flow around or between said carbons toward their luminous points, substantially as and for the purpose specified.

2. In an electric lamp, the combination, with the carbons, placed parallel with one another and in a vertical position, or nearly so, of a chimney arranged around the carbons, so that the heat from the electric flame shall cause a current of air to flow around or between said carbons, substantially as and for the purpose set forth.

3. An electric lamp in which the connections are arranged so as to be burned off by the action of the electric flame, thereby breaking the electric circuit within the lamp and extinguishing the light, substantially as described.

JIM BILLINGS FULLER.

Witnesses:

JAMES J. WOOD,
MAURICE B. HULL.