

(No Model.)

E. H. WRIGHT.
ELECTRIC GAS LIGHTER.

No. 316,429.

Patented Apr. 21, 1885.

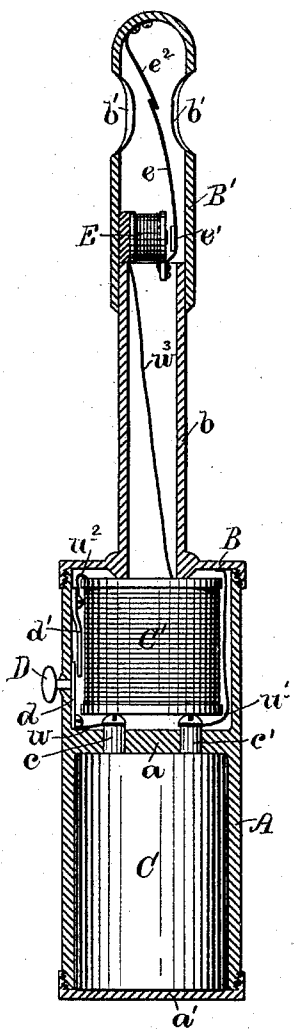


Fig. 1.

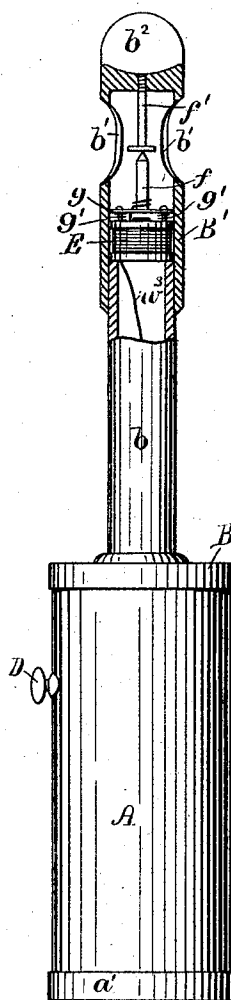


Fig. 2.

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E. HOWARD WRIGHT, OF PROVIDENCE, R. I., ASSIGNOR OF ONE-HALF TO
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ELECTRIC GAS-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 316,429, dated April 21, 1885.

Application filed April 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, E. HOWARD WRIGHT, of the city and county of Providence, and State of Rhode Island, have invented certain new and useful Improvements in Electric Gas-Lighters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to portable electric lighters which are designed to be carried in the hand, like a torch, and by means of which the gas is turned on at the burner and lighted.

The object of my invention is to produce a simple and convenient lighter; and to this end my invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal section of my improved lighter. Fig. 2 is a side elevation, partly in section, of a modified form of lighter.

In the said drawings, A designates the cylindrical base or handle of the lighter, which is open at each end, and divided internally into two compartments by a transverse partition, *a*. The lower end of the handle is closed by a screw-cap, *a'*, and within the lower compartment is placed a battery, C, of suitable form for the purposes of a hand-lighter. The upper end of the handle is closed by a screw-cap, B, and within the upper compartment is placed an induction-coil, C'. The two posts *c* *c'* of the battery extend upward through two apertures in the partition *a*, and from these posts, respectively, extend wires *w* *w'*. The wire *w* runs to a spring-plate, *d*, which is provided with a push-button, D, extending through the side of the handle A, while the wire *w'* extends to the cap B, which is of electric conducting material. The spring-plate *d* is secured to the inner side of the handle in such position as, when pressed inward, to make contact with a plate, *d'*, also secured to the side of the handle. From the plate *d'* extends a wire, *w²*, to the induction-coil C'. The cap B is formed with a tubular metal stem, *b*, through which passes a wire, *w³*, leading from the induction-coil C'. This construction is illus-

trated clearly in Fig. 1, and is supposed to be used in Fig. 2.

In Fig. 1, B' designates a metal cap, which fits over the upper end of the stem *b*, and is provided with the apertures *b'*, which permit the access of gas from the burner to the lighting-spark. Within the lower part of the cap B' is placed a magnet, E, from which extends a spring, *e*, carrying an armature, *e'*. The spring *e* extends upward to a connection with the wire *e²*, which is secured to the upper part of the cap and extends downwardly therein to the point of its contact with the spring *e*.

In Fig. 2 the cap B', having the apertures *b'*, is used, but the magnet E is placed vertically in the cap. In lieu of the springs *e* *e²*, the rods *f* *f'* are used. The rod *f* rests upon a plate, *g*, which is supported upon springs *g'* resting upon the magnet E. The lower end of the rod *f'* carries an enlarged contact-point, and the said rod is secured by its upper end to the upper end of the cap B'. As shown in Fig. 2, the upper end of the cap B' is bifurcated, as at *b²*, so as to receive the burner-key.

When the key D is pressed, the armature *e'* is drawn toward the magnet E, breaking the contact between the wires *e* *e²*, and producing the lighting-sparks, or the plate *g* is drawn down, breaking the contact between the rods *f* *f'* and producing the lighting-sparks. When the button is released, the spring *e* resumes its contact with the spring *e²*, or the point *f* resumes its contact with the point of the rod *f'*, by reason of the expansive action of the springs *g'*. As long as the contact is preserved there will be a number of attractions and repulsions of the contact-points at the lighting-point, so that a series of sparks are caused to pass between the lighting-points.

Thus it will be seen that I have produced a simple and durable form of lighter for gas-burners, and one which is light in weight.

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

1. The combination, with the handle having the partition and closing-caps, and a battery and an induction-coil placed within said handle, of the stem *b* and cap B', the armature E, and the contact-points arranged to separate

when the circuit is closed, all substantially as described.

2. The handle A, having the partition *a*, the spring-plate *d*, having the button D, the cap *a'*, the battery C, and induction-coil C', and the wires *w w' w''*, in combination with the cap B, having the stem *b*, the cap B', the wire *w''*, the magnet E, and the contact-points arranged to separate upon the closing of the circuit, as described.

3. The combination of the handle, the battery and induction-coil therein, the circuit-closer consisting of the spring-plate *d*, having the knob D and the plate *d'*, the stem *b*, magnet E, armature, and the contact-points *f f'*, as described.

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Witnesses:

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