(No Model.)

T. A. EDISON.

Incandescent Electric Lamp.

No. 242,897. **Patented June 14, 1881.**

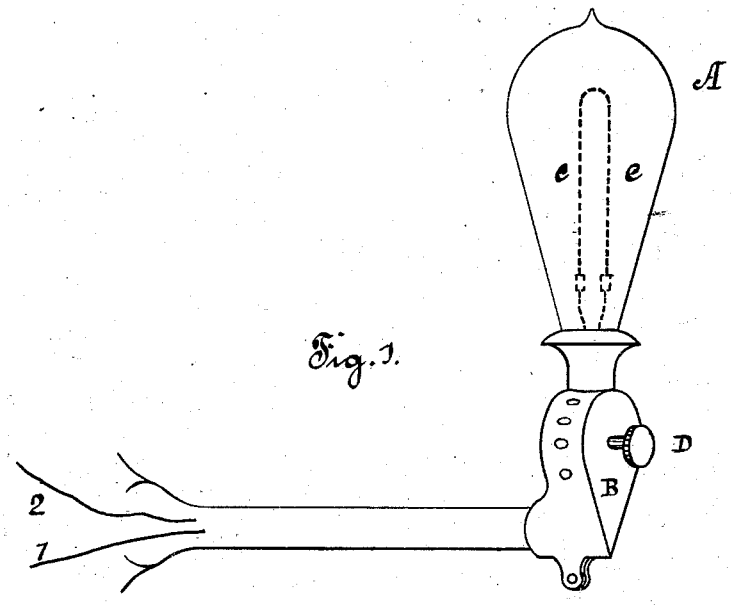

Fig. 1.

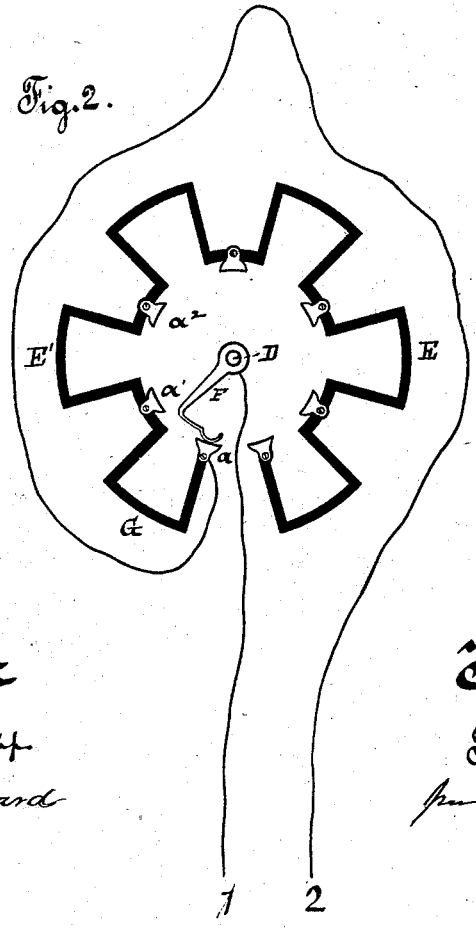

Fig. 2.

Attest:

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Thos. A. Edison

per Dyer & Milber

Attys.

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF MENLO PARK, NEW JERSEY.

INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 242,897, dated June 14, 1881.

Application filed December 15, 1880. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Menlo Park, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Incandescent Electric Lamps, (Case No. 267;) and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of this invention is to furnish a device by means of which the light of a single lamp of an electric-lighting system may be increased or diminished without affecting any others of the series; and to this end my invention consists in the interposition in the circuit of the lamp of a resistance the force of which may be varied at the will of the operator by simply turning a key.

In the accompanying drawings, Figure 1 is a view of an incandescent electric lamp in which this invention is used; Fig. 2, a detail view of the resistance.

1 2 are the wires of an electrical circuit passing up through the base of the lamp to the carbon C C, A being the globe in which the carbon is contained.

In order to better adapt the lamp for use as a "night-lamp," this globe may be of ground glass, or of milk or opaque glass, in order to soften and dim the light more effectually.

B is the hollow base which supports the lamp and contains the resistance E E′, Fig. 2. This resistance is of the shape shown, and is made of stiff heavy carbon. Attached to it at various points are metallic contacts a a' a^2, &c. The wire through which the current passes to the light extends to the metal hook F in the center of the resistance. The current thus normally passes through the wire 1, the metal hook F, the contact a, and around through the carbon C C to the wire 2; but if it is desired to decrease the force of the light the hook F may be turned back until it reaches the contact a', thus requiring the current to pass through the portion G of the carbon resistance and interposing so much additional resistance in the circuit. If a still further diminution of the light is required, the hook may be turned back to the contact a^2, and the resistance thus doubled, and so on until the whole of the carbon E E′ is included in the circuit 1 2. For convenience of manipulation, the key D projects out and terminates in a thumb-screw, so that the hook may be easily turned.

E E′ being made, as stated, of carbon, furnishes a considerable resistance to the passage of the current, and as each succeeding section is placed in circuit the force of the current is decreased and the brilliancy of the light correspondingly diminished, and as the key is again turned back the resistance decreases while the light increases.

What I claim is—

1. The combination, with the incandescing conductor of an electric lamp and the key for controlling the circuit thereof, of an adjustable resistance located within the base of the lamp and cut in or out of the circuit in any desired proportion by the key, so that the lamp may be used at any desired power less than its normal capacity, substantially as set forth.

2. A carbon resistance made substantially as described, and provided with a series of metallic contacts, in combination with a key having an arm for completing circuit at any desired contact, substantially as set forth.

This specification signed and witnessed this 3d day of December, 1880.

THOS. A. EDISON.

Witnesses:
H. W. SEELY,
S. D. MOTT.