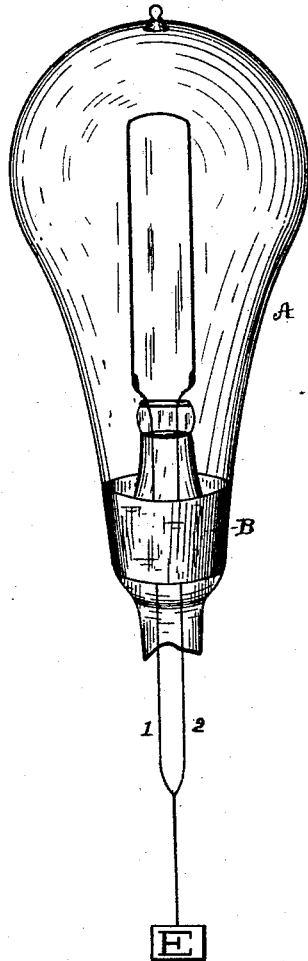


(No Model.)

T. A. EDISON.
INCANDESCENT LAMP.

No. 425,761.

Patented Apr. 15, 1890.



WITNESSES:

E. C. Rowland
Edward. H. Pyatt

INVENTOR:

Thomas A. Edison
By Richard W. Dyer
Atty.

UNITED STATES PATENT OFFICE.

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

INCANDESCENT LAMP.

SPECIFICATION forming part of Letters Patent No. 425,761, dated April 15, 1890.

Application filed November 22, 1883. Serial No. 112,478. (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 Incandescing Electric Lamps, (Case No. 607,) of which the following is a specification.

The object of this invention is to diminish or prevent the electrical carrying between the carbon filament and the inclosing-globe of an incandescing electric lamp, and thus to prevent loss of candle-power by the blackening of the globe, and to increase the life of the lamp.

My invention consists in statically charging the globe and filament with electricity from a frictional or other source of static electricity. The polarity of the charge imparted to them is such as to neutralize the charge which will be given when current passes through the carbon filament, and hence the two charges will produce a neutral static condition of the lamp. There will be no static attraction in the lamp, and in consequence little or no transferring of particles from the filament to the globe will take place. The polarity of the charge given to the globe will depend on the character of the lighting-current. If that current is of such polarity as to induce a positive charge in the globe, the charge previously given thereto should be negative, and vice versa. The globe may be charged either before or after exhaustion, though I prefer to do it after the lamp is otherwise completed.

The charging of the globe may be accomplished in any suitable manner from any powerful frictional machine or from a moving leather belt. In charging, the leading-in wires of the lamp are connected with the earth or with the zero portion of the frictional machine, which is the equivalent of the earth. Connection may, if desired, be made with the earth by holding the wires in the hand of the operator, and the frictional apparatus is then set in operation, whereby the globe and filament are oppositely charged.

Another opposite charging of the globe and filament takes place when the current is applied to the latter, the result being a neutralized static condition of the whole. The charge of static electricity will last a considerable time, it being in some cases almost

impossible to discharge the globe. The lamps may, however, if desired, be charged from time to time after they are put into use by means of a portable frictional electric machine.

In some cases the static charge may be imparted simply by rubbing the globe while the wires are connected to the earth. I prefer, however, to use a more powerful source of frictional electricity.

The annexed drawing represents an incandescing electric lamp A, having its leading-in wires 1 2 connected to earth for the operation of charging. B is a piece of platinum foil, which may be placed on the inside of the globe, so that a stronger charge can be imparted to the globe.

In my patents, No. 268,206, November 28, 1882, and No. 273,486, March 6, 1883, I have shown means for preventing the transfer of carbon particles from the filament of an incandescing lamp to the globe, consisting in a conducting frame-work or envelope charged or electrified by being connected to one or both of the leading-in wires of the lamp-circuit, and such construction I do not claim herein. In the present case the insulating-globe is itself charged, and the necessity of the extra envelope is thereby avoided.

What I claim is—

1. An incandescing electric lamp statically charged with electricity of such character as to neutralize the static charge imparted by the current when the lamp is in use, substantially as set forth.

2. The improvement in the process of manufacturing incandescing electric lamps, consisting in statically charging a lamp-globe before or after exhausting the same, substantially as set forth.

3. The improvement in the process of manufacturing incandescing electric lamps, consisting in statically charging the lamp from a frictional or other source of static electricity while the leading-in wires of the lamp are connected to the earth or its equivalent, substantially as set forth.

This specification signed and witnessed this 20th day of November, 1883.

THOS. A. EDISON.

Witnesses:

H. W. SEELY,
EDWARD H. PYATT.