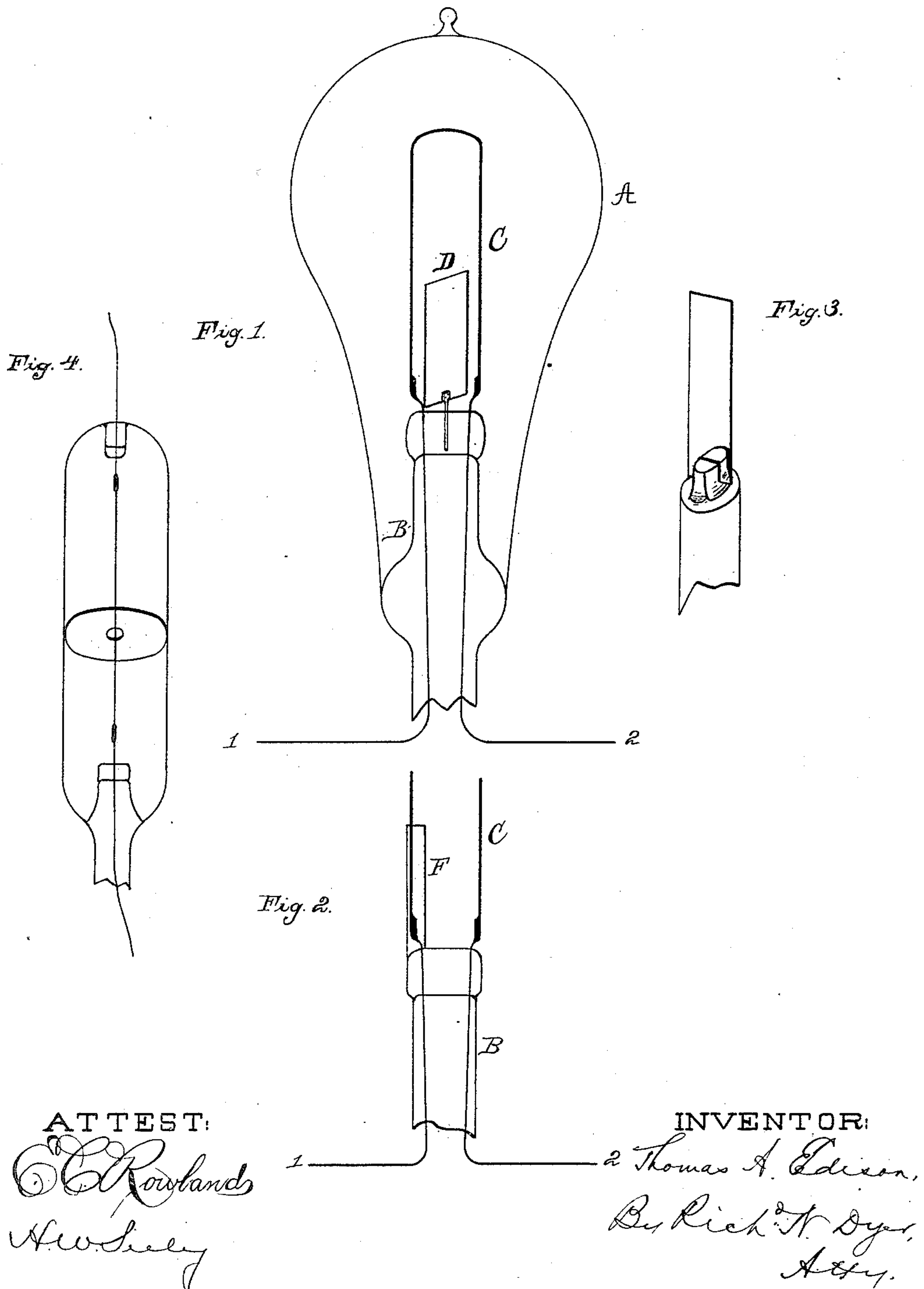


(No Model.)

T. A. EDISON.  
INCANDESCENT ELECTRIC LAMP.

No. 398,774.

Patented Feb. 26, 1889



# UNITED STATES PATENT OFFICE.

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

## INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 398,774, dated February 26, 1889.

Application filed May 14, 1883. Serial No. 94,891. (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. 562,) of which the following is a specification.

The object of this invention is to prevent the formation of an arc between the terminals of the conductor within the globe of an incandescing electric lamp. I accomplish this by interposing between the terminals of the conductor an insulating body, preferably of a transparent material, like mica or glass. This of course increases the resistance of the space between the terminals and so prevents the formation of an arc across such space.

In applying the invention to a lamp in which an arched or looped carbon filament is used I preferably place a thin plate of glass or mica between the ends of the loop, rising to a sufficient height and supported by a metallic or other arm rising from the middle of the inner stem or wire support of the lamp between the leading-in wires; or the edge of the plate may be inserted in the stem, the glass being softened and split to admit it; or I may have one end of the filament inclosed by a glass tube resting upon the glass below.

When a straight carbon is employed, a glass or mica disk having an aperture in its center may be placed around the middle of the carbon, so that insulation is interposed between its terminals.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a view of an incandescing electric lamp embodying the preferred form of my invention; Fig. 2, a view of a portion of the lamp with the glass tube inclosing the lower portion of one side of the filament; Fig. 3, a view showing the insulating-plate inserted in the glass of the stem, and Fig. 4 a view showing the invention applied to a straight carbon lamp.

A represents the inclosing-globe of the lamp, and B is the inner stem sealed therein. The leading-in wires 1 2 are sealed in the glass and support the flexible carbon filament C, which is secured to said wires by electroplating or otherwise.

Referring to Fig. 1, D is a plate of glass or mica interposed between the sides of the filament C and supported by an arm, E, rising from the glass of the stem B.

In Fig. 3 the plate D is inserted into the glass of the stem B, as before explained.

In Fig. 2 a short glass tube, F, is placed over one end of the filament. This would be placed over the filament before the latter is attached to the leading-in wires.

In Fig. 4 the disk of insulating material G is placed over the middle of the straight filament, being thus interposed between the terminals thereof.

In my Patent No. 242,896 is shown a glass arm of small diameter extending up between the sides of the carbon loop to support the same. It is evident that this would not accomplish the object of the present invention, as the small glass arm would admit of the formation of the arc around said arm.

What I claim is—

1. In an incandescing electric lamp, the combination, with the incandescing conductor, of solid insulating material interposed between its terminals and adapted to prevent the formation of an arc between said terminals, substantially as set forth.

2. In an incandescing electric lamp, the combination, with the arched or looped conductor, of an insulating-plate interposed between the terminals of said conductor and adapted to prevent the formation of an arc between said terminals, substantially as set forth.

3. In an incandescing electric lamp, the combination, with the arched or looped conductor and the glass stem or wire support, of an insulating-plate interposed between the terminals of said conductor and supported from said wire support and adapted to prevent the formation of an arc between said terminals, substantially as set forth.

4. In an incandescing electric lamp, the combination, with the arched or looped conductor and the glass stem or wire support, of an insulating-plate having its edge inserted in the glass of said support and extending up between the terminals of said conductor and adapted to prevent the formation of an arc between the terminals, substantially as set forth.

This specification signed and witnessed this 8th day of May, 1883.

THOS. A. EDISON.

Witnesses:

WM. H. MEADOWCROFT,  
H. W. SEELY.