

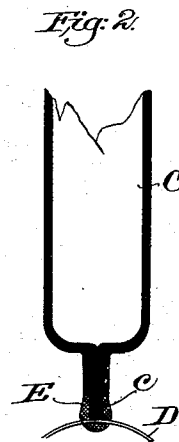
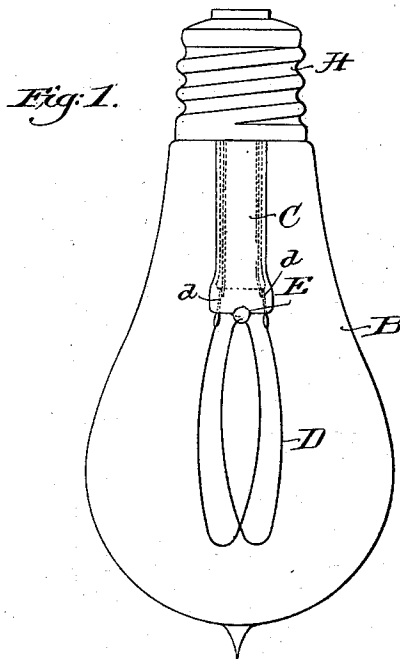
No. 624,463.

Patented May 9, 1899.

E. F. DWYER.
INCANDESCENT LAMP.

(Application filed Mar. 9, 1899.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

ELMER FRANCIS DWYER, OF LYNN, MASSACHUSETTS.

INCANDESCENT LAMP.

SPECIFICATION forming part of Letters Patent No. 624,463, dated May 9, 1899.

Application filed March 9, 1899. Serial No. 708,336. (No model.)

To all whom it may concern:

Be it known that I, ELMER FRANCIS DWYER, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Incandescent Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved form of incandescent lamp, and more particularly to incandescent lamps provided with coiled or looped filaments.

I am aware that it has been proposed to provide a support for the filament in addition to that afforded by the leading-wires and that lamps have been constructed wherein the loop of the filament has been supported by an auxiliary support sealed in the glass at the end of the globe, adapted to loosely embrace the filament or filament-section, so that the filaments will be prevented from undue vibration and consequent breakage. I am also aware of the common practice of making filaments with a coil or loop at the outer end of the globe and in providing an auxiliary support attached to the coil, extending backward and sealed at its other end into the glass of the stem. My improvement contemplates entirely doing away with these auxiliary supports and in attaching or securing by a suitable cement the coil or loop of the filament directly to the stem of the lamp. The advantages flowing from this improvement are considerable and consist not only in the greatly-reduced cost and facility of manufacture, but in the simplification of the lamp structure, the greater rigidity of support given the filament, the removal of any obstruction to the radiation of the light from the incandescent surface of the filament, the considerably-increased illuminating-surface of filaments for a given size of globe, and the uniformity of spherical and horizontal illumination.

My invention consists in the improvements hereinafter described, and more particularly pointed out in the claims.

In the accompanying drawings, illustrating the preferred form of my invention, Figure 1

is an elevation of my improved lamp; and Fig. 2 is a sectional elevation of the end of the stem in which the base A, globe B, and stem C are and will preferably be of the form and proportions usual in incandescent lamps.

The filament D is provided with a return coil or loop extending backward toward the stem C, to which it is directly and rigidly attached or secured by cement E at a point preferably midway between the two leading-wires. This cement is the same as that now commonly used to attach the ends of filament to the leading-wires.

While the filament may be attached to the stem by cement in any desired manner, I prefer to provide the extreme end of the stem with recesses of such form that the cross-section of the stem at this point will be of a dovetail form. This construction is illustrated in Fig. 2, wherein C indicates the stem shown in cross-section, the extreme end of which, c, is of a dovetail form, as described. The cement E, which is used to attach the filament to the stem at this point after hardening, closely embraces the dovetail end of the stem and is thereby effectually prevented from becoming disengaged therefrom.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. An incandescent lamp having a stem and a coiled or looped filament, the coil or loop of the filament being extended backward toward the stem and attached or secured directly and rigidly thereto by cement, substantially as described.

2. An incandescent lamp having a stem provided with a dovetail end and a coiled or looped filament, the coil or loop of the filament being extended backward toward the stem and attached or secured directly thereto by cement, which embraces the dovetail end of the stem, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ELMER FRANCIS DWYER.

Witnesses:

CHARLES H. CHASE,
WEBSTER BRUCE.