

(No Model.)

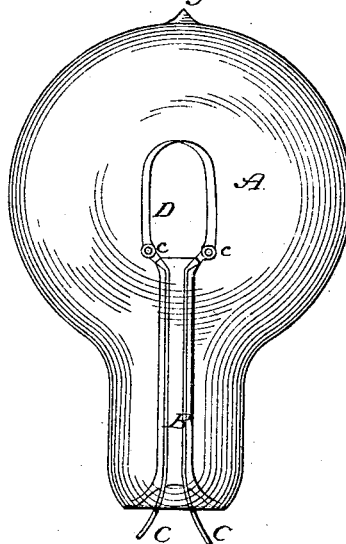
E. WESTON.

INCANDESCENT ELECTRIC LAMP.

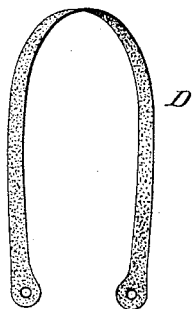
No. 266,741.

Patented Oct. 31, 1882.

*Fig. 1.*



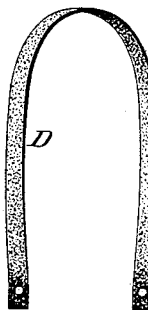
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Attest:*

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# UNITED STATES PATENT OFFICE.

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## INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 266,741, dated October 31, 1882.

Application filed July 19, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD WESTON, a subject of the Queen of Great Britain, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Incandescent Lamps, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

My present invention involves a novel method of mounting the carbons of incandescent electric lamps in which flat strips of flexible carbon are employed as the conductors. The object of the invention is to impart to the conductors such a general configuration as will render the light radiated more nearly uniform in all directions than has hitherto been the case.

In the case of lamps which contain loops or similarly shaped or bent conductors it is well known that the radiation of light from the lamp is very uneven, this being due to the fact that the sides of the loop or arch lie in the same vertical plane, so that the amount of radiating-surface presented in different directions is greatly varied. To overcome this objection and still preserve the simple arch or loop form, I impart to the carbons a bend or twist of such character that they will be distorted so as to present a nearly-uniform amount of radiating-surface in all directions.

In the accompanying drawings the best manner in which the invention is or may be carried into effect is illustrated as applied to an incandescent lamp containing a carbon produced by a special method of manufacture.

Figure 1 illustrates a complete lamp made according to my invention; Fig. 2, a view of the conductor in condition for mounting; Fig. 3, a side view of the same; and Fig. 4 represents a slightly different shaped conductor ready for mounting.

The conductors which I employ are flat narrow strips of highly-flexible carbon, though other forms may be used, as will be seen. The clamping-surfaces of the two wires sealed in the lamp-base are caused to lie in the same line. If one end of the carbon strip be attached to one of the clamping-surfaces, it will be necessary, in order that the other end may be brought

in contact with the remaining clamping-surface, to twist or bend the strip so that it presents the appearance of that shown in Figs. 2 and 3. The ends of the strip in this case are twisted one-quarter of a turn with respect to the center or bow of the strip. Ordinarily the clamping-surfaces are parallel, and the wires are so situated that the carbon may be clamped to them without other bending than that which produces the arch or loop. In the present case, however, it will be seen that the clamping-surfaces lie in line, or in a plane at right angles to their former positions. Whatever may be the general shape of a carbon conductor that is bent from a straight strip into loop form, it is caused to assume approximately the same appearance as that of the strip shown in Figs. 2 and 3 when it is mounted in a similar manner to that above set forth, or when its ends are twisted in the same direction one-fourth of a turn and secured to the clamping-surfaces, having such relative positions as to maintain in the carbon the twist imparted to it. With carbons that are cut out in the shape of loops from flat sheets the above method of mounting is varied to the extent that the clamping-surfaces of the wires must be parallel. If these carbons be mounted on wires the clamping-surfaces of which are parallel, a somewhat similar effect will be produced. The invention is, however, especially applicable to bent carbons, and has accordingly been illustrated by reference to these alone.

In the drawings, A designates a lamp-globe; B, the base containing the conducting-wires. C C are the wires; c c, the clamps connected therewith, and D the carbon conductor.

In Fig. 2 the conductor D is shown as a narrow strip with enlarged clamping ends d, while in Fig. 4 the strip is of uniform width, but having clamping ends of greater density; and so other simple changes in the character and shape of the carbons might be made without departing from the invention.

When a carbon is bent and mounted as above described its general shape will be such that nearly the same amount of radiating-surface is exposed in all directions. The strip is not strained by the bendings nor injured in any way.

I am fully aware that heretofore carbons twisted in the form of a spiral along varying portions of their length have been used in incandescent lamps. Such a configuration, however, differs widely from that described by me, nor are the same results attained thereby.

Having now described my invention, what I claim is—

1. In an incandescent lamp, a loop or arch shaped conductor having its ends twisted one-quarter of a turn with respect to the center or bow of the loop, in combination with clamping-surfaces adapted to maintain the loop in its distorted condition, substantially as hereinbefore set forth.

2. In an incandescent lamp, a flat carbon strip bent into a loop, and having its ends twisted one-quarter of a turn with respect to the center or bow of the loop, in combination with metallic clamping-surfaces arranged to maintain the loop in a distorted condition, whereby a more uniform amount of radiating-surface is obtained, as set forth.

In testimony whereof I have hereunto set my hand this 18th day of July, 1882.

EDWARD WESTON.

Witnesses:

HENRY A. BECKMEYER,  
JOHN C. YOUNG.