

(No Model.)

J. A. PIERCE.
ELECTRIC ARC LAMP.

No. 479,659.

Patented July 26, 1892.

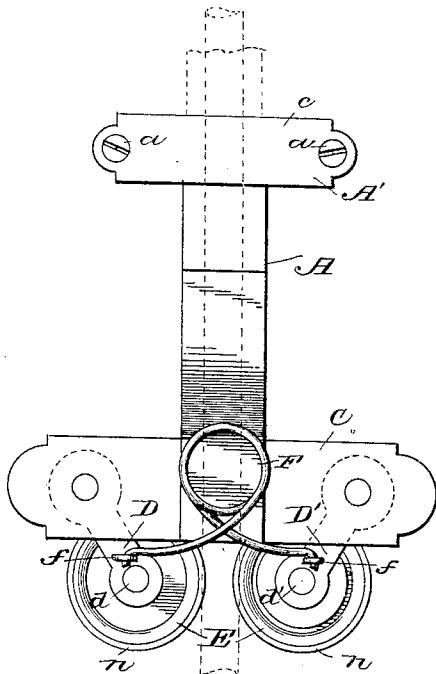


Fig. 1.

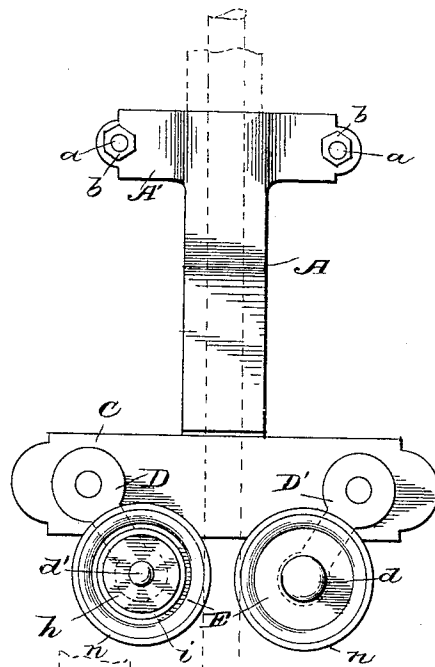


Fig. 2.

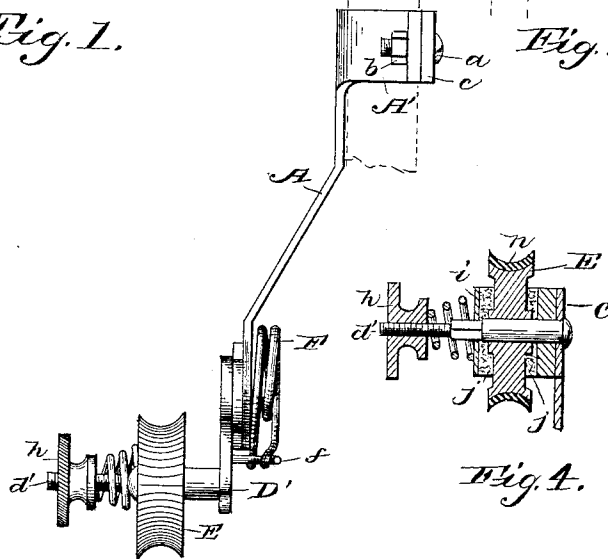


Fig. 3.

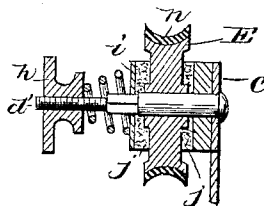


Fig. 4.

Witnesses:
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UNITED STATES PATENT OFFICE.

JONATHAN A. PIERCE, OF AUSTIN, MINNESOTA.

ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 479,659, dated July 26, 1892.

Application filed October 15, 1891. Serial No. 408,803. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN A. PIERCE, a citizen of the United States, residing at Austin, in the county of Mower and State of Minnesota, have invented certain new and useful Improvements in Carbon-Feed Regulators for Electric-Arc Lamps, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object to provide a device whereby the feed for the carbon electrodes of electric-arc lamps may be rendered steady, so as to avoid such sudden movements of the said electrodes as will cause flickering of the lights. To this end I provide a suitable bracket or holder, which may be attached to the frame of the lamp and to which are pivotally attached swinging arms carrying rollers pressed together by a suitable spring attached to said arms, said rollers being grooved so as to properly embrace the electrode and being covered with soft rubber or other elastic material, so as to have the proper frictional grip upon the electrode. In order that these rubber-covered rollers may run with a suitable friction, so as to give a regular and even motion to the carbon in feeding, I provide a tension-spring, which serves to exert a proper pressure of one of the rollers against felt washers, between which it is held. The tension-spring encircles a threaded pin, on which is placed a regulating-nut, whereby the tension of the spring may be varied to produce a greater or less frictional drag upon the rollers.

In the accompanying drawings, Figures 1 and 2 are opposite views of a suitable bracket with my improved regulating device applied thereto. Fig. 3 is a side view of the same, and Fig. 4 is a detail sectional view.

A denotes a bracket provided with a clamping portion A', adapted to surround a portion of the framework of the lamp (said portion of the framework being denoted in dotted lines in Fig. 3) and to be secured thereto by means of the screws a, provided with nuts b and by which the clamping-bar c may be tightened against the framework. To a cross-bar C on the lower portion of the bracket A are pivoted two arms D D', provided at their lower ends with suitable pins d d', on which are mounted

the rollers E, said rollers being pressed together to embrace a carbon electrode (denoted by dotted lines) by means of a spring F, the hooked ends of which engage suitable pins or projections f on the said swinging arms. The pin d' is made of suitable length to receive a coil-spring and is threaded for the reception of a regulating thumb-nut h, said spring pressing against a metallic washer i, between which latter and the outer face of one of the wheels E is interposed a felt washer j, a second felt washer k being interposed between said roller and a boss m on the arm D'. By varying the position of the nut on the threaded portion of the pin d the pressure of the felt washers may be regulated, as may be desired, to secure any proper frictional drag upon the roller to give a steady movement to the feed. The rollers E are provided with a covering n, of soft rubber or other suitable elastic material, which exerts a yielding pressure upon the carbon electrode, and therefore secures a proper grip action of the rollers against the same.

I am aware that it is not broadly new to provide a regulating device for carbon electrodes in electric-arc lamps consisting of spring-pressed rollers between which the electrode runs, and I do not therefore claim this feature, broadly; but

What I do claim, and desire to secure by Letters Patent, is—

1. A carbon-feed-regulating device for electric-arc lamps, consisting of the combination, with the bracket A, provided with the cross-bar C, of the swinging arms D and D', pivoted to said cross-bar and provided with pins, the rollers E, journaled on said pins and having coverings of soft rubber or other suitable elastic material to exert a proper yielding pressure or grip action against the carbon electrode, and a spring F for forcing said rollers toward each other.

2. In an electric-arc lamp, the combination, with spring-pressed rollers between which the carbon electrode is placed, of friction-washers between which one of the said rollers is held, a spring for exerting a proper frictional pressure of said washers against said roller, and an adjusting-nut serving to regulate the pressure of the said spring.

3. The combination, with the bracket A, of

the swinging arms pivoted thereto and provided with suitable pins, the rubber-covered rollers journaled on said pins, the spring F for pressing said rollers toward each other,
5 and an adjustable tension-spring and friction pads or washers to vary the frictional drag on said rollers.

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

JONATHAN A. PIERCE.

Witnesses:

LYMAN D. BAIRD,
A. C. PAGE.