

(No Model.)

A. P. SEYMOUR.  
ARC LAMP ATTACHMENT.

No. 427,195.

Patented May 6, 1890.

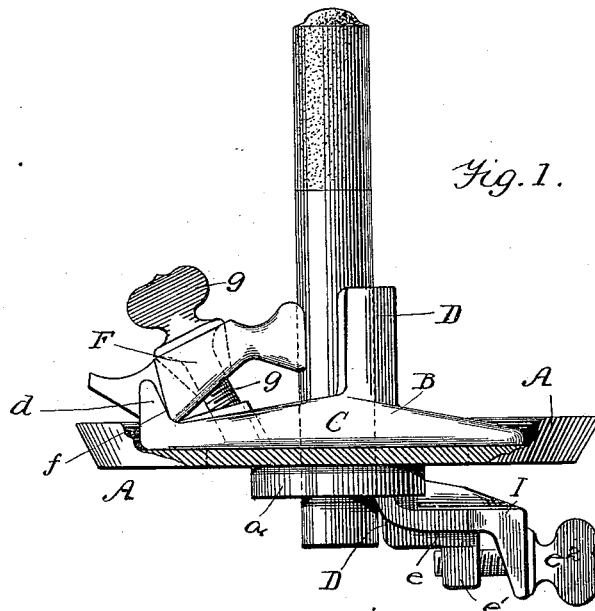


Fig. 1.

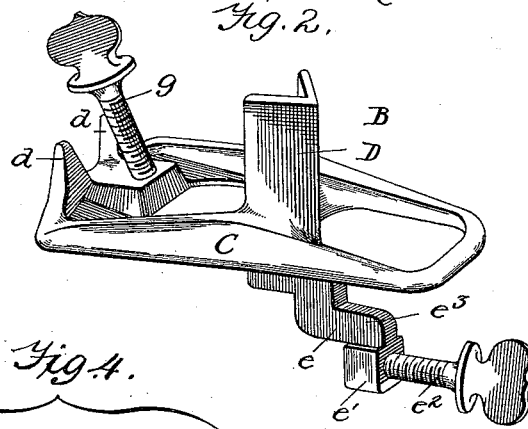


Fig. 2.

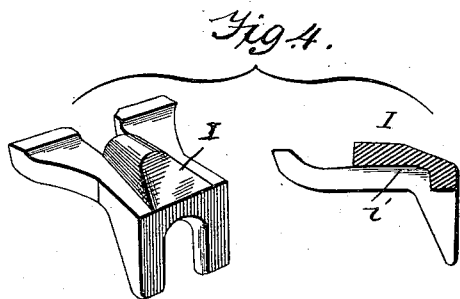


Fig. 4.

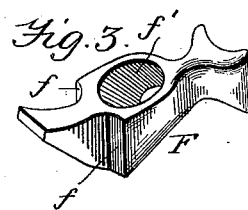


Fig. 3.

WITNESSES:

*Frank S. Ober*  
*Thomas K. Trinchard*

INVENTOR

*Albert P. Seymour*

BY

*W. D. Johnston*

ATTORNEY.

# UNITED STATES PATENT OFFICE.

ALBERT P. SEYMOUR, OF SYRACUSE, NEW YORK.

## ARC-LAMP ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 427,195, dated May 6, 1890.

Application filed February 11, 1890. Serial No. 339,990. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT P. SEYMOUR, a citizen of the United States, residing in Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Carbon-Holders for Arc Lamps, of which the following is a specification.

The object of my invention is to provide a holder for the lower or negative carbon of an arc lamp, which is simple in construction, few in parts, readily adjustable by the lamp-trimmer, and in which the lower carbon may readily be centered with relation to the upper carbon without the usual necessity of removal of the globe, also to prevent by suitable protection the clamping-screws, which hold the carbon in position, from becoming clogged or corroded by the accumulation of carbon-dust or waste from the arc or droppings from the copper coating of the carbons.

With these objects in view the carbon-holder consists of a pan or receptacle for catching the carbon-dust and other waste from the arc. This pan has an elongated opening in its center, through which the clamping device passes and in which it is centered. The clamping device consists of a bracket or frame having an upright fixed jaw, between which and an adjustable jaw the rod is clamped. The frame rests in the pan, but has an integral tail-piece or pendant which extends downward through the opening in the pan and engages with another clamping device which locks the frame when it has once been centered.

Referring to the accompanying drawings, Figure 1 is a side elevation of the device with the pan or receptacle partially broken away. Fig. 2 is a perspective of the clamping-jaw and screws with clamping-arms removed. Fig. 3 is a perspective view of the movable clamping-arm for holding the carbon in position, and Fig. 4 is a perspective of the clamping-arm for maintaining the carbon-clamp centered.

A is the pan or receptacle supported by or forming a part of the lower end of an arc lamp, having raised edges and an opening through the center, as shown by dotted lines. On the inside of this pan rests the clamping device B, which consists of an elongated skel-

eton plate or frame C of substantially rectangular shape. In the center of this plate and projecting above it is an angular jaw D, forming a seat against which the carbon is held. Directly in front of this angular jaw and at the end of the plate are formed two lugs *d d*, between which is placed a movable clamping-jaw F. The lower edge of this jaw bears against the base of the lugs, and shoulders *ff* prevent it from sliding outward between them. A tail-piece extends between the lugs, which serves as a finger-piece to tilt the jaw, and also prevents lateral movement of the same. The forward end of the jaw F is concaved or arc-shaped to form a cylindrical seat for the carbon rod. In order to adapt this seat to the standard commercial sizes of carbons—viz., one-half and seven-sixteenths of an inch in diameter—the upper and lower edges of the jaw are formed on the arcs of different circles, the lower edge being on a radius of one-half an inch and the upper edge on a radius of seven-sixteenths of an inch. The jaw is clamped by means of a screw *g*, which works in a threaded hole in the frame C. It passes through an enlarged opening *f'* in the body of the jaw, and is formed with a cross-head or flange on its outer end, which bears upon the back of the jaw when the screw is tightened. This flange, furthermore, covers the hole in the jaw, and thereby prevents carbon-dust, copper-drippings, and other foreign substances from clogging the screw. When the screw is tightened, the jaw swings toward the rod on its bearing-points at the base of the lugs *d d*, and in its clamped position stands oblique to the rod, thereby requiring but little pressure of the screw to hold the rod. The angular jaw D extends downward through the opening in the center of the pan in the form of a lug, and carries a laterally-extending bracket *e*, which at its outer end extends downward and forms a boss *e'*, in which a horizontal threaded hole is formed to receive a screw *e<sup>s</sup>*.

I represents an entirely loose and separate piece, which acts as a lever, in conjunction with the parts just described, to hold the frame C in any position in the pan. In the under side of the body of this piece a socket *i* is formed, within which rests the shoulder *e<sup>s</sup>*. This piece therefore rides on the bracket

e. The forward end of the piece is bifurcated and straddles the lug depending from the frame C. It rests against the under side of a flange *a*, formed around the opening in the pan. The rear end of this piece is bent downward, and is also bifurcated and straddles the screw *e*<sup>2</sup>. Now, when the screw *e*<sup>2</sup> is tightened up, the tendency will be to swing the piece I upon the shoulder of bracket *e*<sup>1</sup> as a pivot; but inasmuch as the forward end of the piece I cannot move upward the effect upon the bracket *e* and the frame C will be to draw them downward against the pan. The leverage thereby obtained is very great, and the frame may thus be securely locked in position.

In order to adjust the frame for the purpose of centering the carbon, the screw *e*<sup>2</sup> is loosened, and this immediately loosens the frame, which may be moved around until the proper adjustment is made. It will be observed that the piece I and the pan thoroughly protect the screw *e*<sup>2</sup> from falling particles of foreign matter.

In setting a carbon the hand may be passed down through the globe of the lamp to loosen the screw *g*. The carbon is then readily removed, and to insert a new one the tail-piece of the jaw F is pushed downward, thus opening the space between the two jaws to admit the rod.

It will be observed that this device can be

manufactured at a very small cost, in view of the fact that the parts are separate and are of such nature that they may be cast. Very little machine-work is necessary to fit them together.

Having thus described my invention, I claim—

1. The combination, with the pan or frame and the frame C, of the piece I and the screw *e*<sup>2</sup>, the piece I being pivoted upon the frame C and acting in combination with the screw and the pan to hold frame C in place.

2. The frame C, provided with seat D and lugs *d d*, in combination with the jaw F, having shoulders *f f*, and a tail-piece fitting the lugs *d d*, and screw *g*, substantially as described.

3. In a carbon-holder for arc lamps, the combination, with a frame having a fixed seat at one end and a lug at the other end, of a jaw shaped at one end to fit said lug and at the other end to fit the carbon, and a screw passing through said jaw between its ends and entering the frame, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ALBERT P. SEYMOUR.

Witnesses:

JOHN C. KEEFE,  
ARTHUR J. KEEFE.