

(No Model.)

J. C. KNIGHT.
CARBON HOLDER.

No. 543,186.

Patented July 23, 1895.

Fig. 1.

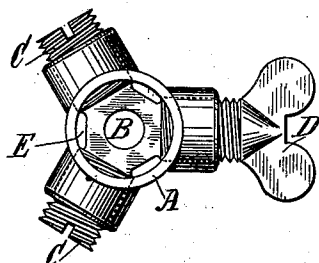


Fig. 2.

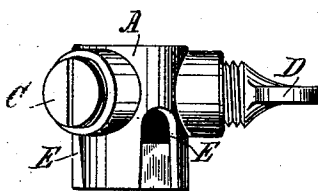


Fig. 3.

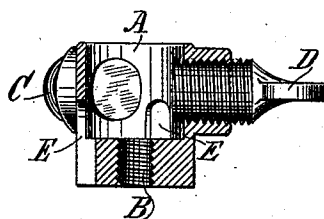
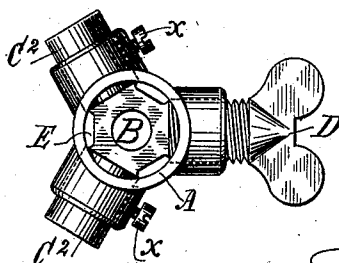


Fig. 4.



WITNESSES:

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CARBON-HOLDER.

SPECIFICATION forming part of Letters Patent No. 543,186, dated July 23, 1895.

Application filed January 15, 1895. Serial No. 535,023. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. KNIGHT, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented a certain new and useful Improved Carbon-Holder, of which the following is a specification.

My invention relates to that class of devices commonly known as "carbon-holders" for clamping or securing in place the carbons in an electric-arc lamp.

The object of the invention is to provide a simple, cheap, and effective carbon-holder adapted to clamp carbons of various diameter and form good contact with the same, no matter what the size, as well as to accurately center the carbon in its holder in alignment with the opposite carbon.

The invention consists in the construction and combination of parts, as hereinafter fully described, and set forth in the claim.

In the drawings which accompany this application and form a part thereof, Figure 1 represents a plan of my improved carbon-holder. Fig. 2 represents a side elevation thereof. Fig. 3 represents a vertical central section. Fig. 4 represents in plan a modified form.

A designates the body portion of the holder, which is provided at its upper end with a socket for receiving the carbon and at its lower end with any suitable means for securing it to the frame of the lamp or to a carbon-carrier such means in this instance being a screw-threaded aperture B, which may receive a threaded stud upon said frame or on the end of the carbon-carrier. Through the walls of the socket are passed the clamping means, which may consist of three screws, C, C, and D, turning in suitable screw-threaded bosses and bearing radially upon the carbon, thus causing them to converge toward the center of the socket. Two of said screws I have shown as provided with nicks and the third one D as provided with a thumb-piece. This of course is a matter of choice, but for simplicity and economy of manufacture this form is deemed to be the preferable one. The screws might all be provided with thumb-pieces or all provided with nicks, but when

the screws have been set for a certain size of carbon it will only be necessary to operate one of the screws for removal of the old carbon and insertion of the new. The screws C, having been set by a screw-driver to the proper position for a certain size of carbon, they will not need to be moved until a carbon of different diameter is inserted or until the carbon-carriers through some accident or in consequence of the wearing of parts get out of alignment. It will be noted also that the socket is shown provided with bosses for receiving the screws. Instead of providing these bosses the wall of the socket may obviously be made sufficiently thick to properly hold the screws, the screws being placed at an angle of one hundred and twenty degrees apart.

In the place of screws C C, I may use other individually-adjustable devices—as, for instance, rods C² C² passed through bearings in the wall of socket A, as seen in Fig. 4, and retained in any desired position by means of the set-screws x x. In connection with these rods I prefer to use the set-screw D. Obviously it may be replaced by a third rod and set-screw.

The faces of the clamping devices are of considerable area, so as to provide extended contact-surfaces.

By the arrangement of the clamping devices about the socket at an angle of one hundred and twenty degrees, the screws C C or rods C² C² being once set, a new carbon is readily brought into alignment by being forced into the angle between the ends of the aforesaid screws or rods by turning the thumb-screw D. For this purpose the clamping devices are most conveniently placed at the aforesaid intervals, but they may be placed at different intervals so long as the screw D bisects the angle made by the opposing devices. I have shown also the socket provided with holes E at its bottom, through which dirt or dust may be easily discharged.

The holder, as above described, provided with the screw-threaded opening, can be readily attached to the frames and rods of most of the arc lamps now in use but to adapt said holder to other lamps the means for securing

it in place may obviously be changed without departing from my invention.

What I claim as my invention is—

5 A carbon holder for electric arc lamps, consisting of a socket provided with means for securing it to the rod or frame of a lamp and with dust discharge openings at its bottom, and set-screws extending through bosses located on the walls of the socket at one hundred and twenty degrees apart two of which

screws are adapted to be set for a particular size of carbon while the third is in the form of a thumb-screw for frequent manipulation.

Signed at New York, in the county of New York and State of New York, this 14th day 15 of January, A. D. 1895.

JOHN C. KNIGHT.

Witnesses:

WM. H. CAPEL,
HENRY T. HIRSCHY.