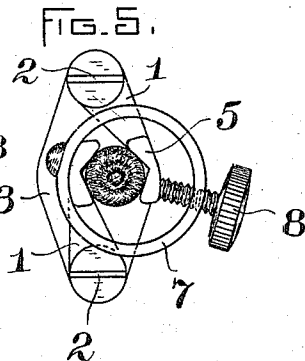
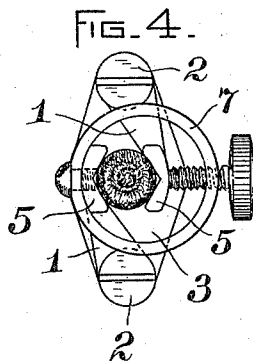
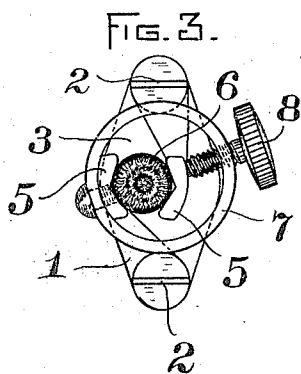
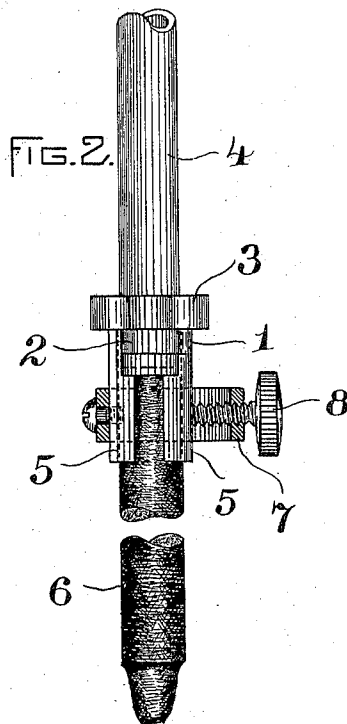
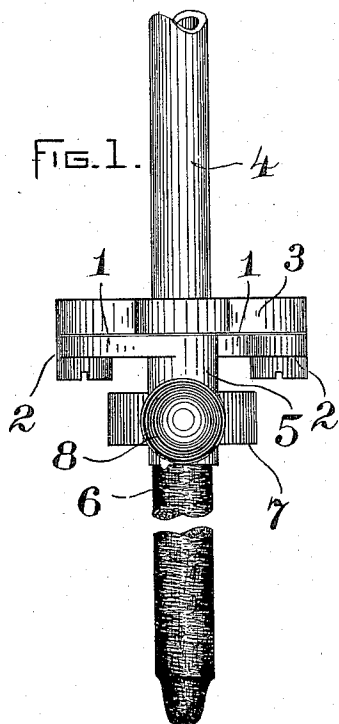


(No Model.)

C. E. HARTHAN.
CARBON HOLDER.

No. 579,267.

Patented Mar. 23, 1897.



WITNESSES.
Henry Westerdar.
B. B. Hill.

INVENTOR-
Charles E. Hartman,
By R. B. Hill,
Atty.

UNITED STATES PATENT OFFICE.

CHARLES E. HARTHAN, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE
GENERAL ELECTRIC COMPANY, OF NEW YORK.

CARBON-HOLDER.

SPECIFICATION forming part of Letters Patent No. 579,267, dated March 23, 1897.

Application filed October 14, 1896. Serial No. 608,795. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. HARTHAN, a citizen of the United States, residing at Lynn, in the county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Carbon-Holders, (Case No. 473,) of which the following is a specification.

This invention relates to a class of devices known as "carbon-holders" for clamping or securing in place a carbon in an electric-arc lamp.

The object of the invention is to provide a simple and effective carbon-clamp by means of which one of the carbons can be adjusted in a proper position relatively to the other carbon, so that the two will be located in accurate alinement.

The invention consists in a carbon-holder constructed and arranged as hereinafter set forth and claimed.

Referring to the accompanying drawings, Figure 1 is a view in elevation of a clamp constructed in accordance with this invention. Fig. 2 is a view in elevation showing the device in vertical section. Figs. 3, 4, and 5 are plan views looking at the under side of the device and illustrating the manner of moving the carbon to the desired position in alinement with the other carbon.

The invention broadly contemplates a carbon holder or clamp in which one of the carbons may be inserted and held, the clamp and carbon being capable of being moved to the desired position of alinement with the other carbon and then secured or locked in fixed position.

To illustrate the manner of carrying out the invention, the clamp is shown as consisting of two movable members or swinging arms 1, each pivoted at one end, as at 2, to the head 3 of a supporting-rod 4 of an arc-lamp. These swinging arms 1 are provided with or formed at their inner swinging ends with a suitably-shaped clamping-head 5, as hereshown of a V shape, between which heads 5 a carbon 6 may be inserted and clamped. It is purposed that these two arms 1 and the inserted carbon 6 may be swung across the face of the head 3 to locate the carbon in its proper position. Any suitable means is pro-

vided for connecting them together, as here shown consisting of a ring 7 or other suitably-shaped connecting-piece, which is secured to one of the arms 1 and is provided with a set-screw 8, bearing against the head 5 of the opposite arm 1.

The operation of the device is as follows: The carbon being first inserted between the jaws or heads 5 of the arms 1, as shown in Fig. 3, and the set-screw 8 impinging against the head 5 just enough to hold the carbon 6 between the heads 5, in this position the carbon and the clamping members may be moved freely across the face of the head 3 to any position throughout the range of movement in a line at right angles to a line extending through the pivotal points 2. To adjust the carbon in position relatively to the lower carbon, so that it will be placed in accurate alinement therewith, the carbon 6 is moved from the position shown in Fig. 3 to that in Fig. 4, and so on, until the accurate position shown in Fig. 5 is reached, and the carbon is then securely clamped or locked in place by screwing up the set-screw 8. It will be seen that in this movement just described the jaws or clamping-heads 5 move about the carbon 6, and the ring 7, swinging with the supporting-arm 1, brings the impinging end of the set-screw 8 against the lower part of one of the clamping-heads 5, as shown in Fig. 5. By means of this construction the carbon may be readily placed in position in the clamp and moved to a position in accurate alinement with the other carbon and there held immovably by the set-screw 8.

The invention broadly contemplates a movable clamp of any construction which will operate as hereinbefore described and any means for locking the clamp in place after the carbon has been moved to a position in accurate alinement with the other carbon.

The clamping-heads 5 having a bearing portion against the carbon of a V shape it will be noted that the carbon is automatically centered between the pivots 2, thus enabling any size of carbon to be used, such as one-half inch, five-eighths inch, seven-sixteenths inch, &c., while the adjustment to positions at right angles to the line joining the pivots 2 is made in the manner before described.

What I claim is—

1. The combination with the head of the carbon-holder of an arc-lamp, of a clamp consisting of arms pivoted to said head and having at their inner ends clamping-heads, a third member secured to one of said clamping-heads, and a set-screw mounted in said third member and adapted to hold one of said clamping-heads against a carbon inserted between said clamping-heads and to lock the heads and carbon together, as set forth.

2. The combination, with the head of a carbon-support for arc-lamps, of a pair of swinging arms pivoted at one end to said head and

having clamping jaws or heads at their inner ends between which the carbon is to be inserted and held, and movable therewith, a ring secured to one of said clamping-heads, and a set-screw mounted in said ring and impinging against the opposite clamping-head, as set forth.

In witness whereof I have hereunto set my hand this 12th day of October, 1896.

CHARLES E. HARTHAN.

Witnesses:

JOHN W. GIBBONEY,

HENRY O. WESTENDARP.