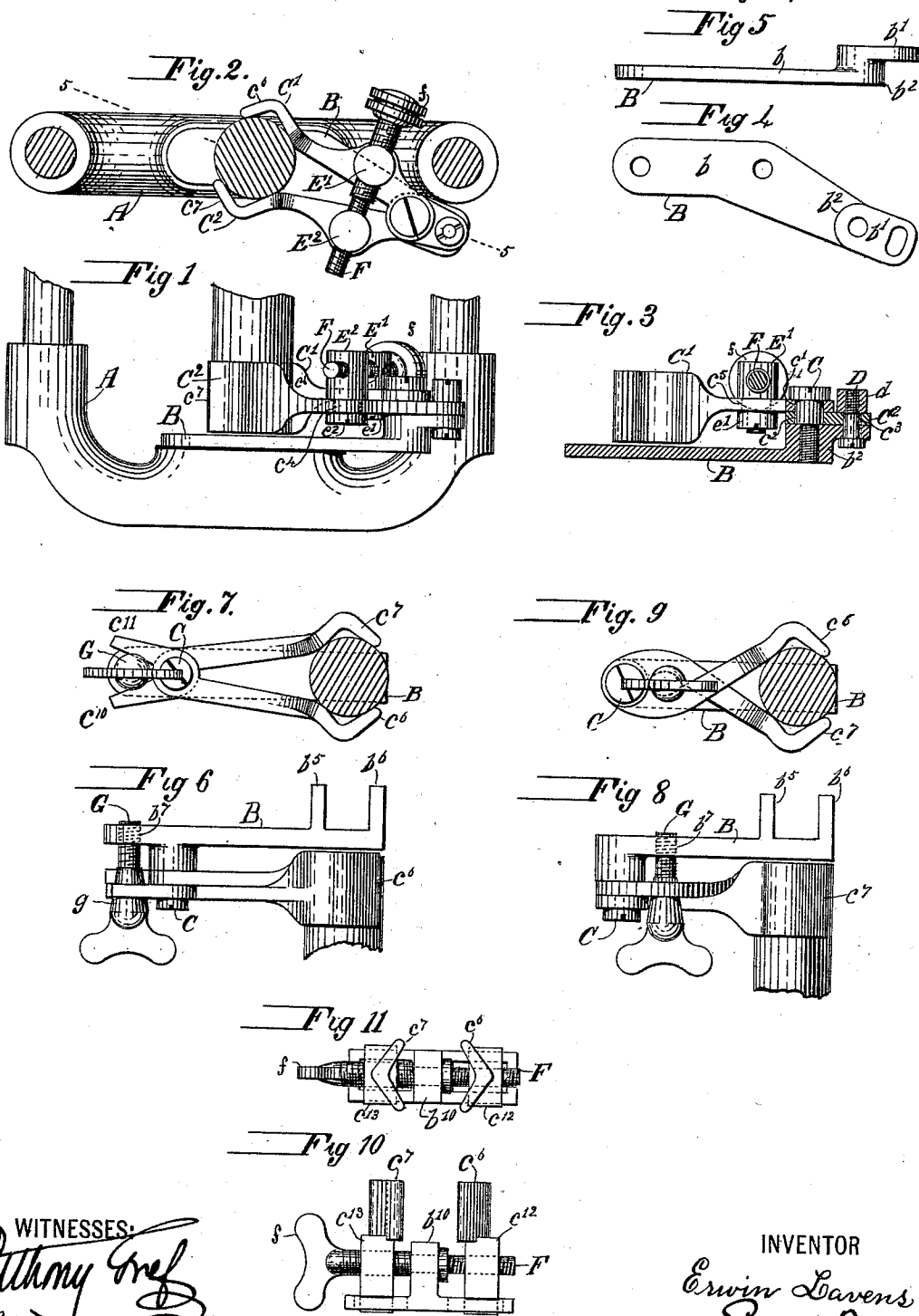


(No Model.)

E. LAVENS.
CARBON HOLDER FOR ARC LAMPS.

No. 519,334.

Patented May 8, 1894.



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CARBON-HOLDER FOR ARC LAMPS.

SPECIFICATION forming part of Letters Patent No. 519,334, dated May 8, 1894.

Application filed September 30, 1893. Serial No. 486,925. (No model.)

To all whom it may concern:

Be it known that I, ERWIN LAVENS, of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Carbon-Holders for Electric Lamps, of which the following is a specification.

I will describe a carbon holder embodying my improvement and then point out the novel features in the claims.

10 In the accompanying drawings Figure 1 is a side view of a carbon holder embodying my improvement, and this view also includes a side view of a part of a lamp on which it is used. Fig. 2 is a plan or top view of this carbon holder and said part of a lamp. Fig. 3
15 is a vertical section taken at the plane of the line 5, in Fig. 2. Fig. 4 is a plan or top view of the base piece or supporting piece of the carbon holder. Fig. 5 is an edge view of the
20 base piece. Fig. 6 is a side view of a carbon holder embodying my improvement in modified form. Fig. 7 is a plan or top view of an example of my improvement shown in Fig. 6. Fig. 8 is a side view of a carbon holder, em-
25 bodying my improvement in another modified form. Fig. 9 is a plan or top view of the example of my improvement shown in Fig. 8. Fig. 10 is a side view of a carbon holder embodying the improvement in still another
30 modified form. Fig. 11 is a plan or top view of the latter modification.

Similar letters of reference designate corresponding parts in all the figures.

35 In Figs. 1, 2, 3, 4, and 5, A designates a part or appurtenance of the frame of an electric arc lamp of any suitable construction.

B designates the base piece or supporting piece for a carbon holder used with such lamp. Its shape and construction may be
40 best understood by reference to Figs. 4 and 5, where it will be seen, that it comprises a main plate-like portion *b*, capable of being fastened by screws, or other means, to a part
45 A of the electric lamp, and having a more elevated plate like portion *b'*. The portion intermediate of the two plate-like portions being made in the form of a cylindric hub *b''*. It will be seen that the plate like portion *b* is not straight, but is partly oblique. The ob-
50 ject of this feature of construction is to enable the carbon holder to be arranged obliquely

to the part A, so as to have more space than it could have if it were arranged entirely over said part.

C', C² designate two arms, which are pivot- 55 ally connected together by studs C, which, preferably, will consist of a screw passing through holes *c'*, *c''*, formed in said arms and engaging with a tapped hole in the hub-like portion *b''* of the base piece or supporting
60 piece B. Not only can the arms swing relatively to each other, but both may swing to one side about the screw C. This bodily swinging motion of the two arms relatively
65 to the base piece or supporting piece is advantageous because it enables the carbon, which is supported by the arms, to be brought into alignment with its fellow carbon. A
70 screw D passing through a hole *c''*, formed in the arm C² rearward of the screw C and passing through an arc-shaped slot, formed concentric to the pin and to the screw C, with-
75 in the plate-like portion *b'* of the base piece or supporting piece, and receiving a nut *d* below the latter, serves to clamp the two arms in position against bodily adjustment to-
80 gether after their proper position has been attained, but without interfering with the adjustment of the arm C' relatively to the arm C², for the purpose of gripping or releasing a
carbon.

Pivottally connected to the arms C', C², so as to project from one side thereof, are nuts E', E². These are here shown as made in the
85 form of cylinders, having tapped holes formed in them, transversely to their axes. These nuts may be connected with the arms in any suitable manner. I have shown them as being shouldered, so as to form cylindric ten-
90 ons or bosses which pass through holes *c''*, *c''*, formed in the arms and screw-threaded beyond the arms to receive nuts *e'*, *e''*, for retaining them in place.

F designates a screw having reverse screw threads near its ends for engaging with the
95 nuts. I have shown these screw threads as formed of portions of different diameters. At one end the screw is provided with a head *f* by which it may be conveniently turned. Obviously, by turning the screw in one direc-
100 tion the arms will be spread apart, and by turning it in the reverse direction, the arms

may be drawn together. The free or outer ends of the arms will be constructed in any suitable manner to form jaws c^6, c^7 . As here shown, the material of which the arms are made is flattened out and bent in an angle to form the jaws.

All the parts may be made of any suitable metal.

Turning now to Figs. 6 and 7, it will be seen that I use a similar construction, but that the base piece or supporting piece B is provided with jaws b^5, b^6 to enable it to grasp any part of the lamp arranged above it, a screw being employed to fasten it in place. In this example of my improvement, I dispense with the nuts e', e^2 , and the screw f , and in lieu thereof, I employ a screw G, which engages with a tapped hole b^7 in the base piece or supporting piece B, and is provided with a conical portion g , which, by turning the screw will be moved longitudinally between two extensions c^{10}, c^{11} of the jaws C', C^2 , these extensions being rearward of the pivot C. By this combination of parts, the jaws of the arms may be made to release or grip a carbon.

In Figs. 8 and 9, I have shown that the arms C', C^2 may be pivoted at the extreme ends, by means of the screw C and cross forward of the pivot in such a way as to leave a space intermediate of their cross portions, and said pivot screw. A screw D, like that already described, has a conical portion passing between the arms C', C^2 intermediate of where they cross each other and of their pivoted screw C, producing the same results as in the last previously described example of my improvement.

In Figs. 10 and 11, I have substituted for the arms C', C^2 , two sliding blocks c', c^2 , which are fitted to a base piece or supporting piece B that may be fastened in any desired manner to the part A of any other portion of a lamp, and in any suitable manner. The opposite faces of the blocks are concave to grasp a carbon.

F designates a screw, like the screw F, in that form of my improvement, which is illustrated in Figs. 1, 2, 3, 4 and 5; it has two reversely threaded portions, being engaged with tapped holes in the blocks c', c^2 . This screw is

supported in an upright projection b^{10} , formed within the base piece or supporting piece B. Only the portion of smaller diameter passes through the projection b^{10} ; the screw being held against longitudinal movement in one direction, by the shoulder formed on the end of the portion of larger diameter and against movement in the opposite direction by means of a finger b^{11} which is fastened to the portion of smaller diameter.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a carbon holder for an electric lamp the combination of a base piece or supporting piece, two arms, one pivotally connected to the other, and both being connected to the base piece or supporting piece, and means for oscillating the movable arm, substantially as specified.

2. In a carbon holder for an electric lamp the combination of a base piece or supporting piece, two arms, one pivotally connected to the other, and both being connected to the base piece or supporting piece, means for oscillating the movable arm, and a screw for adjusting the movable arm relatively to the other, substantially as specified.

3. The combination in a carbon holder for an electric lamp, of a base piece or supporting piece, two arms pivotally connected together, means for adjustably securing one of said arms to the base piece or supporting piece, and means for moving one of the arms relatively to the other, substantially as specified.

4. In a carbon holder for an electric lamp the combination of a base piece or supporting piece, two arms pivotally connected to each other and a cam or wedge movable between the said arms, so as to move one of them relatively to the other, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERWIN LAVENS.

Witnesses:

ANTHONY GREF,
S. A. PALMER.