

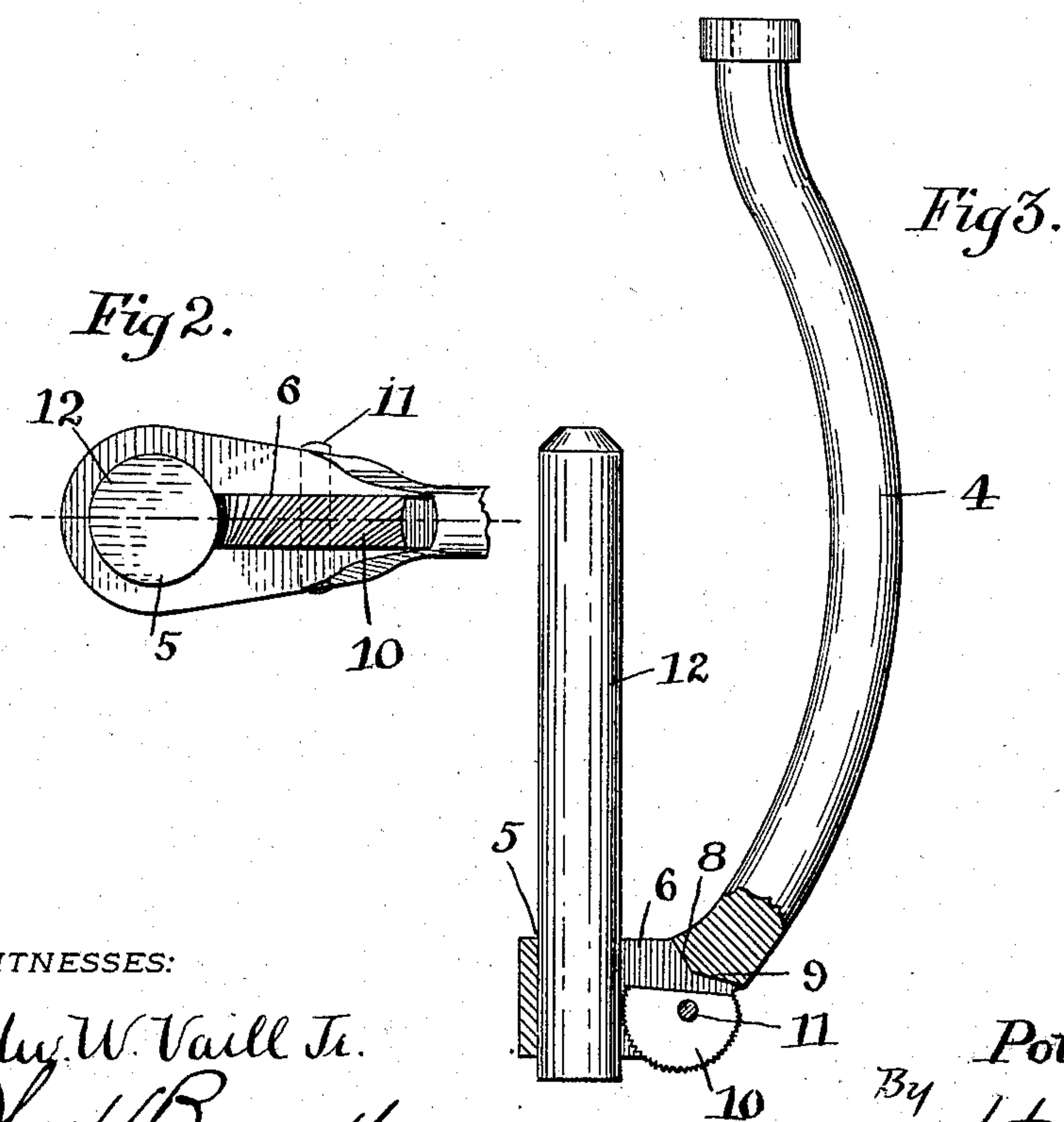
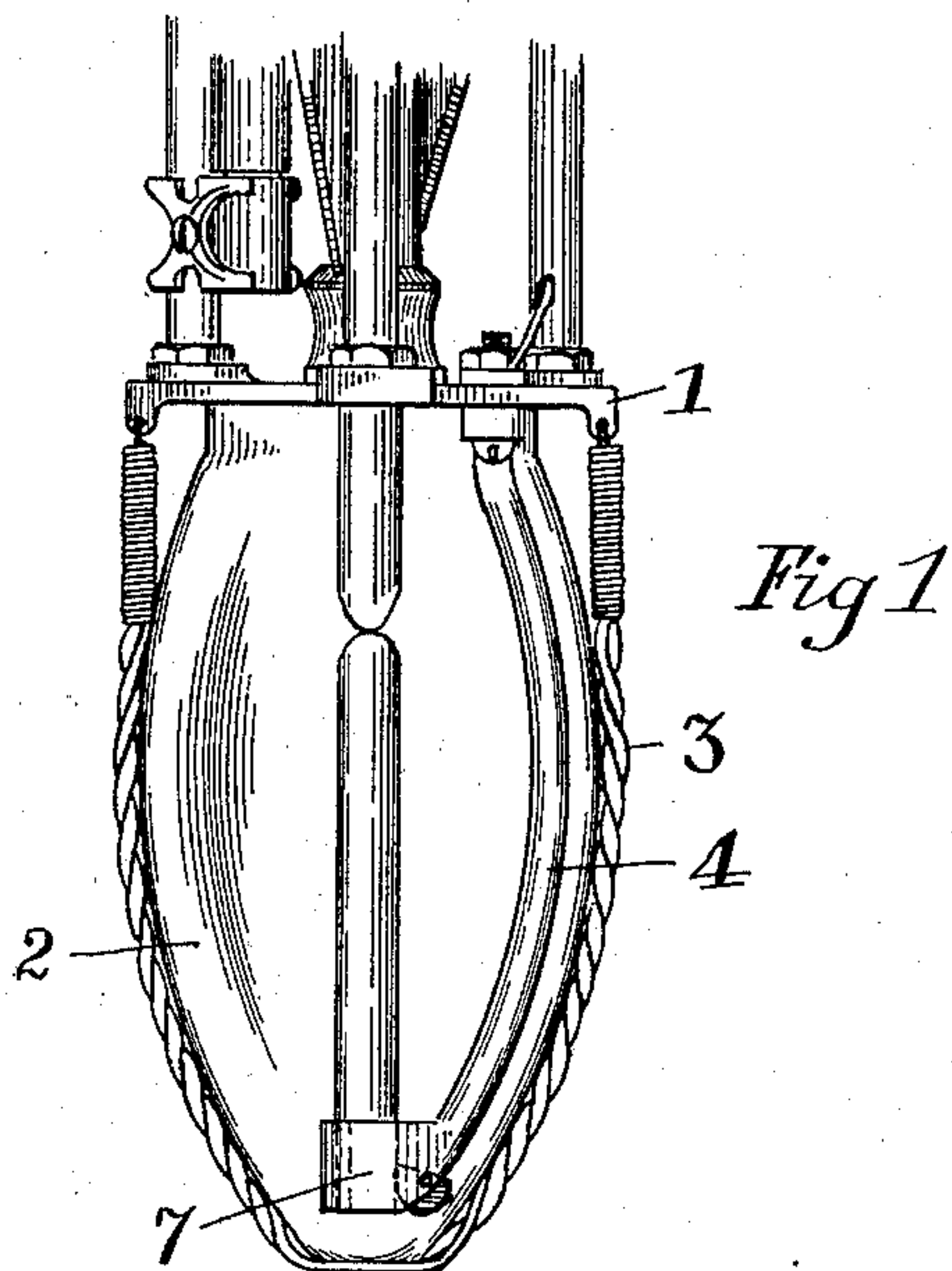
No. 717,233.

Patented Dec. 30, 1902.

P. F. MAINES.
HOLDER FOR ELECTRIC LAMP CARBONS.

(Application filed Mar. 14, 1902.)

(No Model.)



WITNESSES:

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POTTER F. MAINES, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
AMERICAN ELECTRICAL MANUFACTURING COMPANY, A CORPORATION OF DELAWARE.

HOLDER FOR ELECTRIC-LAMP CARBONS.

SPECIFICATION forming part of Letters Patent No. 717,233, dated December 30, 1902.

Application filed March 14, 1902. Serial No. 98,154. (No model.)

To all whom it may concern:

Be it known that I, POTTER F. MAINES, a citizen of the United States, and a resident of the city of Philadelphia, State of Pennsylvania, have invented certain new and useful
5 Improvements in Holders for Electric-Lamp Carbons, of which the following is a full and complete disclosure.

In general the object of my invention is the
10 production of a holder for carbons for arc-lamps, which will not only be more simple in construction, but will also be more efficient in operation than those heretofore used.

Further objects accomplished by my device
15 are a saving in time in the changing of the carbon and a more perfect and more reliable connections between the holder and the carbon under all variations of temperature due to the heating effect of the electric current.

For a full and detailed description of my invention reference may be had to the following specification and to the accompanying
20 drawings, forming a part thereof, in which—

Figure 1 is an elevation of the lower portion
25 of an arc-lamp, showing my improved holder in position. Fig. 2 is a bottom view of the socket portion of the holder; and Fig. 3 is an elevation of the holder detached, showing the socket portion in section, the section being
30 taken substantially on the line 3 3 of Fig. 2.

1 indicates the base-plate of a lamp, to which the arc-inclosing globe 2 is attached by means of the support 3. The lower-carbon-supporting arm 4 is attached to the plate 1 and is
35 suitably insulated therefrom, but included in the electric circuit. The lower end of the arm has an angular portion 7, through which passes the cylindrical opening 5, and a slot 6 communicating with said opening. The slot
40 6 extends partially through the arm portion forming the stops 8 and 9. Within the slot 6 is pivoted the cam-shaped piece 10, which in this instance consists of a semicircular piece having the axis or pivot upon which it turns
45 offset from its true center, so that as it rotates in an anticlockwise direction, as shown in Fig. 3, the distance from the axis to the periphery increases proportionately, thereby wedging the carbon 12 in position in the open-

ing 5. The edge of the cam-piece 10 may be
50 knurled or roughened in any suitable manner to give a good contact with the carbon and also to keep the fingers of the operator from slipping.

It will be noticed that in changing the car-
55 bon all that is necessary is to raise the same, thereby releasing the hold of the cam and allowing the carbon to be withdrawn from the opening 5. In inserting a new carbon the cam is held against the stop 8, the carbon in-
60 serted in the opening 5, and the cam then allowed to drop into position against the carbon. Any further downward pressure upon the carbon tends only to bind the same more
65 firmly in position.

Heretofore much trouble has been experi-
enced in holders for carbons by the expansion of the metal under the influence of the heat of the electric current and of the arc. When a screw or other similar fastening
70 means has been used, the expansion of the metal loosens the hold of the screw and allows the carbon to fall, thereby putting the lamp out of operation. The expansion of the parts also often binds the screw, so that the
75 same cannot be turned. By my device these difficulties have been overcome, and it will be obvious that as the metal expands the cam will be automatically adjusted to take a new
80 hold.

Having thus described my invention, what I claim to be new, and desire to protect by Letters Patent, is—

1. A carbon-holder for electric lamps, comprising a suitable support having an opening
85 therein to receive the carbon and a second opening adapted to receive a cam-shaped member, a cam-shaped member pivoted in said opening adapted to hold the carbon in said first-named opening substantially as de-
90 scribed.

2. A carbon-holder for electric lamps comprising a suitable support having an opening therein a slot communicating with said opening, an eccentrically-pivoted disk in said slot
95 adapted to hold the carbon in said opening, substantially as described.

3. A carbon-holder for electric lamps com-

prising a supporting-arm having an angular portion at its lower end, an opening in said portion to receive the carbon, a slot communicating with said opening, an eccentrically-
5 mounted disk having a straight portion, pivotally mounted in said slot and adapted to hold said carbon in said opening, substantially as described.

4. A carbon-holder for electric lamps comprising a supporting-arm having an angular
10 portion at its lower end, an opening in said portion to receive the carbon, a slot communicating with said opening, an eccentrically-

mounted disk having a straight portion, pivotally mounted in said slot and adapted to
15 hold said carbon in said opening and stops at one end of said slot adapted to limit the movement of said disk, substantially as described.

In witness whereof I have hereunto set my
20 hand this 12th day of March, A. D. 1902.

POTTER F. MAINES.

Witnesses:

EDW. W. VAILL, Jr.,
FREDK. C. EBERHARDT.