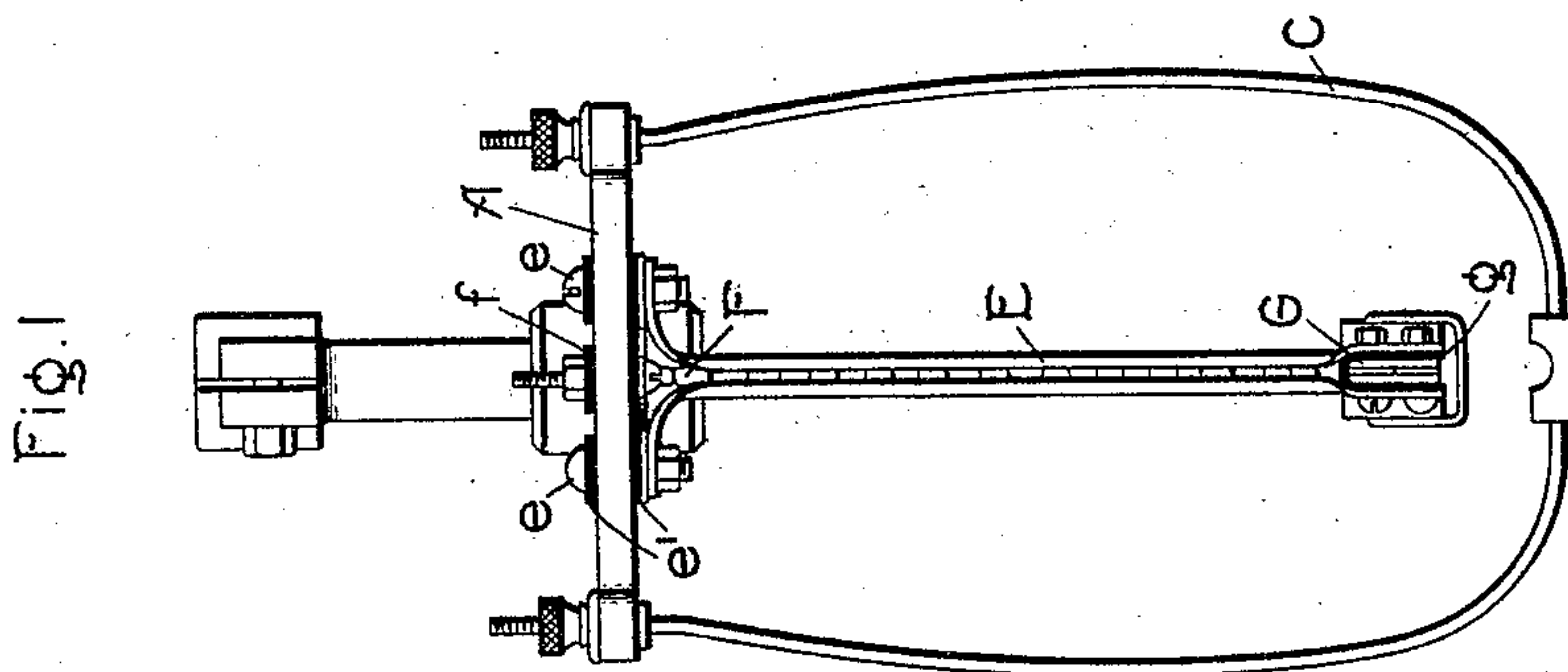
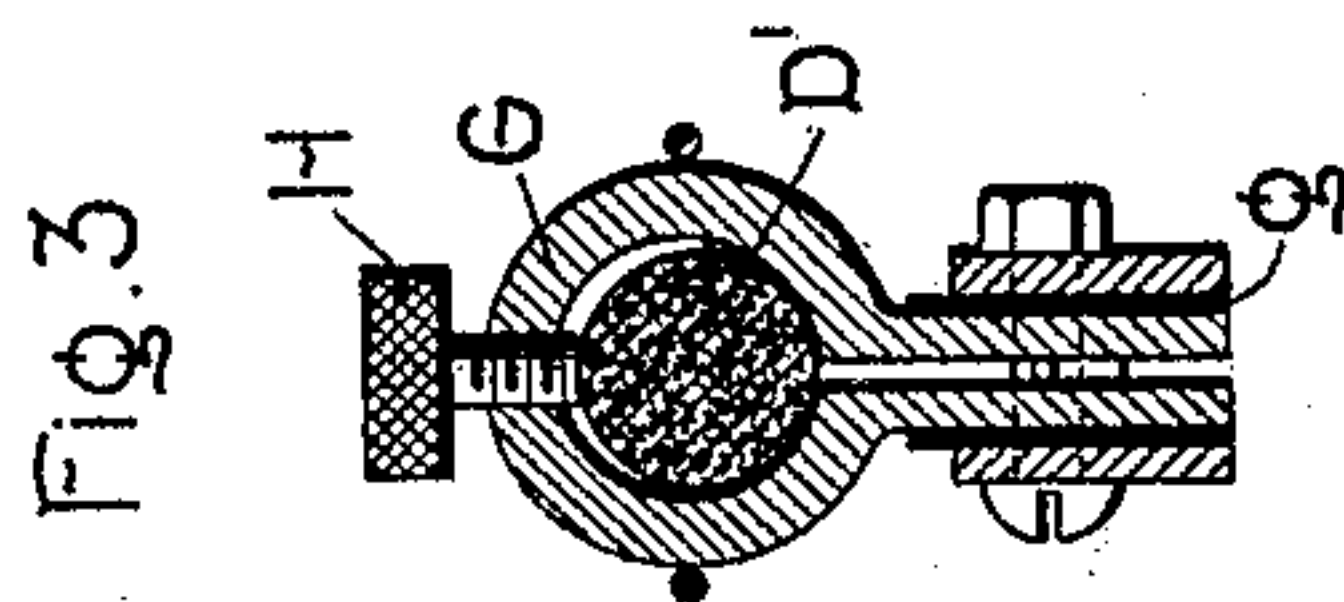
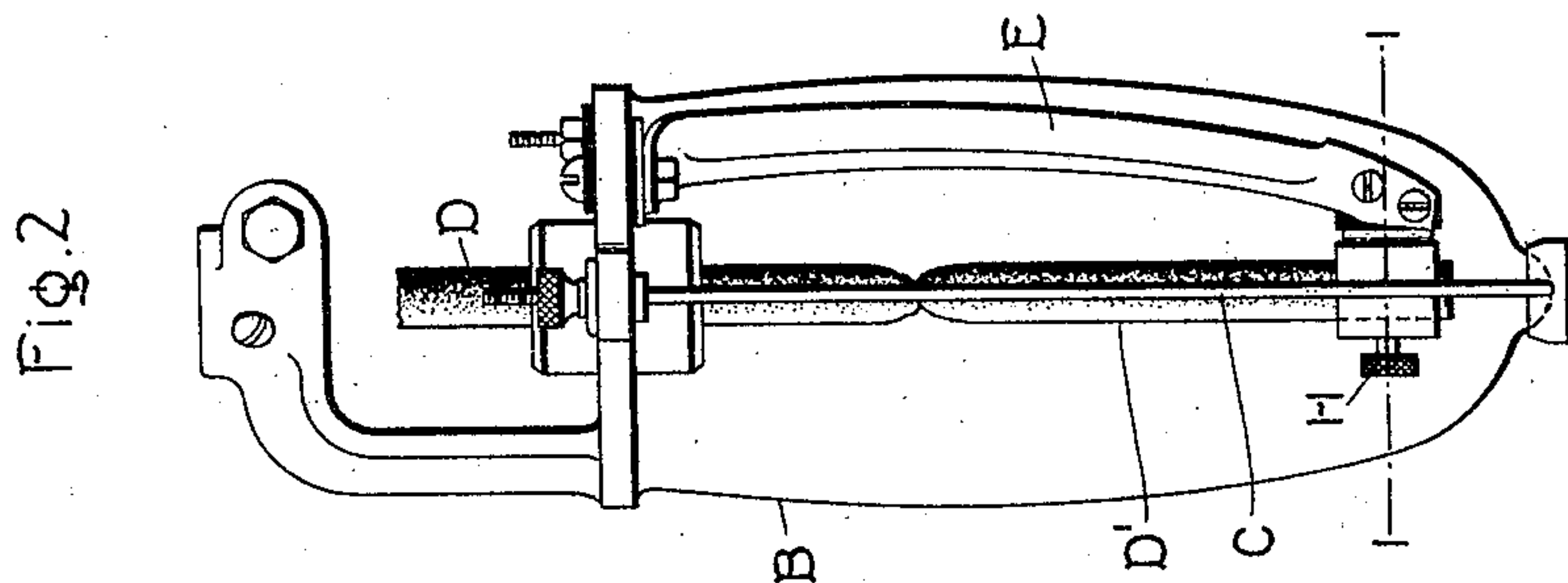


No. 822,240.

PATENTED JUNE 5, 1906.

S. H. BLAKE & G. R. DAVISON.
ARC LAMP.

APPLICATION FILED SEPT. 22, 1904.



Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL H. BLAKE, OF JERSEY CITY, NEW JERSEY, AND GEORGE R. DAVISON, OF PITTSFIELD, MASSACHUSETTS, ASSIGNORS TO GENERAL INCANDESCENT ARC LIGHT COMPANY, A CORPORATION OF NEW YORK.

ARC-LAMP.

No. 822,240.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed September 22, 1904. Serial No. 225,407.

To all whom it may concern:

Be it known that we, SAMUEL H. BLAKE, residing at Jersey City, county of Hudson, State of New Jersey, and GEORGE R. DAVISON, residing at Pittsfield, county of Berkshire, State of Massachusetts, citizens of the United States, have invented certain new and useful Improvements in Arc-Lamps, of which the following is a specification.

Our invention relates to electric-arc lamps and is particularly applicable to lamps of the inclosed-arc type. In this type of lamp the lead and support for the lower carbon are separated by only a small distance from the arc, and if the lead is not properly protected or if the support is not insulated from the lower carbon the arc is likely to spring from the upper carbon to the lead or support, thereby producing a short circuit and damaging the lamp.

The object of our invention is to provide a novel arrangement for supporting the lower carbon and for conveying the current thereto which shall be simple and cheap to construct, which shall properly protect the lead for the lower carbon from the arc, and which shall effectively insulate the lower carbon and lead from the casing, thereby rendering the lamp safer to handle.

Our invention will best be understood from the accompanying drawings, in which—

Figures 1 and 2 show side elevations of a carbon-support constructed in accordance with our invention, and Fig. 3 shows an enlarged detailed view in cross-section on the line 1 1 in Fig. 2.

In the drawings, A represents the plate or cap, against which the globe B (shown in Fig. 2) is pressed by the adjustable support C. The upper carbon D passes through this plate and is insulated therefrom in the usual manner.

E represents the support for the lower carbon, which may be stamped out from a single sheet of metal. This support E is split at both ends, as shown, the upper ends being bent back, so as to form ears by means of which the support may be conveniently attached to plate A by the screws *e e*. The support E is insulated from the plate A by the insulating-washers *e'*. The central portion of the support E is bent to form a V-shaped trough adapted to contain the lead F for the

lower carbon. The lead F is insulated from the support E by a number of insulated beads strung on lead F, as shown in Fig. 1. These beads may be of any suitable heat-resisting material, such as glass or porcelain. The lead F is insulated from plate A by the insulating-washers *f*. The split portion at the lower end of support E forms ears by means of which the lower-carbon holder G, which is formed as a split ring, may be firmly clamped in position. The support E is insulated from the split ring G by means of the U-shaped insulating-washer *g*. The lower end of lead F is clamped between the ends of split ring G, as shown in Fig. 3, thereby making excellent electrical contact therewith. The lower carbon D' is supported in the split ring G by means of the thumb-screw H. It will be seen that with this construction the lead F is fully protected from the arc, so that all possibility of a short circuit, due to the arc's springing to the lead, is avoided. Moreover, the support E is entirely insulated from the lower carbon, so that there is no tendency for an arc to spring to the support. Furthermore, the lower carbon, as well as the upper carbon, is effectively insulated from the frame, thereby rendering the lamp safe to handle.

What we claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an arc-lamp, a member having its central portion bent to form a trough and each end split to form a pair of ears, means for securing one set of ears to a support and for insulating said ears therefrom, a carbon-holder clamped between the other set of ears and insulated therefrom, and a lead for the carbon passing through said trough and insulated therefrom and in electrical connection with said carbon-holder.

2. In an arc-lamp, a member having its central portion bent to form a trough and each end split to form a pair of ears, means for securing one set of ears to a support and for insulating said ears therefrom, a split member clamped between the other set of ears, and insulated therefrom, a conductor passing through said trough and insulated therefrom and clamped within said split member, and a carbon supported by said split member.

3. In an arc-lamp, a support, a member

bent to form an inclosure for a lead secured at one end to the support but insulated therefrom, an electrode-holder secured to the other end of the member but insulated therefrom, and a lead passing through said inclosure but insulated therefrom and electrically connected to said electrode-holder.

4. In an arc-lamp, a support, a member having its central portion bent to form an inclosure for a lead, ears formed at one end of the member, means for securing the ears to said support and insulating them therefrom, an electrode-holder carried by said member at the other end thereof but insulated therefrom, and a lead for the electrode passing through said inclosure but insulated therefrom and electrically connected to said electrode-holder.

5. In an arc-lamp, a support, a member formed from a sheet-metal blank and bent to form a trough secured at one end to the support but insulated therefrom, an electrode-holder carried by the member at the other end thereof but insulated from the member, and a lead passing through said trough but insulated therefrom and electrically connected with said carbon-holder.

6. In an inclosed-arc lamp, a trough-shaped member, means for attaching one end of said member to a support and for insulating it therefrom, a carbon-holder secured to the other end of said member and insulated therefrom, a conductor disposed within said member and electrically connected to said holder, and insulating-beads on said conductor adapted to insulate said conductor from said member.

7. In an inclosed-arc lamp, a member split at both ends to form ears, means for attaching one set of ears to a support and for insulating them therefrom, a carbon-holder clamped between the other set of ears and insulated therefrom, a conductor disposed within said member and electrically connected to said carbon-holder, and insulating-beads on said conductor adapted to insulate said conductor from said member.

In witness whereof we have hereunto set our hands this 7th day of September, 1904.

SAMUEL H. BLAKE.

GEORGE R. DAVISON.

Witnesses:

SAMUEL E. WIDDIFIELD,
AGNES GORMAN.