

(No Model.)

2 Sheets—Sheet 1.

A. G. WATERHOUSE.

DEVICE FOR SUSPENDING ELECTRIC ARC LAMPS.

No. 259,612.

Patented June 13, 1882.

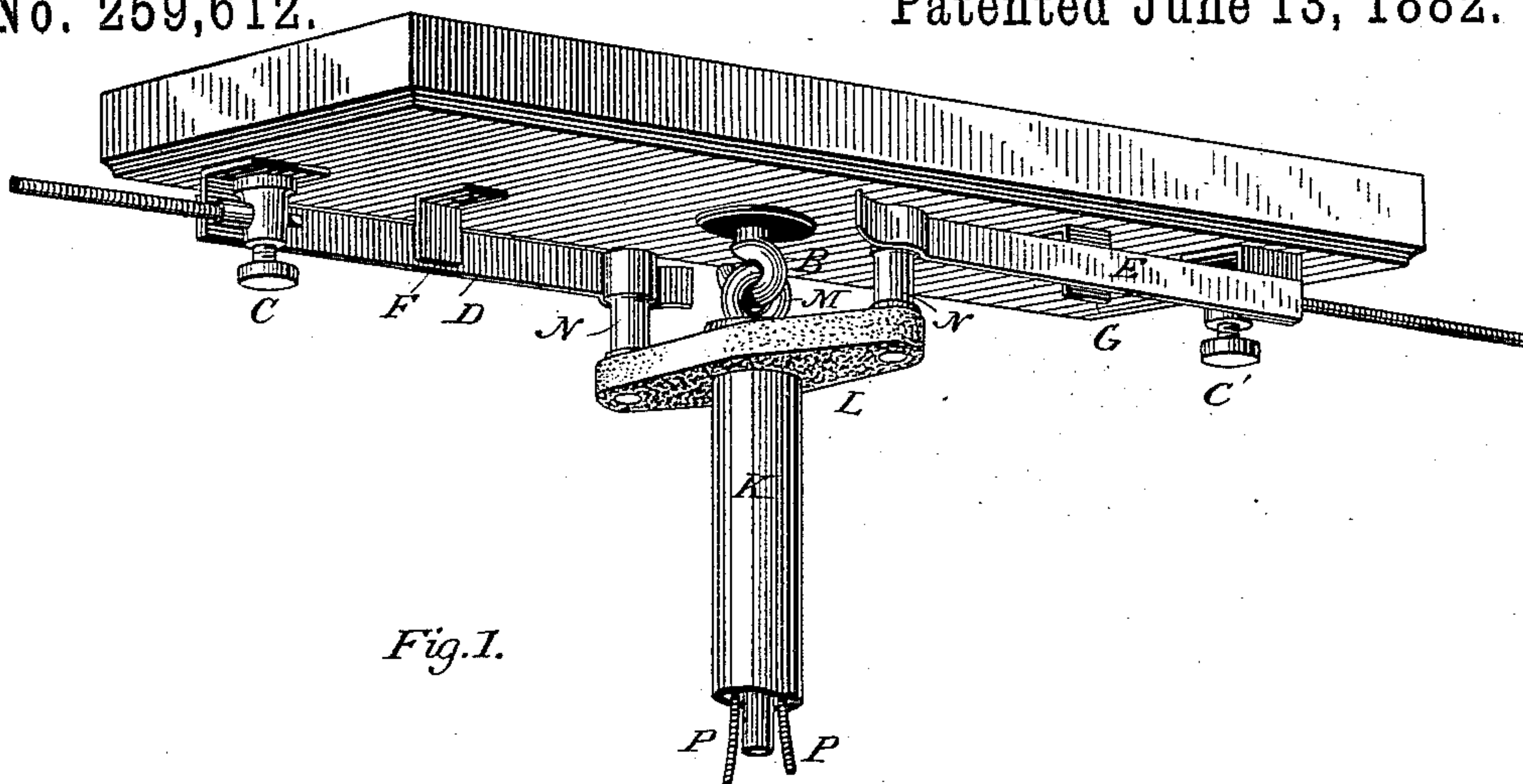
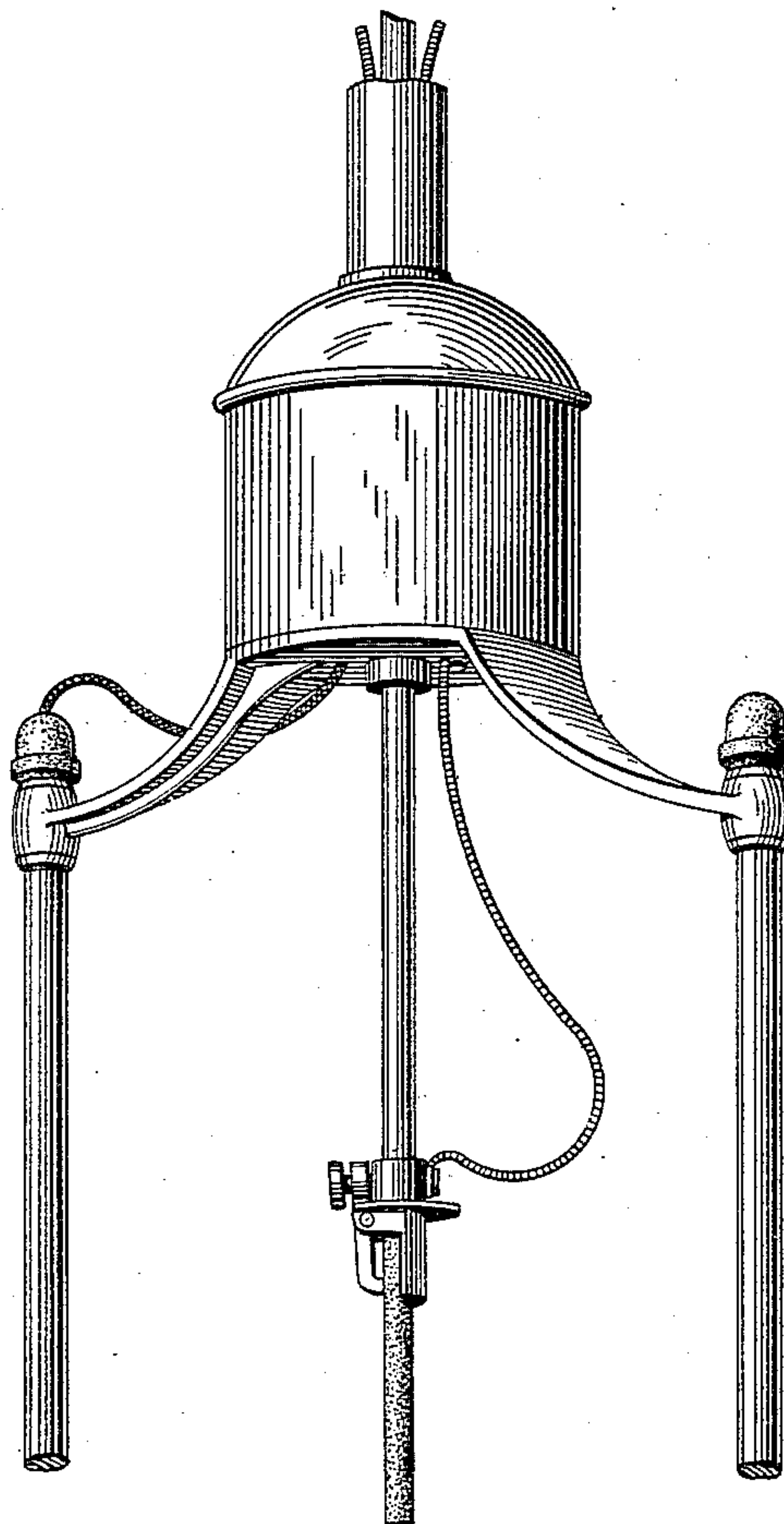


Fig. 1.



Attest:

Raymond Barnes.
W. Frisby

Inventor:

Addison G. Waterhouse
By Parker W. Page
att'y.

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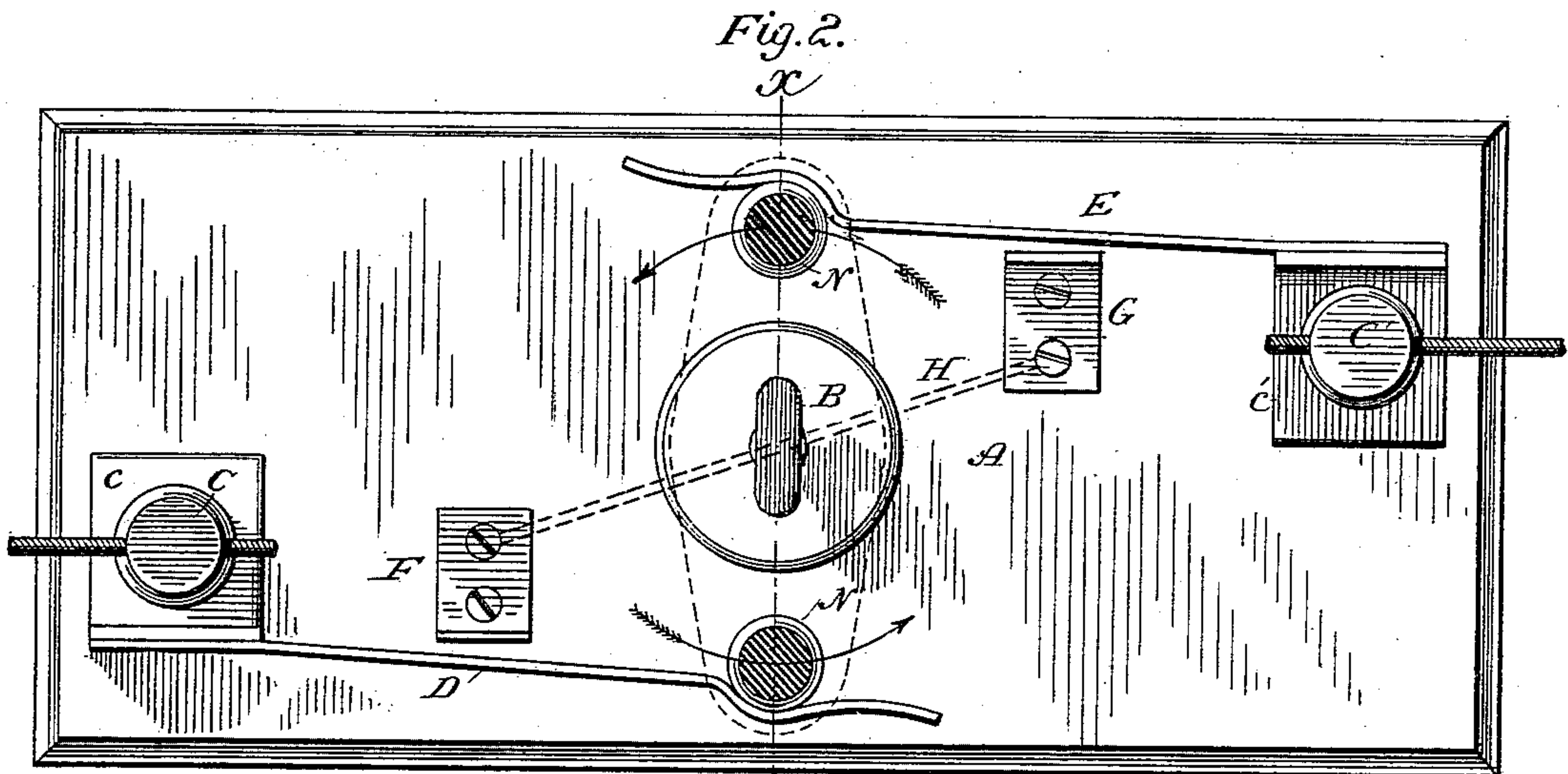
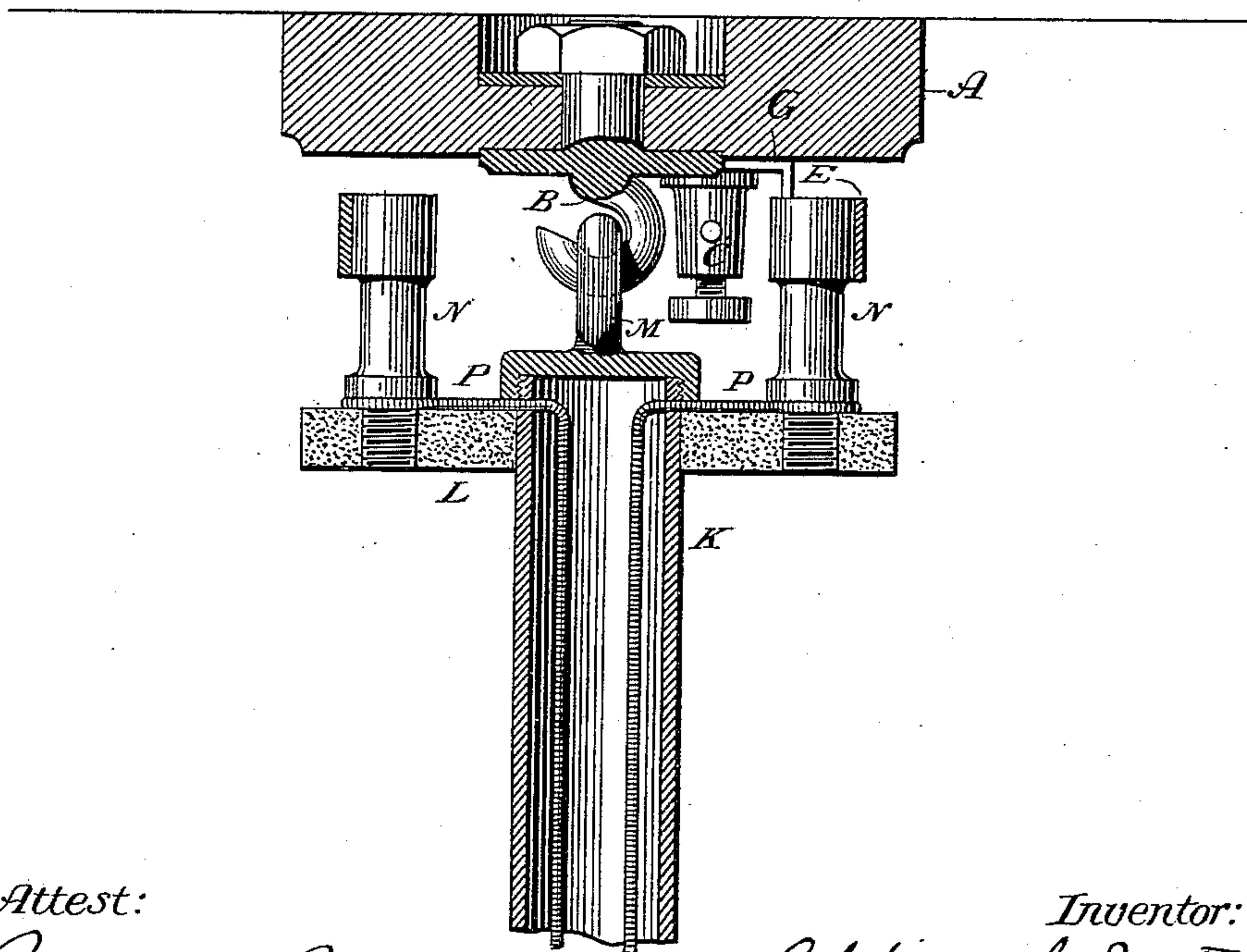


Fig. 3.



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UNITED STATES PATENT OFFICE.

ADDISON G. WATERHOUSE, OF NEW YORK, N. Y., ASSIGNOR TO THE UNITED STATES ELECTRIC LIGHTING COMPANY, OF SAME PLACE.

DEVICE FOR SUSPENDING ELECTRIC-ARC LAMPS.

SPECIFICATION forming part of Letters Patent No. 259,612, dated June 13, 1882.

Application filed April 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, ADDISON G. WATERHOUSE, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Devices for Suspending Electric-Arc Lamps, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

My invention embraces certain novel and useful improvements in devices designed for use in conjunction with electric-arc lamps, the same consisting in a combination of mechanical elements, by means of which a lamp is or may be readily hung in position for use, or taken down for cleaning or repairs, by means of which also the current may be directed through the lamps or around them, as desired, without trouble or danger to the persons handling them. An apparatus which I have designed for this purpose, and one which embodies the several features of my invention, is illustrated in the accompanying drawings, in which—

Figure 1 represents in perspective the apparatus complete, with a lamp suspended thereby in position for action. Fig. 2 is a plan view of the apparatus, with parts of the lamp shown in dotted lines. Fig. 3 is a sectional view through line *xx* of Fig. 2.

Similar letters refer to corresponding parts in the several figures.

The letter A represents a base or slab of insulating material—dry wood preferably—which, by means of bolts, screws, or otherwise, is to be fastened to the ceiling. About the center of this block is set a swivel-hook, B, of any proper character. In diagonally-opposite corners of the slab are fixed binding-posts C C', upon plates of brass or copper *cc'*, and to these latter are secured stout metallic springs D E.

F G are metal stops clamped to base A, and connected by a stout wire, H. The stops F G are so placed that the springs D E in their normal condition will bear upon them, forming a metallic path between the binding-posts C C'.

With this device lamps of widely-varying shape or character may be used, though I prefer to employ a lamp of the general character

illustrated in Fig. 1, and to make special provision for readily attaching and using the same with the apparatus above described. For this purpose I attach to the tube K, near its top, a block of insulating material, L, and close the tube K by a cap provided with a ring or eye, M.

Near the ends of the block L are set two metallic pins or stops, N, from which conductors P lead into the tube K, which is also designed to contain the carbon-carrier, and down to the regulating mechanism and carbons, as in ordinary forms of lamp.

In the practical application of this appliance the slab A is securely attached to an overhead support, and the terminals of an electric circuit, connected respectively with the binding-posts C C'. Under normal conditions the current passes freely through the springs, stops, and wire H.

A lamp may at any time be inserted in the circuit by passing the eye M over hook B, and turning the lamp bodily until the stops N have forced the springs off from the stops F G.

It will be advisable to bend the springs D E, as shown in Fig. 2, to form recesses for the stops N.

It will be seen that as soon as the contact of springs D E with stops F G is broken the current passes through the lamp.

In the devices heretofore used for suspending lamps it has been usual to arrange the means of support and the conductors independently of each other, or to use the conductors themselves as a means of support. In the first case, however, it is generally necessary to employ binding-screws for making the connections, while in both instances it is necessary to employ self-acting cut-outs or other devices for maintaining the continuity of the circuit when the lamps are removed.

I have described a device in the foregoing which I believe to be the simplest and best adapted for the purpose named. I will briefly point out, however, wherein the several parts of the same may be modified without departing from the invention.

It is evident, for instance, that the swivel-hook is susceptible of great variation, and that it may be applied to the tube or other equivalent part of the lamp, instead of the base or

slab A. So, too, the springs D E may be supported by metal plates properly held by spiral springs, or other arrangements of these parts may be employed.

5 The stops N are one means only of a great number for completing the circuit to the lamp. They may form part of the lamp-frame, or be constructed or combined in other obvious ways.

The wire H may or may not contain a resistance, according to circumstances or preference.

10 What I therefore claim as new and of my invention is—

1. A combined supporting and circuit-controlling apparatus for electric lamps, consisting of an insulating-plate to which are fixed a swivel-hook, contact-springs, and binding-posts in electrical connection with the said springs, these parts being so constructed and arranged that a lamp suspended from the swivel-hook and turned will be brought into circuit by contact of suitable terminal points thereon with the springs, as set forth.

2. The combination, with an electric lamp, of two springs fixed to an insulating-support and connected with an electric circuit, electrically-connected contact-points upon which the springs bear, and a swivel-support between the springs, these parts being so arranged that a lamp suspended from the swivel-

support and turned will be brought into circuit by the contact of terminal points thereon with the springs, as set forth. 30

3. The combination, with an electric lamp, of a tube inclosing the carbon-holder, and conductors leading to the regulating mechanism and carbons, and a block or support, L, provided with terminal points with which the said conductors are connected, these parts being constructed and arranged substantially as described, and for the purpose of facilitating the introduction of a current to the lamp from suitably-arranged circuit-terminals. 40

4. The combination, with an electric lamp having terminal contact-points N, of a plate, A, springs D E, electrically-connected stops F G, and swivel-hook B, substantially as described. 45

5. In a supporting and circuit-controlling apparatus for electric lamps, the combination, with the hook B, of the contact-springs D E, bent as described, for holding the terminal stops of an electric lamp. 50

In testimony whereof I have hereunto set my hand this 11th day of April, 1882.

ADDISON G. WATERHOUSE.

Witnesses:

W. FRISBY,

RAYMOND F. BARNES.