

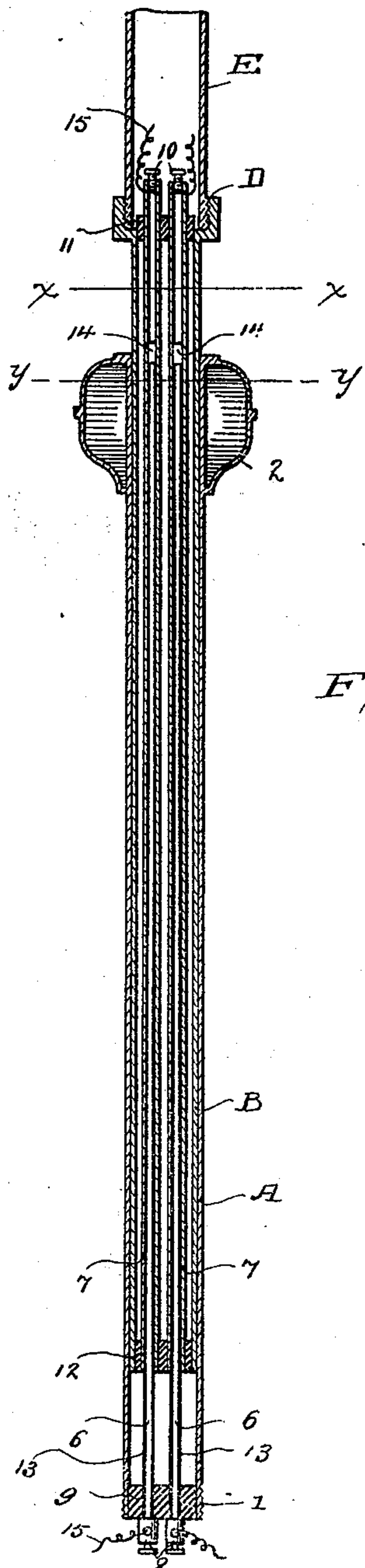
(No Model.)

A. McLEAN.  
EXTENSION ELECTRIC CHANDELIER.

No. 517,009.

Patented Mar. 20, 1894.

Fig. 2.



WITNESSES

H. A. Lamb  
Pearl Reynolds

Fig. 1.

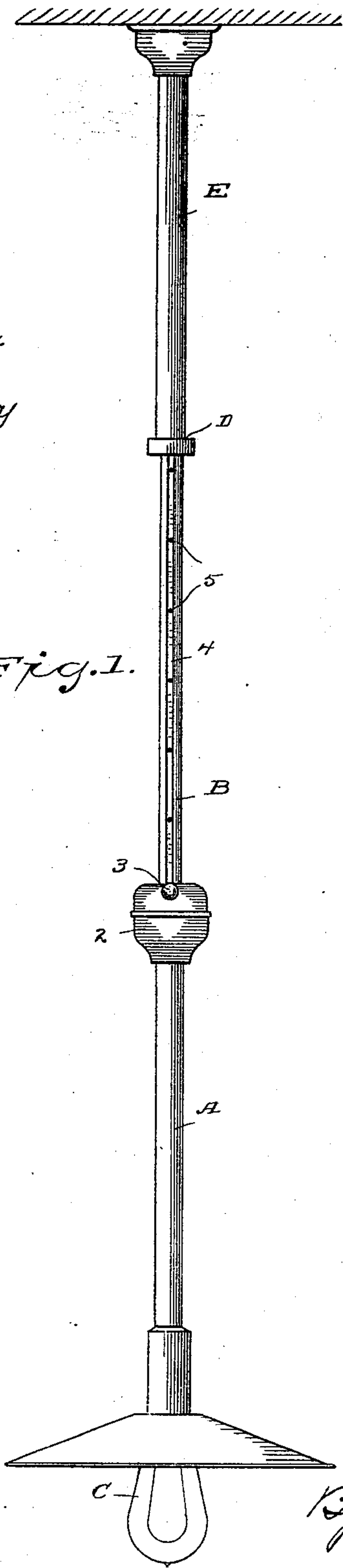


Fig. 3.

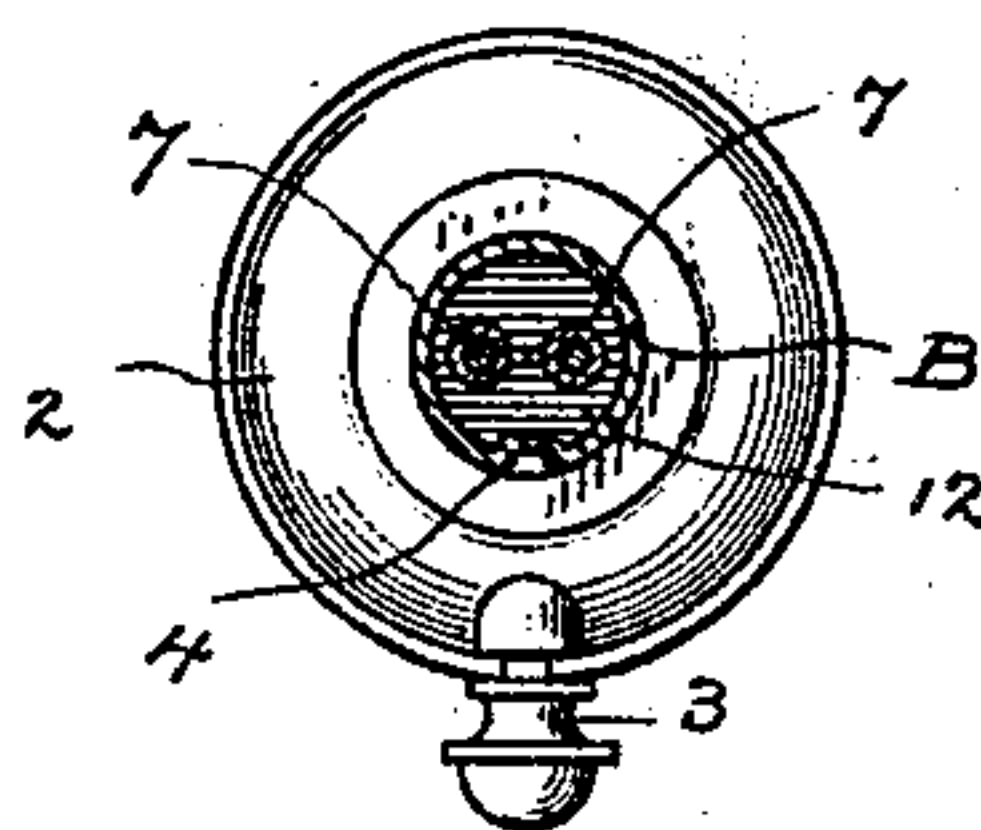


Fig. 4.

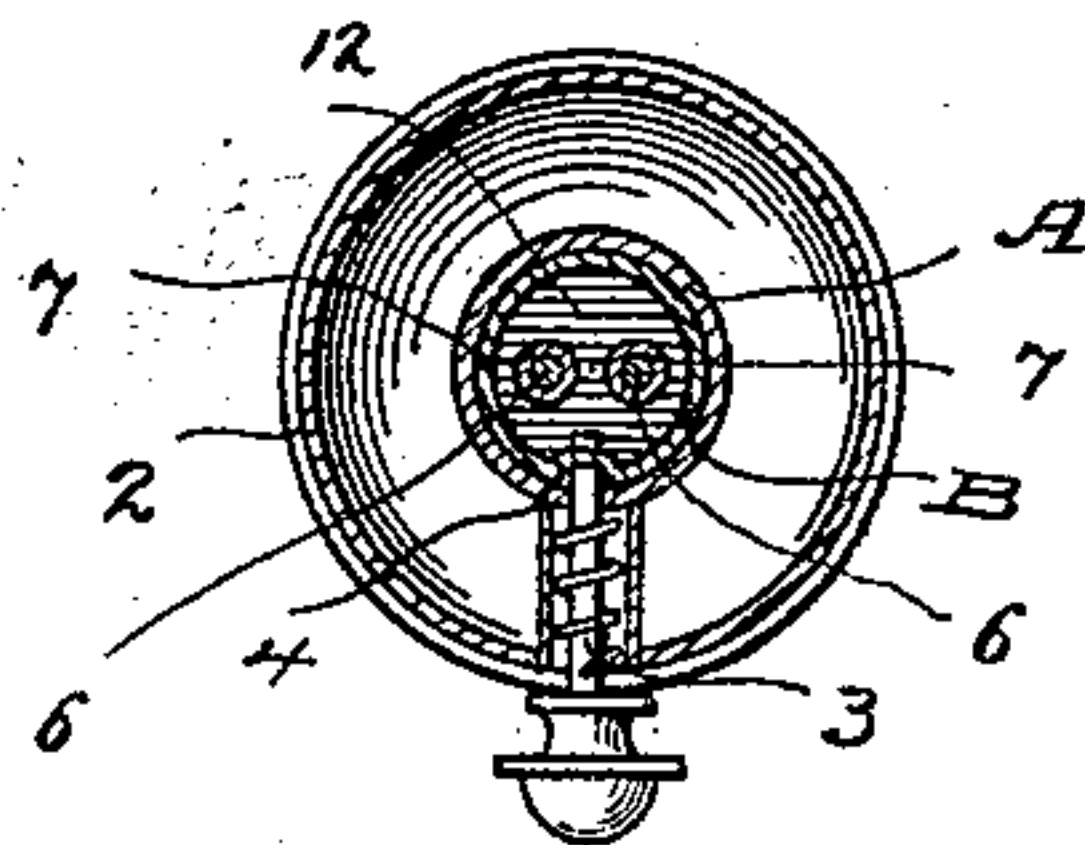
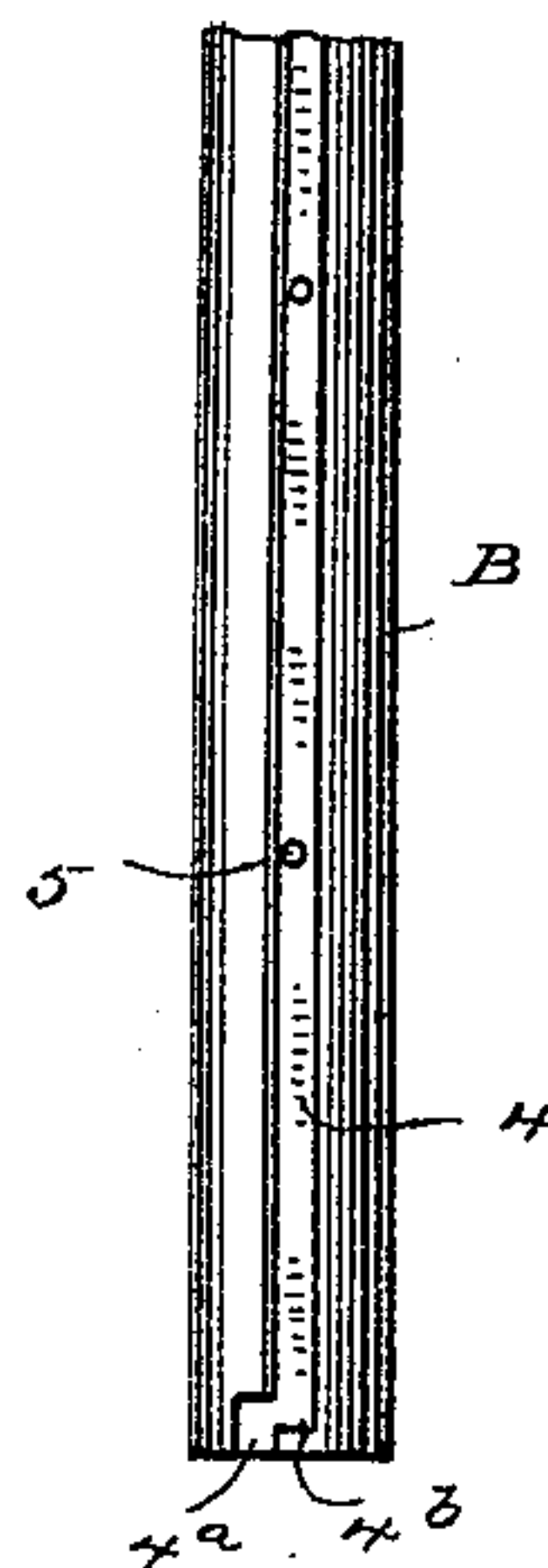


Fig. 5.



INVENTOR

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By A. M. Wooster  
Att'y



# UNITED STATES PATENT OFFICE.

ARTHUR McLEAN, OF ANSONIA, CONNECTICUT, ASSIGNOR OF ONE-THIRD TO  
WILLIAM G. McLEAN, OF SAME PLACE.

## EXTENSION ELECTRIC CHANDELIER.

SPECIFICATION forming part of Letters Patent No. 517,009, dated March 20, 1894.

Application filed August 7, 1893. Serial No. 482,507. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR McLEAN, a citizen of the United States, residing at Ansonia, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Extension Electric Chandeliers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide extensible electrical connections which shall be applicable to chandeliers, so that electrical chandeliers may be readily raised or lowered when required whether lighted or unlighted, and by a very simple movement on the part of the operator, it being required that such a device be simple and inexpensive as well as durable, and practically impossible to get out of repair.

With these ends in view I have devised the novel extension device for chandeliers which I will now describe referring by numbers to the accompanying drawings forming part of this specification in which—

Figure 1 is an elevation showing the principle of my invention as applied to a single incandescent light, it being obvious of course that the principle is the same whether applied to one light or to a number grouped on a single chandelier; Fig. 2 an enlarged sectional view illustrating the extensible electrical connection; Fig. 3 a section on the line  $x x$  in Fig. 2; Fig. 4 a section on the line  $y y$  in Fig. 2, and Fig. 5 is a detail view on an enlarged scale of the lower end of the inner tube.

A denotes the outer tube and B the inner tube. The lower end of tube A is provided with a thread 1 for the attachment of a chandelier, or as I have illustrated in the drawings a single lamp, which I have designated by C. At the upper end of tube A I preferably place a ball or bulb 2 which serves the purpose of ornamentation and also carries a spring bolt 3 the purpose of which will presently be explained. Inner tube B is adapted to slide within tube A as clearly indicated in Fig. 2. At the upper end of tube B is a union D which is threaded on its inner side to adapt

it for engagement to a wall or to another tube as E.

Tubes A and B may be locked so as to secure the chandelier at the desired position by any ordinary or preferred locking device adapted to this class of articles. In the present instance I have shown tube B as provided with a groove 4 and with holes 5. The inner end of the spring bolt lies in the groove so as to prevent the outer tube from turning and is adapted to engage either of the holes to lock the outer tube and the chandelier or lamp carried thereby, at any desired position after adjustment.

To raise or lower the chandelier it is simply necessary to draw out the spring bolt and move tube A up or down as may be required and then allow the inner end of the bolt to pass into one of the holes 5 to lock the chandelier in position. It will be noticed, see Fig. 5 that the lower end of groove 4 is off-set as at 4<sup>a</sup> making it in fact a bayonet connection. This is in order to provide a stop should the bolt through carelessness of the operator, or from any cause fail to engage and the chandelier be allowed to drop down the full length of the slot. Should this take place the end of the bolt will engage shoulder 4<sup>b</sup> and stop the chandelier from falling farther. At the same time this connection provides convenient means for disconnecting tube A and the chandelier from tube B should it be required at any time. The extensible electrical connections consist of rods 6 which are carried by one of the tubes in the present instance tube A, and are adapted to slide within tubes 7 carried by the other tube, in the present instance tube B. The lower ends of the rods are provided with binding posts 8 and are rigidly held in an insulating block 9 at the lower end of tube A. Tubes 7 are provided at their upper ends with binding posts 10 the upper ends of said tubes being rigidly held in an insulating block 11 which is itself rigidly fixed in the upper end of tube B, the lower ends of tubes 7 being rigidly held in an insulating block 12 which is itself rigidly fixed in the lower end of tube B.

In practice I preferably insulate rods 6 as at 13, and at the upper ends of said rods I pro-



vide heads 14 which engage tubes 7 and form an electrical connection therewith. In practice rods 6 are made quite small, much smaller relatively than is indicated in the drawings 5 and tubes 7 are also made so light as to contain approximately the same weight of metal for a given length that the rods do. While I do not consider it absolutely necessary to insulate rods 6 from tubes 7, I preferably in- 10 sulate them in practice in order to avoid waste of current.

15 denotes wires connected to the binding posts in the usual manner.

Having thus described my invention, I 15 claim—

1. An extension electrical conductor for chandeliers consisting of an outer tube A, an inner tube B, rods 6 rigidly fixed in one of said tubes, and tubes 7 rigidly fixed in the 20 other tube, said rods 6 and tubes 7, having electrical connections at their outer ends and said inner and outer tubes being adapted to slide upon each other in raising or lowering a chandelier.

2. An extension electrical conductor for 25 chandeliers consisting of an outer tube A, an inner tube B rods 6 rigidly fixed in one of said tubes, tubes 7 rigidly fixed in the other tube, said rods 6 being insulated from said tubes 30 but having hubs at their inner ends which engage said tubes and form an electrical connection therewith, said rods 6 and tubes 7

having electrical connections at their outer ends and said inner and outer tubes being adapted to slide upon each other in raising or 35 lowering a chandelier.

3. The combination with tube A threaded at its lower end for the engagement of a chandelier, and tube B adapted to slide therein and having at its upper end a union for at- 40 tachment in place, of tubes 7 rigidly secured in one of said tubes A or B, rods 6 rigidly secured in the other of said tubes A or B and adapted to slide within tubes 7, binding posts at the ends of said rods 6 and tubes 7 for the 45 connection of wires, and suitable means for locking tube A to tube B after the chandelier has been adjusted.

4. The combination with tube A, insulating block 9 at its lower end and insulated rods 6 50 fixed in said blocks and provided with heads 14 at their upper ends, of tube B having insulating blocks 11 and 12 at its ends, and tubes 7 rigidly secured in said blocks and adapted to receive rods 6, binding posts at 55 the outer ends of rods 6 and tubes 7 for the connection of wires, and suitable means for locking tube A to tube B after adjustment.

In testimony whereof I affix my signature in presence of two witnesses.

ARTHUR McLEAN.

Witnesses:

A. M. WOOSTER,  
PEARL REYNOLDS.