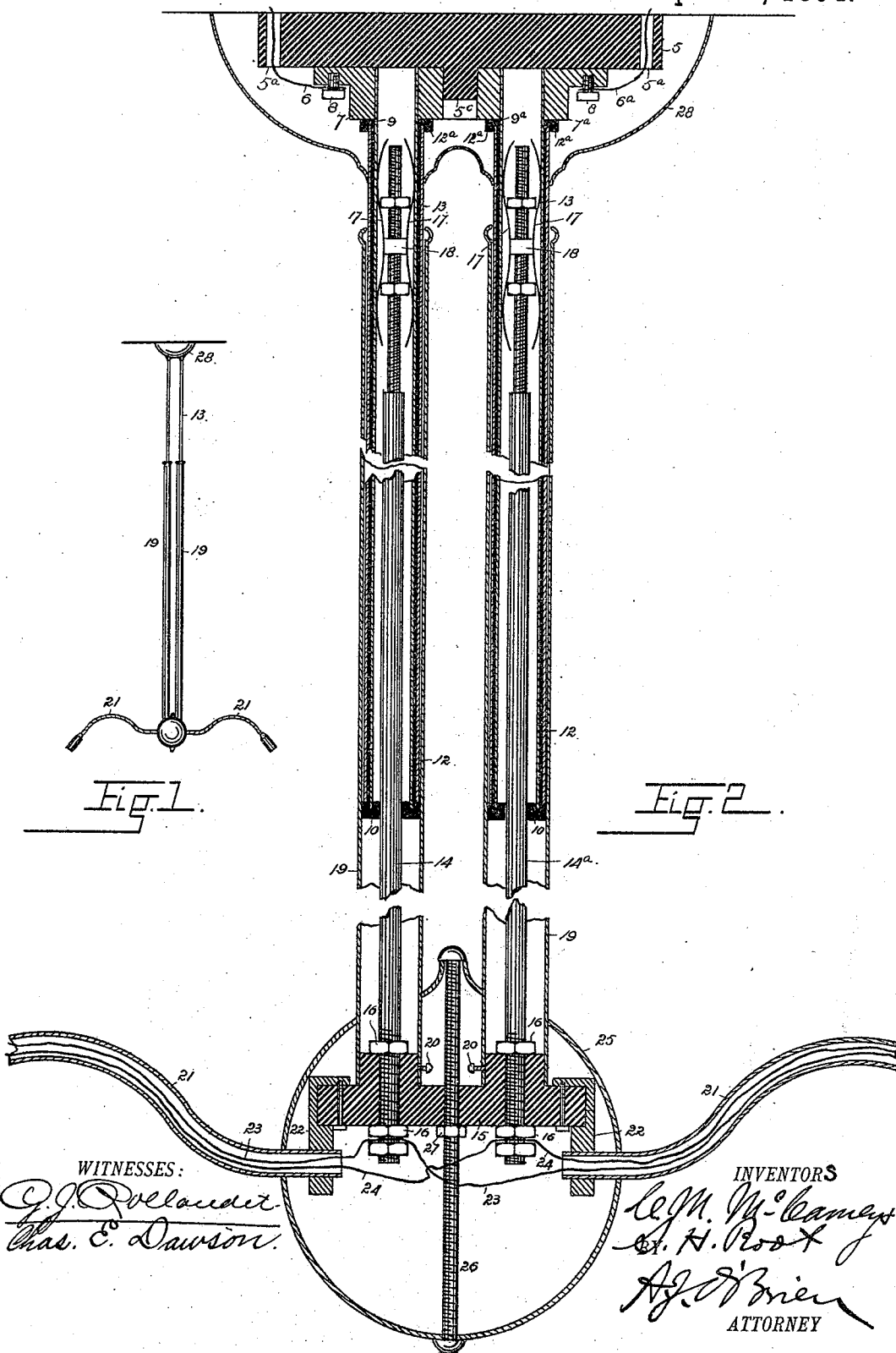


(No Model.)

C. M. McCAMEY & S. H. ROOT.
ADJUSTABLE ELECTROLIER.

No. 518,198.

Patented Apr. 10, 1894.



WITNESSES:

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ADJUSTABLE ELECTROLIER.

SPECIFICATION forming part of Letters Patent No. 518,198, dated April 10, 1894.

Application filed December 5, 1893. Serial No. 492,884. (No model.)

To all whom it may concern:

Be it known that we, CHARLES M. McCAMEY and SEBRA H. ROOT, citizens of the United States of America, residing at Longmont, in the county of Boulder and State of Colorado, have invented certain new and useful Improvements in Adjustable Electroliers; and we do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in adjustable electroliers, and the same consists of the features, arrangements and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is an elevation of the device, shown on a small scale. Fig. 2 is a vertical longitudinal section of the same shown on a larger scale.

Similar reference characters indicating corresponding parts or elements of the mechanisms in the several views, let the numeral 5 designate an insulating block made fast to the ceiling of the room or other suitable support, and provided with two apertures 5^a through which pass the wires 6 and 6^a respectively, leading from the main circuit and connected respectively with the contact plates 7 and 7^a by means of binding screws 8. The plates 7 and 7^a are composed of some material forming a good conductor for the electric current, preferably metal; hence the terms metal and metallic in this specification are employed in a broad sense, as designating any good electrical conductor which may be suitable, practicable or desirable. The plates 7 and 7^a engage the block 5 to which they are made fast, and are insulated from each other by a depending projection 5^c forming a part of said block. These plates also surround and engage the upper extremities of the metallic tubes 9 and 9^a respectively, the plates and tubes being so connected as to form a good electrical contact. The tubes 9 and 9^a are of

any suitable length, depending upon the degree of vertical adjustability required. Their lower extremities are embedded in insulating disks 10, and the tubes are surrounded throughout their length by some suitable insulating material 12 which extends from the disks 10 to the insulating rings 12^a which engage the plates 7 and 7^a and overlap the upper extremities of the outer stationary tubes 13 which surround or inclose the insulating covering 12 of the tubes 9 and 9^a, their lower extremities also being embedded in the insulating disks 10. The tubes 13 are thus thoroughly insulated from the tubes 9, 9^a and the plates 7, 7^a. The insulating disks 10 are centrally apertured to receive the sliding metallic rods 14 and 14^a which pass through apertures formed in the insulating base 15 to which the rods are attached by nuts 16 screwed upon the rods and engaging the base 15 both above and below. The upper extremities of the rods 14 and 14^a are each provided with a plural number of contact springs or metal brushes 17 made fast to a metal block 18 swiveled on the rod. These brushes or springs 17 are located on diametrically opposite sides of their respective rods, and extend both above and below the block 18, from which they bow outwardly to engage the inner surfaces of their respective tubes. The upper extremities of these rods are oppositely threaded both above and below their respective blocks 18; and each rod is provided with two nuts, one above, and the other below its swiveled block; that is to say, one nut of each rod engages the left hand thread of the rod, while the other nut engages the right hand thread of the same. These nuts are located between the spring contact brushes, and their function is to maintain those brushes in proper contact with the tubes 9 and 9^a. The nuts are adjusted and the pressure upon the tubes increased or diminished by turning the rods 14 and 14^a, whereby the nuts are made to simultaneously recede from or approach the blocks 18. As the springs 17 grasp the nuts, the latter are prevented from turning with the rods, the springs being prevented from turning by reason of their engagement with the tubes. The device is further provided with two outer

tubes 19, which are made fast to the base 15 at their lower extremities by means of screws 20. These tubes 19 extend upward from the base around the stationary tubes 13, which telescope therein, and are of such length as to form a suitable casing for the rods 14 and 14^a when the latter are drawn downward to their limit of movement.

We have illustrated in the drawings, a two lamp electrolier.

Let the numeral 21 designate the tubes forming the casing for the conductors leading to the lamps. The inner extremities of these tubes are made fast to the lower extremities of the hangers 22, the upper extremities of the latter being screwed to the insulating base 15. The wires 23 and 24 connected with each lamp are respectively attached to the lower extremities of the rods 14 and 14^a.

In describing the path of the current, it may be assumed that it enters through wire 6 at the top of the device, and passes thence through contact 7, tube 9, spring contacts 17, rod 14 and wire 23 to the lamp; and thence through wire 24 to rod 14^a, the spring contacts 17, the tube 9^a, the contact plate 7^a, and out through the wire 6^a to the main circuit.

The lower part of the device is inclosed by a suitable casing 25 supported upon the base 15 by a threaded rod 26 which passes through an aperture formed in the center of the base, and is adjustable by means of a nut 27 engaging the lower surface of the base. The upper extremity of the device is inclosed by an ornamental casing 28 engaging the ceiling or other support, and made fast to the stationary tubes 13. The lower part of the device, or that part to which the lamps are attached, may be raised and lowered at will, there being sufficient friction between the contact brushes 17 and their engaging tubes to maintain the lamps, or movable part of the device, in any desired position of vertical adjustability. It will thus be seen that the brushes 17 have two functions, namely; the one, the forming of a perfect electrical contact between the rods and the tubes; and the other, the causing of sufficient friction with the tubes to maintain the lamps in any desired position in which they may be placed.

It will be observed that in the operation of the mechanism, the insulating disks 10 form stops for the contact springs 17, and thus prevent the rods from drawing out of the tubes 9 and 9^a.

Having thus described our invention, what we claim is—

1. In an adjustable electrolier, the combi-

nation of two depending metallic tubes made fast to a suitable support and insulated from each other, the feed wires respectively connected electrically with the tubes, movable rods provided with spring contact brushes at their upper extremities, the rods telescoping within the tubes which are engaged by the brushes, an insulating base connecting the lower extremities of the rods, and the lamp wires respectively attached to the rods, substantially as described.

2. In an adjustable electrolier, the combination of the depending stationary metallic tubes insulated from each other and connected with the feed wires, the metallic rods telescoping within the tubes and provided with adjustable spring contact brushes, the outer stationary tubes insulated from the inner tubes, the insulating base connecting the rods, and the lamp wires respectively connected with the rods, substantially as described.

3. In an adjustable electrolier, the combination of the stationary insulating block, the metallic contact plates attached to the block and insulated from each other, the feed wires leading to these plates, the depending metallic tubes respectively connected with the contact plates, the outer stationary tubes insulated from the inner tubes, the telescoping metallic rods provided with the spring contacts engaging the inner tubes, the insulating base block connecting the rods and insulating them from each other, the outer tubes attached to the base block and inclosing the rods, and the lamp wires respectively connected with the rods, substantially as described.

4. In an adjustable electrolier, the combination of the depending stationary metallic tubes insulated from each other, the feed wires connected therewith, the telescoping metallic rods the upper extremities of which are provided with right and left threads, spring contact brushes attached to these rods and engaging the tubes, spreading nuts screwed upon the rods and engaging the brushes, suitable means for connecting and insulating the lower extremities of the rods, and the lamp wires respectively connected with the rods, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

CHARLES M. McCAMEY.
SEBRA H. ROOT.

Witnesses:

J. K. SWEEMP,
W. L. MCCASLIN.