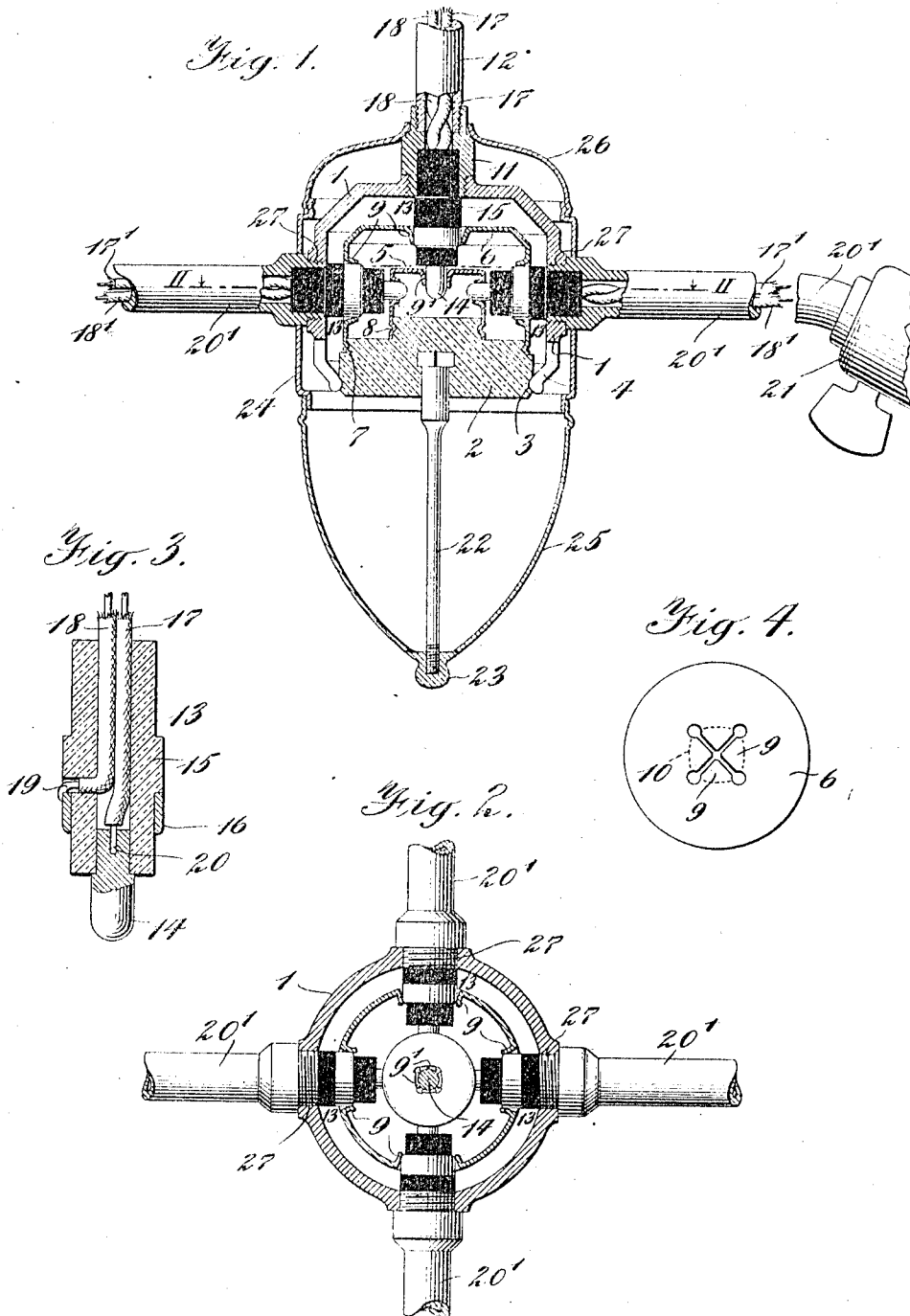


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ELECTRIC CHANDELIER.
APPLICATION FILED NOV. 16, 1911.

1,035,061.

Patented Aug. 6, 1912



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UNITED STATES PATENT OFFICE.

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ELECTRIC CHANDELIER.

1,035,061.

Specification of Letters Patent.

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Application filed November 16, 1911. Serial No. 660,594.

To all whom it may concern:

Be it known that I, SAMUEL TROOD, a subject of the Czar of Russia, residing at New York city, in the borough of Bronx and State of New York, have invented certain new and useful Improvements in Electric Chandeliers, of which the following is a full, clear, and exact description.

This invention relates to electrical fixtures, and more particularly to an electric chandelier, and has for one of its objects the elimination of all soldering, taping and wiring when the structure is being assembled.

Another object of my invention is to cheapen the cost of production of devices of this character by simplifying the structure, reducing the number of parts therein, and by forming such parts in such manner as to expedite their manufacture.

These and other objects of my invention will be hereinafter referred to and the novel elements and combinations of elements whereby said objects are accomplished will be more particularly set forth in the appended claims.

In the accompanying drawings, which form a part hereof, and in which like reference characters designate like parts throughout the several views, I have exemplified a preferred form of my invention. I am aware however that various modifications and changes may be made therein without departing from the spirit of said invention, and I hence desire to be limited only by the scope of the said claims.

Referring to the drawings: Figure 1 is a vertical section taken substantially through the center of the body of an electric chandelier. Fig. 2 is a section of said chandelier body taken on line II—II of Fig. 1. Fig. 3 is a detail section of an insulating thimble used in the construction. Fig. 4 is a plan of one of the conductive cups, prior to bending in the contact tongues of the same.

The fixture exemplified comprises a socketed metal base 1, preferably of shell-like contour, apertured at various points for the reception of the several members to be connected thereto. Within a large aperture at the bottom is an insulating block or plate 2,

which in the preferred form of construction is snapped into engagement with the base, the block being grooved or recessed as at 3, and the base having resilient fingers 4, the extremities of which are adapted to enter the groove 3. The insulating block 2 carries two conductive caps 5 and 6, both of which are preferably sprung into engagement with the block 2; the latter if desired being ledged or stepped as at 7 and 8, and the cups setting over and engaging the projections thus formed. In Fig. 1, I have shown the vertical walls of these projections as grooved for the reception of beads upon the edges of the cups. If this means of connection be used, the beads and grooves should preferably be quite shallow, so that a cup may be forced down upon a projection and into firm engagement therewith. The conductive cups are preferably concentrically arranged; may be of swaged or spun brass or other suitable resilient material; and have at a plurality of points groups of tongues 9—9' struck up or rather in from the body of the cup, whereby connection may be made thereto.

As shown in Fig. 6, four tongues 9 may be formed by providing an X-shaped slot in, for example, the flat table like part of the inverted cup; the tongues being bent into the interior of the cup along the dotted lines 10. Into the upper side of the body 1 is screwed a sleeve 11, which is threaded into the extremity of the supporting tube or pipe 12 which usually depends from the ceilings of rooms intended to be provided with a chandelier. In the lower extremity of the sleeve 11 is a thimble 13 of insulating material, such as fiber, from the lower extremity of which projects a center contact piece 14, which is adapted to enter between the tongues 9' of the inner cup. The thimbles 13 is also preferably reduced at either extremity to leave a rib 15 around the center thereof. Below this rib and firmly driven thereagainst is a ring contact 16 of brass or the like, which is so disposed with respect to the center contact 14 that when the parts of the device are in assembled relationship, contact 14 will be in firm engagement with the tongues 9' of cup 5 while contact 16 will

similarly engage the tongues 9 of cup 6. Through the hollow interior of the thimble 13 extend the conductive leads 17-18, which convey current to and from the device. As shown in Fig. 3, the wall of a thimble 13 is apertured laterally and the extremity 19 of lead 18, from which the insulation has been removed projects out through this aperture and is soldered or otherwise connected to the ring 16. In like manner the extremity 20 of lead 17 is connected to the center contact 14. Each of the laterally directed thimbles 13 is firmly connected to a preferably tubular chandelier arm 20' in which are disposed the wires 17'-18', leading to the usual sockets 21 provided at the outer extremities of such arms. Wires 17' and 18' are correspondingly connected to the ring and center contacts of the respective thimbles in the manner, previously described, in which the leads 17-18 are connected to like parts.

Attached to the insulating block 2 in any suitable manner, as by being embedded therein, is a stud 22 which is threaded at its lower extremity for the reception of the usual decorative nut 23. Around the base 1 is a ring 24 of brass, or the like, the lower edge of which engages an inverted dome 25, which latter is supported by nut 23. A decorative cover 26 is snapped into engagement with the upper edge of ring 24.

It is evident that by reason of the construction shown the mere act of screwing an arm 20' into its socket in the base suffices to effect all electrical connections between the wires in said arm and the respective common contact cups 5 and 6. Similarly the withdrawal of the arm by unscrewing the same disconnects both of the wires therein from the circuit, substantially simultaneously. If desired the inner extremities of the arms 20' may be provided with shoulders 27 adapted to abut against the body 1 and to thereby limit the inward movement of the contacts carried by said arm while at the same time, if the thread be properly cut, serving to insure the proper angular disposition of said arm. Any other suitable means for limiting the inward movement of the arms may be employed however.

The supporting member or sleeve 11 is specially useful in that it adapts the chandelier to any size of supporting tube 12, it being merely necessary to provide a sleeve 11 to fit the particular supporting tube in use, while the connection of the sleeve to the base may be maintained standard, as may also be the thimble 13 secured in said sleeve. The sleeve in question further facilitates the connection of the leads 17-18 to the principal contacts, *i. e.*, those which energize the cups or contact structures within the base. This connection must, of course,

be effected at the place where the chandelier is to be erected, but after it has once been made, the chandelier may be taken down, for cleaning, or other purposes, without the aid of an electrician. The auxiliary or secondary contacts, *i. e.*, those carried by the arms 20', may obviously be connected to the wires 17'-18', at the factory and such connection need at no time thereafter be disturbed.

The course of current through the device is as follows: Assuming lead 17 to be positive, current flows therefrom to the center contact of the vertically disposed thimble 13, thence through the current distributing cup 5 to the several center contacts 14 of the laterally directed thimbles. Current then traverses the wires 17' within the respective arms 20', and after passing through the lamps or other devices consuming the same, returns via wires 18' which connect with the corresponding rings 16, whence the current flows to the conducting cup 6 common to all of said rings. It leaves cup 6 by means of the ring 16 of the vertical thimble and passes thence over the lead 18.

It will be observed that the device as a whole consists of but few parts and those of such a shape as to be adapted to be readily and cheaply manufactured. It may further be expeditiously assembled by unskilled labor and withal presents an attractive appearance.

Having described my invention, I claim:

1. An electric chandelier comprising a recessed base, a plurality of chandelier arms adapted to be connected to said base, lead wires in said arms, insulating members at the inner extremities of said arms, two spaced contacts carried by each of said members, said wires connected to said contacts, two superposed cups in said base and supported therefrom, each of said cups having resilient tongues struck up therefrom adapted for engagement with said contacts, one of said contacts of each arm being adapted for engagement with one of said cups and the other contact of each arm adapted for engagement with the other of said cups.

2. An electric chandelier adapted to be hung from a supporting tube and comprising a base, means for rigidly connecting said base to said supporting tube, chandelier arms, means for connecting said arms to said base, two spaced contact structures carried by said base, two principal contacts carried by a part of said first mentioned means, said contacts adapted to be energized from an external source of current, said principal contacts automatically engageable one with one of said structures, and the other with the other of said structures when said base is being connected to its supporting tube, two sets of auxiliary contacts carried by said

arms, one contact of each set being connected to each arm, one set of said auxiliary contacts adapted to automatically engage one of said structures and the other set adapted
5 to automatically engage the other of said structures when said arms and frame are assembled.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

SAMUEL TROOD.

Witnesses:

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