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ELECTRICAL LIGHTING SET FOR CHRISTMAS TREES OR THE LIKE

Filed July 2, 1930

Fig. 1.

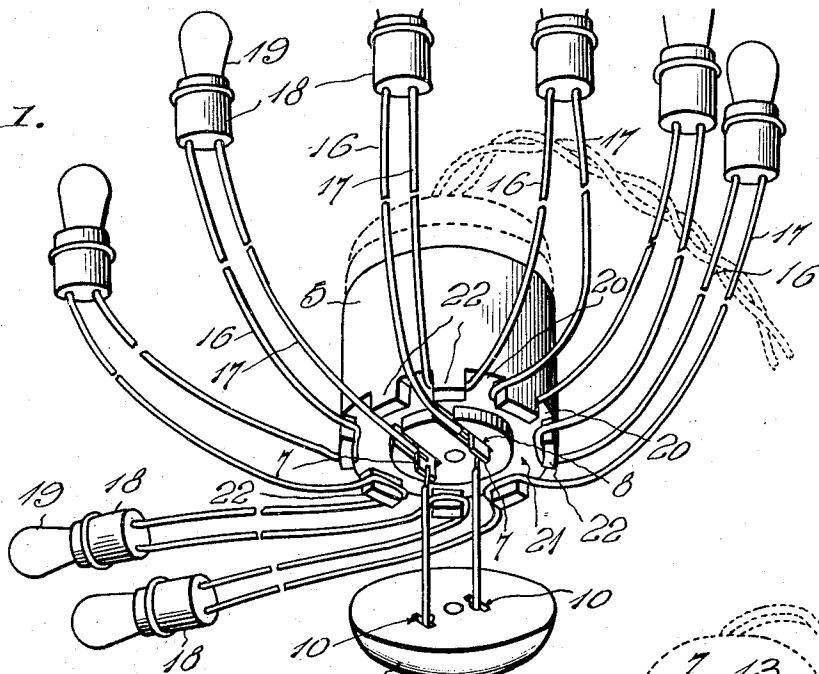


Fig. 3.

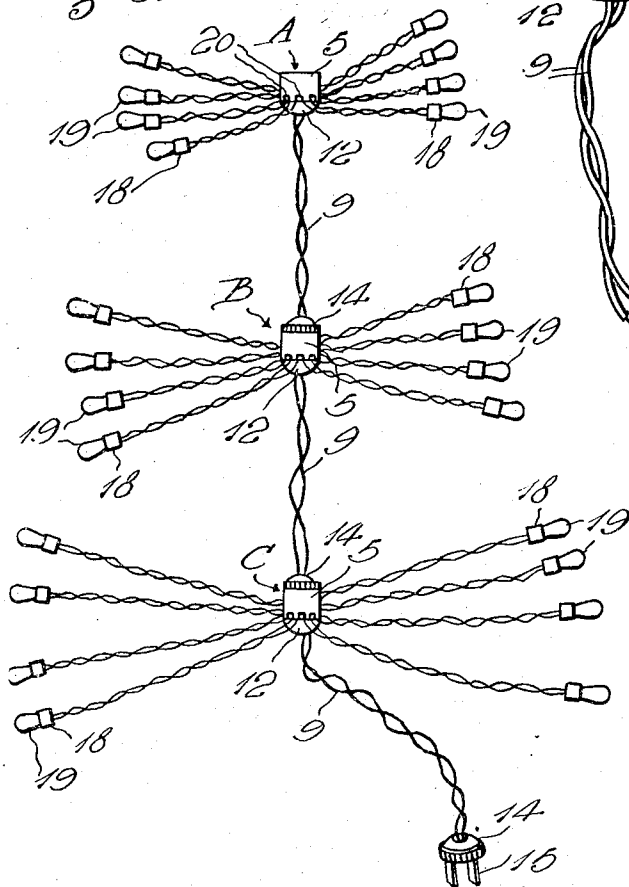
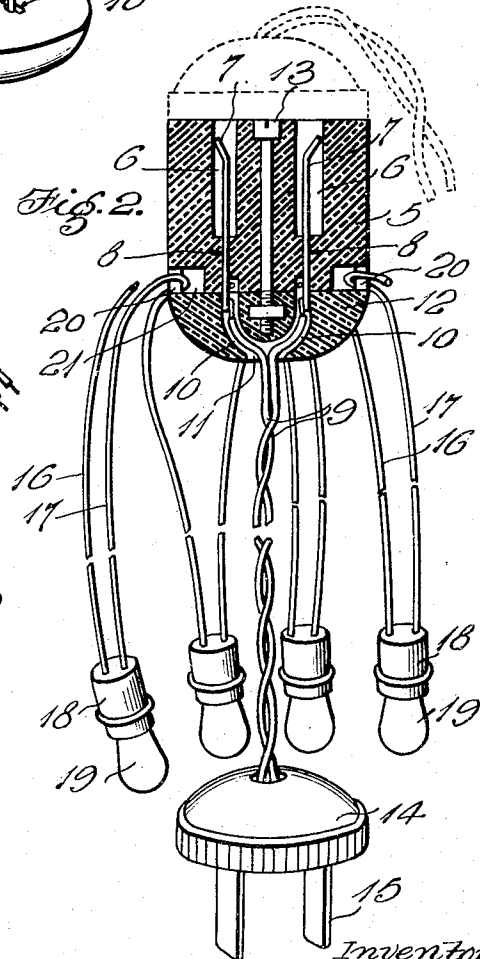


Fig. 2.



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ELECTRICAL LIGHTING SET FOR CHRISTMAS TREES OR THE LIKE

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My invention relates to an electrical lighting set for Christmas trees or the like.

An important object of the invention is to provide a set of the above mentioned character, embodying any suitable number of units of varying diameters, corresponding to the cone or taper of the tree.

A further object of the invention is to provide an electrical lighting set of the above mentioned character, embodying units which may be readily separated and assembled.

A further object of the invention is to provide a branch connector which bodily carries the radial conductors holding the same from slipping so that a selected length or diameter may be maintained.

A further object of the invention is to provide a device of the above mentioned character which is extremely simple in construction, cheap to manufacture, and safe and convenient in use.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a perspective view of one of the units, parts removed for the purpose of illustration,

Figure 2 is a central vertical longitudinal section through the branch connector, and,

Figure 3 is a side elevation of a plurality of units connected in series for providing the lighting set.

The lighting set embodies any suitable number of units A, B and C. Three of these units have been shown for the purpose of illustration. The units preferably decrease in diameter upwardly to correspond to the taper or cone of the tree.

Each unit embodies a branch connector including a block or body portion 5, formed of insulating material. This block, which is ordinarily vertically arranged, has openings or sockets 6, formed therein extending downwardly from the top of the same. These sockets receive resilient metal contacts 7, the lower ends of which pass through slots 8 and

are held therein. Wires 9 are connected with the lower ends of the contacts 7 and pass through branches 10 of a main opening 11, formed in a cap 12 of insulating material. This cap is rigidly clamped upon the lower end of the block 5 by a central bolt 13 or any other suitable means, as shown. The opposite ends of the wires 9 have connection with a plug 14, embodying plug elements 15, as shown.

Generally radially disposed pairs of wires 16 and 17 are connected with the terminals of sockets 18, receiving electrical bulbs 19. The end wire 16 is electrically connected with one contact 7 and the end wire 17 is connected with the other contact 7. The remaining wires 17 are continuous with the adjacent wires 16. The block or body portion 5 is provided near its bottom and upon its periphery with longitudinal notches 20, in communication with an annular groove 21. The continuous inner ends of the wires 16 and 17, excepting the end wires 16 and 17, pass through the notches 20 and are looped or engaged behind teeth or lugs 22 formed by the notches. The end wires 16 and 17 pass through the notches 20 and are attached to the contacts 7, as explained. Due to the fact that the wires 16 and 17 are sharply bent about the lugs 22, there is no tendency for the wires to shift or slide longitudinally with respect to the body portion 5, whereby the selected radial lengths of these wires remain constant when in use. Due to the fact that the wires 16 and 17 are loosely mounted within the space 21, behind the lugs and in the spaces 20 between the lugs, it is obvious that by shifting the wires inwardly slightly with relation to the lugs, such wires may then be readily moved longitudinally with relation to the lugs, and, hence, the length of the wires may be adjusted.

In view of the foregoing description, it will be seen that all of the bulbs 19 in each unit are connected in series. The plug elements 15 of the plug 14 are adapted to be inserted in a floor plug or the like, while the next higher set is inserted into the sockets 6 and engage the contacts 7, whereby current is supplied to the bulbs in the next unit.

It is thus seen that any number of units may be used and connected together in series, and the generally radial wires in the several units vary in diameter and preferably decrease in diameter, upwardly corresponding to the taper or cone of the tree. The branch connector bodily carries and supports all of the generally radial wires rendering it convenient to locate the branch connector near the trunk of the tree, leading the wires generally radially along the branches.

It is to be understood that the form of my invention, herewith shown and described, is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts, may be resorted to, without departing from the spirit of my invention, or the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. A branch connector comprising an insulating body portion provided with plug receiving recesses extending through one end of the same, contacts passing through the opposite end of the insulating body portion and extending into said recesses, lead wires connected with the contacts, a plug connected with the lead wires, a set of spaced longitudinal lugs formed upon said opposite end of the insulating body portion and completely surrounding said contacts, said lugs affording spaces therebetween, wire means having portions bent to form branches, the inner ends of the branches being continuous, said continuous inner ends extending through the spaces and engaging behind the lugs, the free ends of said wire being connected with the contacts, electric bulb sockets connected in series with said branches, a cap having opening means for the passage of the lead wires and mounted upon said opposite end of said insulating body portion and abutting the free ends of said lugs for loosely retaining the inner continuous ends of said branches behind said lugs, the arrangement being such said branches may be readily adjusted with relation to said lugs to vary their length, and means for attaching the cap to the body portion.

2. A branch connector comprising a substantially cylindrical insulating body portion provided with plug receiving recesses extending through one end of the same, contacts extending through the opposite end of the insulating body portion and projecting into the plug receiving recesses, an annular set of spaced longitudinal lugs formed upon said opposite end of the insulating body portion and affording spaces between the lugs, said annular set of lugs surrounding the contacts, lead wires connected to the contacts, a plug connected to the lead wires, wire means having its opposite ends connected with said contacts, the wire means being bent to provide

branches, the inner ends of the branches being continuous and extending through the spaces and engaging behind the spaced lugs, electric bulb sockets connected in series in said branches, a cap having opening means formed generally centrally thereof for the passage of the lead wires, and mounted upon said opposite end of the insulating body portion to cover the ends of the spaces between the lugs and abutting the free ends of the lugs to loosely retain the continuous inner ends of said branches behind said lugs, the arrangement being such that the branches may be adjusted with respect to the lugs to vary their length, and means operable from the first-named end of the insulating body portion for holding the cap upon said body portion.

3. A branch connector, comprising an insulating body portion having recesses extending through one end of the same for receiving plug elements, an annular set of spaced lugs formed upon the opposite end of the insulating body portion, contacts extending through said opposite end of the insulating body portion and leading into said recesses and being surrounded by said spaced lugs, lead wires connected with the contacts, wire means having the ends thereof connected with said contacts, said wire means having portions forming branches, the inner portions of the branches being continuous and engaging behind the lugs, a cap mounted upon the said opposite end of the insulating body portion and abutting the free ends of the spaced lugs to loosely retain the inner continuous portions of the branches behind said lugs, the arrangement being such that the branches may be readily adjusted with relation to the lugs to vary their length, and electric bulb sockets connected with the branches.

4. A branch connector comprising an insulating body portion provided in one end with plug receiving recesses and at its opposite end with a surrounding set of spaced lugs and recess means behind the lugs, contacts carried by the body portion and leading into the recesses, lead wires connected with the contacts, wire means having its ends connected with the contacts and having portions thereof forming branches, the inner portions of the branches being continuous and engaging behind the lugs to operate within the spaces between the lugs and the recess means behind the lugs, a cap mounted upon the said opposite end of the body portion and abutting the spaced lugs to loosely retain the branches behind the same, the arrangement being such that the branches may be adjusted with respect to the lugs to vary their length, and electric bulb sockets connected with said branches.

In testimony whereof I affix my signature.

CARL J. L. FISCHER.