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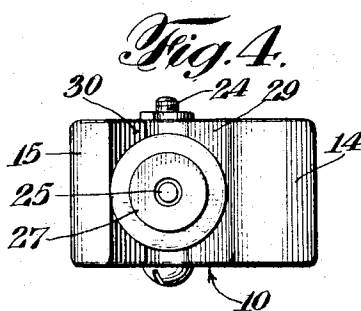
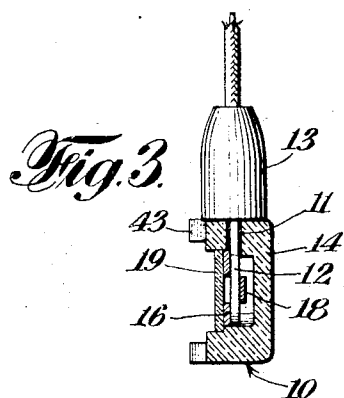
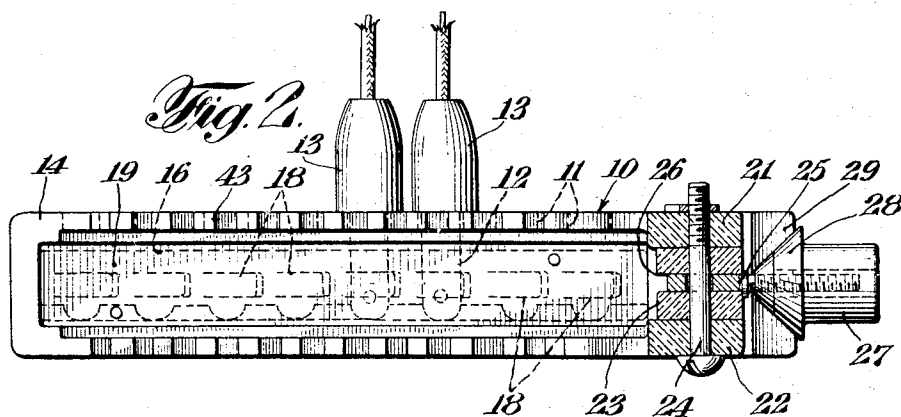
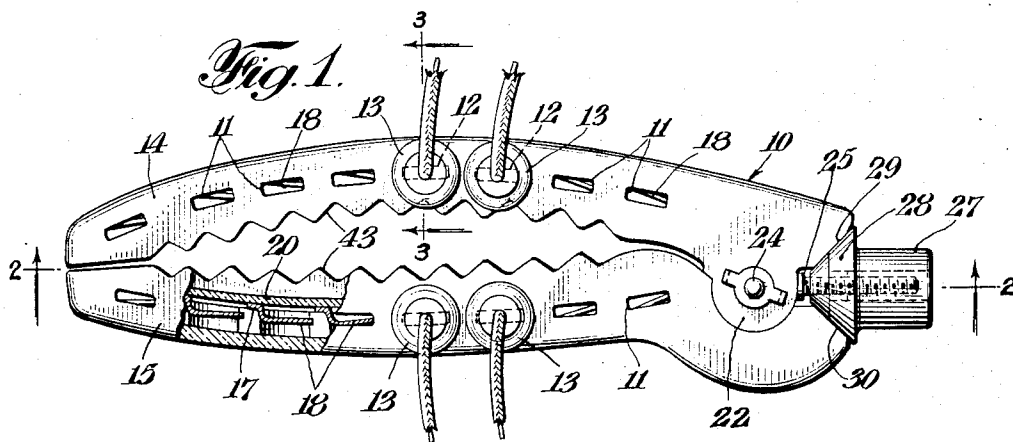
A. J. BAROCAS

1,891,341

ELECTRIC LIGHT ATTACHMENT SET

Filed March 7, 1930

2 Sheets-Sheet 1



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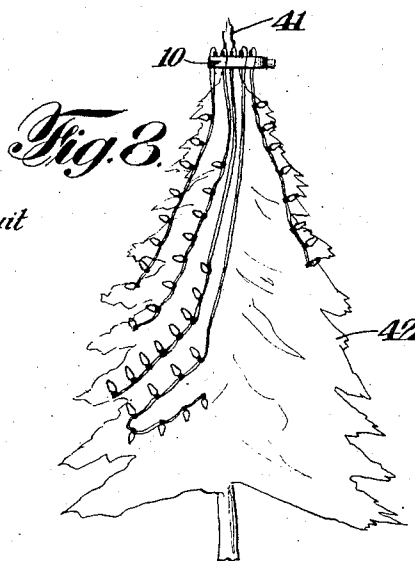
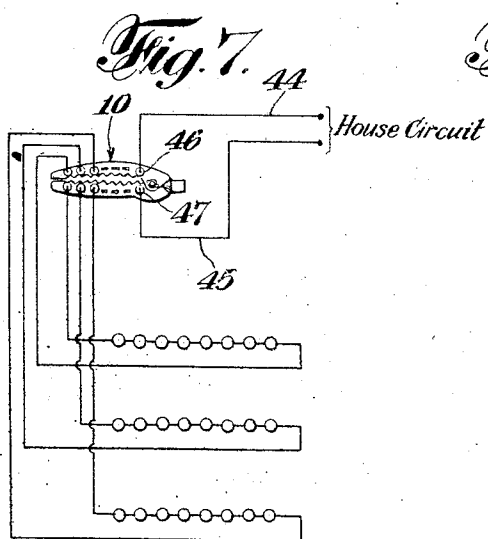
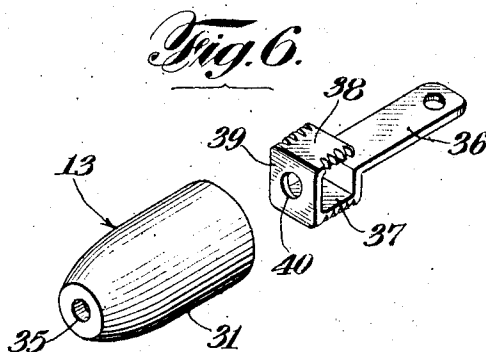
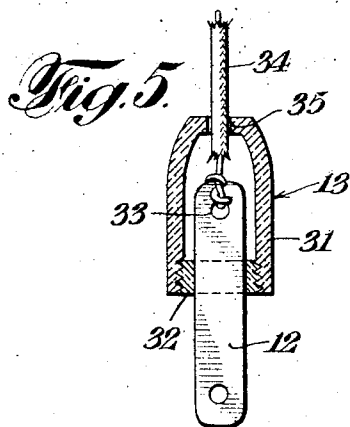
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ELECTRIC LIGHT ATTACHMENT SET

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2 Sheets-Sheet 2



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ELECTRIC LIGHT ATTACHMENT SET

Application filed March 7, 1930. Serial No. 433,959.

This invention relates to electric connectors for lighting sets, particularly of the class adapted for attachment to Christmas trees and the like, for decorative illuminating purposes.

Illuminated Christmas trees are generally provided with a number of sets of lamps, the standard arrangement being eight miniature lamps in series to every set, so as to reduce the voltage on each lamp in order to produce the required lighting effect. Each set generally contains an attachment plug for connection to a lamp socket, so that for every set used there must be a separate lamp socket connected to the house lighting circuit, or, if a single socket is used, there must of necessity be a separate connector attachment with each set of lamps. This arrangement is costly, cumbersome and unsightly, and if there are a great number of such sockets or attachments, the branches of the tree are apt to sag and possibly break due to the added weight. It is one of the objects of my invention to avoid such a condition by providing a single attachment unit, in a set of this kind, that can be readily secured to the trunk of the tree or to some other sturdy part thereof capable of withstanding the load, and to thereby obviate the scattering of attachments or plugs over comparatively weak branches, which has heretofore been necessary in order to distribute the lighting sets over all portions of the tree. The elimination of all these unsightly attachments also tends to add to the beauty of the outfit, which is a further object of this invention.

Another object of my invention is to provide single wire plugs of simple and inexpensive design so as to render the construction less costly and more flexibly adaptable for assembly than the standard two wire attachment plugs.

Still a further object is to provide one single connector unit to which the leads of every set of lamps on the tree can be electrically attached, thereby not only considerably reducing the fire hazard from many danger points to just one, but also simplifying operation and assembly by concentrating all the con-

nections at one easily controlled and accessible point.

A further object of the invention is to provide adjustable clamping means to permit the attachment of this device to objects of different dimensions, and to further render it adaptable for attachment to the top of a tree, so as to allow the leads of all the sets of lamps to be uniformly spread radially downwardly about the tree from a single source at the top. In this manner a more beautiful effect can be produced than is possible with the scattered arrangement prevalent in other outfits.

Many manufacturers are required to incur the expense of producing and carrying in stock a variety of lighting outfits containing one, two, three, and four sets of lamps, the sets being connected in multiple and having a single attachment plug. It is one of my objects to reduce this expense, as with the use of my invention only a single variety need be used, namely single sets of eight lamps each,—a result which is possible of attainment in view of the fact that the connector attachment in my design is adapted to electrically connect a single outlet plug of the house circuit to as many single sets of eight lamps as is generally necessary; and if the tree or object which is to be illuminated is exceptionally large, the addition of one or more connector attachments can be made to meet any requirements.

Referring to the drawings:

Fig. 1 is a plan view, part broken away, of the attachment constituting part of my invention, showing several plugs in place.

Fig. 2 is a front elevation showing a part section along line 2—2 of Fig. 1.

Fig. 3 is an end sectional elevation along line 3—3 of Fig. 1.

Fig. 4 is an end elevation of the attachment, showing the clamp hinge arrangement.

Fig. 5 is a sectional elevation of a single wire plug constituting part of this invention.

Fig. 6 is an exploded view, shown in perspective, of the plug of Fig. 5 and a modified form of prong element for use with such plug.

Fig. 7 is a diagrammatic view, showing the electrical connections of the set comprising my invention.

Fig. 8 is a view of a Christmas tree with the electric light attachment set in place.

In the drawings the connector attachment 10 contains a plurality of sockets 11 adapted to receive the prongs 12 of the single wire plugs 13. The jaws 14 and 15 of said attachment are made of insulating material and contain the contact bars 16 and 17 respectively, running lengthwise of said jaws and communicating with the sockets 11. Positioned adjacent the said sockets are the springs 18 suitably attached to the body of the attachment 10 and adapted to yieldably force the prongs 12 against the bars 16 and 17, the inner surfaces of said bars being covered by strips of insulating material 19 and 20. (See Figure 3.) It will be noted that in the particular form illustrated, the spring members 18 are tongues integral with the contact bars 16 and 17.

The hinge construction of this device consists of the two outer knuckles 21 and 22 and the cylindrical inner knuckle 23, these knuckles being axially aligned and rotatable about the pin 24. The eyebolt 25 is rotatably surmounted upon the said pin 24, the head of this eyebolt being positioned between the sides of the slot 26 of the inner knuckle 23. In threaded engagement with said eyebolt is the clamping nut 27 having a conical portion 28 thereon adapted for frictional engagement with the diverging surfaces 29 and 30 formed by the rear walls of the jaws 14 and 15.

The single wire plugs 13 each consist of a hollow internally threaded shell 31 and a threaded male member 32, carrying the conducting element or prong 12 with the hole 33 therein for attachment to the terminal of the lead 34 extending through the opening 35 in the shell 31. A modified form of prong element 36 is shown in Fig. 6, and comprises a flat strip of metal one end of which is folded back upon itself to form two parallel walls 37 and 38 and one transverse connecting wall 39, the edges of the said walls 37 and 38 being threaded for engagement with the threads of shell 31, and the wall 39 containing a hole 40 adapted for attachment to the terminal of the lead wire extending through opening 35.

In setting up this device, the attachment 10 is secured to some portion of the object to be illumined, such as the top 41 of the tree 42, the teeth 43 of the jaws 14 and 15 being effective to firmly hold the attachment in place. The clamping adjustment is made by first backing up the nut 27 to permit the opening of the jaws 14 and 15 to accommodate the part they are to be clamped on, and then this nut 27 is tightened so as to wedge the conical portion 28 between the surfaces 29 and 30 and thereby hold the jaws fixed in their clamping positions.

The two outlet leads 44 and 45 of the house circuit carry at their terminals the single wire plugs 46 and 47 which are identical in construction with the plugs 13, the two said plugs being connected one to a socket in jaw 14 and the other to a socket in jaw 15. The leads of the various sets of lamps to be used on the tree likewise carry two single wire plugs 13, and these are similarly inserted into the sockets of the said jaws 14 and 15. In this way all the sets of lamps are electrically connected in multiple, to the house circuit, through the medium of the contact bars 16 and 17. By detaching any one of the plugs 13 from its socket, the current through one set of lamps is broken without in any way affecting the other sets. As many sets of lamps can be used as there are pairs of sockets in the attachment; and it is obvious that if the tree to be illumined is exceptionally large, either a larger or a greater number of attachments can be employed.

With this arrangement just one connector attachment and one lamp socket connected to the house lighting circuit need be used, thereby relieving the tree of the burden and unsightliness of a great number of plugs and attachments scattered over the tree. The adaptability of this device for attachment to the top of a tree permits an even and uniform distribution of leads, and obviates the unsightliness of a tangled network of wires.

The single wire plug 13 is of exceedingly simple construction, and a pair of such plugs is less costly than the usual standard two wire plugs. It is easy to assemble and take apart, the male member 32 being readily screwed in or out of the shell 31; and the end of the lead 34 being attached to the prong through the hole 33. The modified form shown in Fig. 6 is still simpler in design, as the prong element 36 with the threads thereon constitutes a one piece arrangement to take the place of the male member 32 and prong 12. Furthermore, the single wire plug is flexibly adaptable for connection to the variously spaced plugs on the connector attachment, which is particularly necessary in this design in view of the movement of the jaws 14 and 15 with respect to one another and the consequent changing of relative positions of the sockets in said jaws.

The description herein given refers to but one of several different mechanical forms that may be embodied within the scope of my invention.

What I claim is:

1. An electric light attachment set comprising two complementary hinged members provided with clamping means, each member being electrically insulated from the other and having therein a continuous contact bar and a plurality of sockets communicating therewith, and adapted to receive single wire plugs for contacting with said bars, and

means to yieldably hold the contact element of said plugs against said bars.

2. An electric light attachment set comprising two complementary hinged members provided with clamping means, each member being electrically insulated from the other end having therein a plurality of sockets communicating with a continuous contact bar running lengthwise of said member, said sockets being adapted to receive single wire plugs for contacting with said bars, each of said bars having integral therewith a plurality of tongue members underlying said sockets and adapted to hold the contact elements of said plugs in yieldable contact with said bars.

3. In an electric light attachment set the combination of two hinged jaws insulated from each other and each having therein a continuous contact bar and a plurality of sockets communicating therewith, and adapted to receive single wire plugs for contacting with said bars, the said jaws being pivotally mounted upon a pin upon which is rotatably surmounted the head of an eyebolt having its shank extending between the two diverging surfaces formed by the rear walls of said jaws, the said shank being in threaded engagement with a clamping nut having a conical portion thereon adapted for frictional engagement with the two said surfaces.

In testimony whereof I affix my signature.

ABRAHAM J. BAROCAS.

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