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LIGHTING DEVICE FOR TREES

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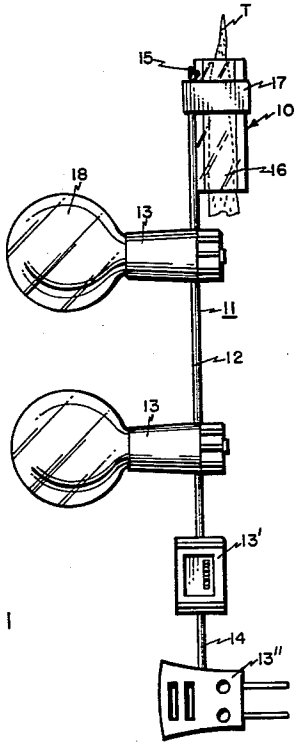


FIG. 1

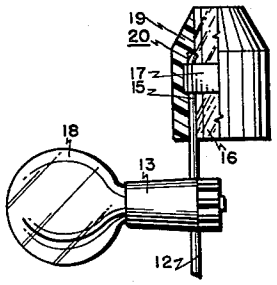


FIG. 2

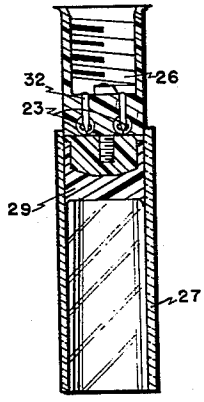


FIG. 4

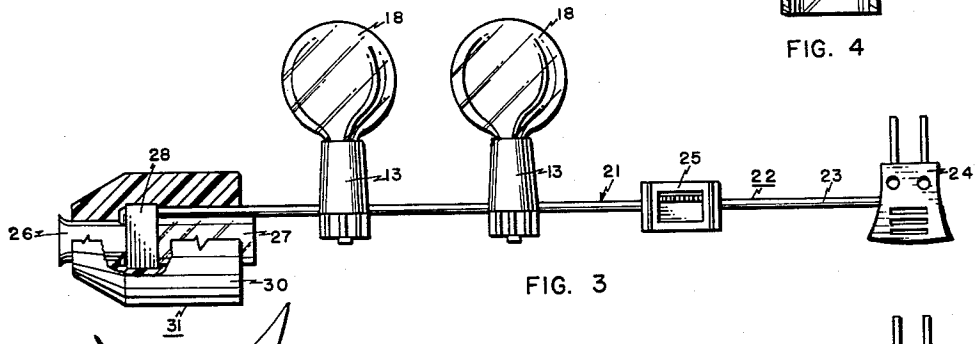


FIG. 3

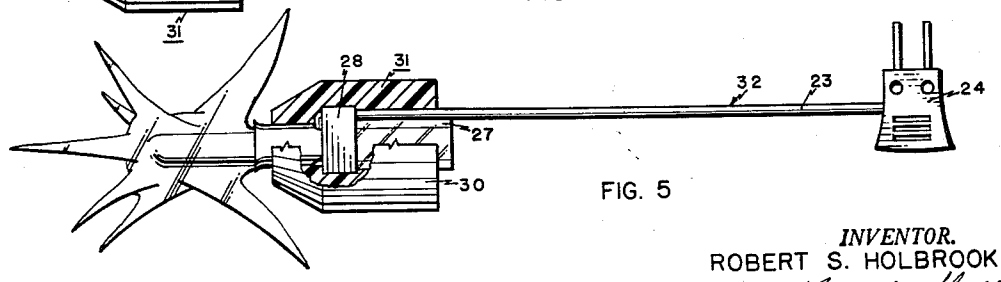


FIG. 5

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LIGHTING DEVICE FOR TREES

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The present invention relates to lighting devices for trees such as Christmas trees and, more particularly, to a new and improved lighting device which is very inexpensive to manufacture, and yet which is easily mountable to the top stem of a Christmas tree and easily powered by means other than conventionally used central conductors.

An object of the present invention is to provide a new and useful lighting device for trees such as Christmas trees, which is very inexpensive to manufacture.

A further object of the invention is to provide a lighting device of the type described wherein the conductor pair of the same is preliminarily secured to a mounting tube by very convenient means so that the combination may be inserted into a plastic mold for receiving a decorative head encasement which circumscribes the mounting tube and the related extremity of the conductor pair of the device.

A further object of this invention is to provide inexpensively manufactured lighting means for displaying a top light such as a star at the top of the Christmas tree, for example, this in combination with direct connection to a depending light string which may be disposed about the tree being decorated in any desired configuration.

A further object of the invention is to provide a lighting device for a Christmas tree wherein switch means and power means are automatically supplied a single depending string of lights without further accessories.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The present invention, both as to its organization and manner of operation, together with further objects and advantages thereof, may best be understood by reference to the following description, taken in connection with the accompanying drawings in which:

FIGURE 1 is an elevation of a tree lighting device according to one embodiment of the present invention.

FIGURE 2 is a fragmentary elevation of a portion of the device shown in FIGURE 1 when the mounting tube of the same is encased by suitable, molded plastic fill material.

FIGURE 3 is an elevation, drawn substantially in a horizontal plane relative to the viewer, of a lighting device for trees according to a second embodiment of the invention.

FIGURE 4 is an enlarged detail, in section, of a portion of the device shown in FIGURE 3.

FIGURE 5 is an elevation, drawn largely along a horizontal plane relative to the viewer, of an additional embodiment of the invention wherein but one light socket is used, with the same being provided with a star-type light screwed therein.

In FIGURES 1 and 2 the tree lighting device **10** is shown to include a light string **11** comprising a conductor pair **12**, one or more light sockets **13** physically affixed and electrically connected to the light string, a permissably included, on-off switch **13'** interposed medially of said conductor pair **12**, and a power input plug **13''** connected in the usual manner to extremity **14** of conductor pair **12**. Extremity **15** of conductor pair **12** is secured to a mounting tube **16** by means of preferably plastic adhesive tape **17** being wrapped securely around the conductor pair **12** (at **15**) and around the mounting tube **16** as shown. The light sockets **13** may take any one of several forms extant. Preferably, for convenience of assembling, the double bayonet-type socket (see FIGURE 4, for example) is suitable for a rapid securement of the light sockets **13** to the light string **12**. Lights **18** are disposed in their respective sockets **13** and may be of any convenient or desired form.

During some convenient time in the fabrication of the device, as, for example, when conductor pair **12** has been initially secured to the mounting tube **16** by tape **17**, this mounting tube end of the combination will be inserted in a suitable plastic mold to receive thermosetting plastic fill material **19** which, by the mold, produces a plastic body **20** encasing extremity **15** of conductor pair **12**, the adhesive tape **17**, and some or all of the mounting tube **16**.

Thus, the adhesive tape **17**, provides a very convenient means for preliminarily positioning the extremity **15** of conductor pair **12** relative to mounting tube **16** so that a molded head as at **20** can be provided.

FIGURES 3 and 4 illustrate a second embodiment of the invention wherein the tree lighting device **21** includes a light string **22** comprising conductor pair **23**, power input plug **24**, physically affixed and electrically connected thereto, an interposed on-off switch **25** which is connected in a conventional manner, the light sockets **13** (see FIGURE 1 of the first embodiment of the invention) and a top light, light socket **26** partially disposed within mounting tube **27** preliminarily affixed thereto by means of adhesive **28**. The securement of socket **26** to mounting tube **27** is illustrated in FIGURE 4 wherein, for example, the socket **26** may be preliminarily inserted and/or press fitted into mounting tube **27**, with plastic fill material, cement or other substance **29** being ultimately inserted so as to affix rigidly the socket **26** to the mounting tube **27**. Again, conductor pair **23** is preliminarily secured by a piece of adhesive tape **28** prior to the introduction of the combination of members **26** and **27** into a plastic mold for receiving thermosetting plastic film material **30** to form the body **31**. The conductor pair **23** are electrically connected to socket **26** by conventional bayonet type prongs **32**. In any event, it will be noted that the adhesive tape **28** again plays the part of initially positioning and retaining the light string **23** close to mounting tube **27** so that the combination may be introduced into the mold for receiving a plastic fill material **30**.

The FIGURE 5 embodiment is substantially the same as that shown in FIGURES 3 and 4 with the exception that this time the additional light sockets **13** with lights **18** and switch **25** are not shown. Of course any combination on the above may be used as desired. This third embodiment in FIGURE 5 is designated as **32**.

Of importance is the fact that, as has been illustrated, a light string may depend from the top stem of a Christmas tree as at T in FIGURE 1, with the end of the light being directly connectable to power source. The adhesive tape means as at **28** secures the conductor pair to their respective mounting tube so that satisfactory insertion into a mold for receiving the body of fill material as at **30** or **19** is made possible.

While particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from this invention in its broader aspects and, therefore, the aim in the appended claims is to cover all such changes and modifications as fall in the true spirit and scope of the invention.

I claim:

1. A lighting device for trees including, in combination, a light string comprising a conductor pair, plural light sockets electrically connected and physically affixed to said conductor pair medially thereof, plural lights disposed in said light sockets, and an electrical power input

plug electrically connected and physically affixed to said conductor pair on one side of said light socket; mounting tube means for mounting said device to and about the top stem of a tree; adhesive tape means wrapped about said conductor pair and said mounting tube means, physically securing said conductor pair, on the remaining side of said light socket to and against said mounting tube means; and a body of plastic material molded about and affixed to said mounting tube, circumscribingly encasing said adhesive tape, that portion of said conductor pair proximate said mounting tube means, and said mounting tube means.

2. Structure according to claim 1 wherein one of said light sockets is disposed within and secured to an uppermost portion of said mounting tube means.

3. Structure according to claim 1 wherein said device includes a switch interposed in said conductor pair between said power input plug and said light sockets.

4. A lighting device for trees including, in combination, a light string comprising a conductor pair, plural light sockets electrically connected and physically affixed to said conductor pair medially thereof, plural lights disposed in said light sockets, and an electrical power input plug electrically connected and physically affixed to said conductor pair on one side of said light socket; mounting tube means for mounting said device to and about the top stem of a tree; means wrapped about said conductor pair and said mounting tube means, physically securing said conductor pair proximate said mounting tube means to and against said mounting tube means; and a body of plastic material molded about and affixed to said mounting tube, circumscribingly encasing said means, that portion of said conductor pair proximate said mounting tube means, and said mounting tube means.

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