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F. A. TALTY

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FLUORESCENT LAMP BALLAST FIXTURE

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Fig. 1

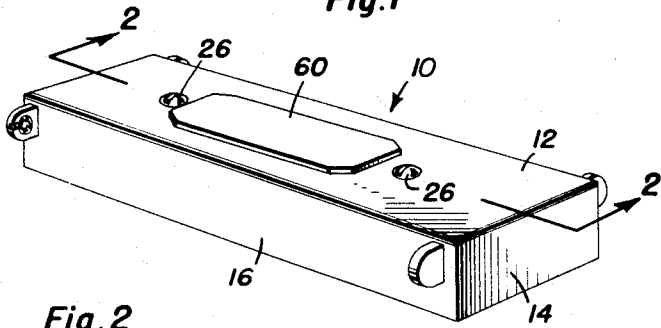


Fig. 2

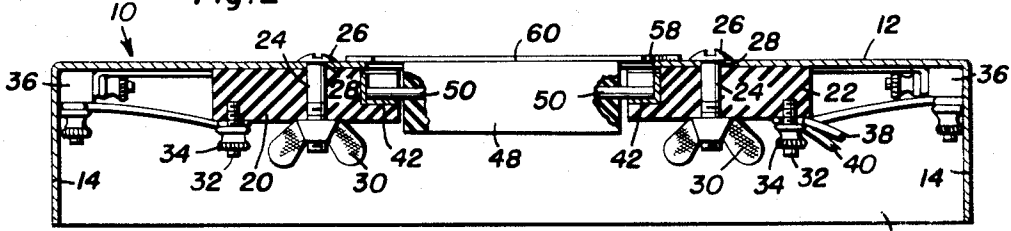


Fig. 3

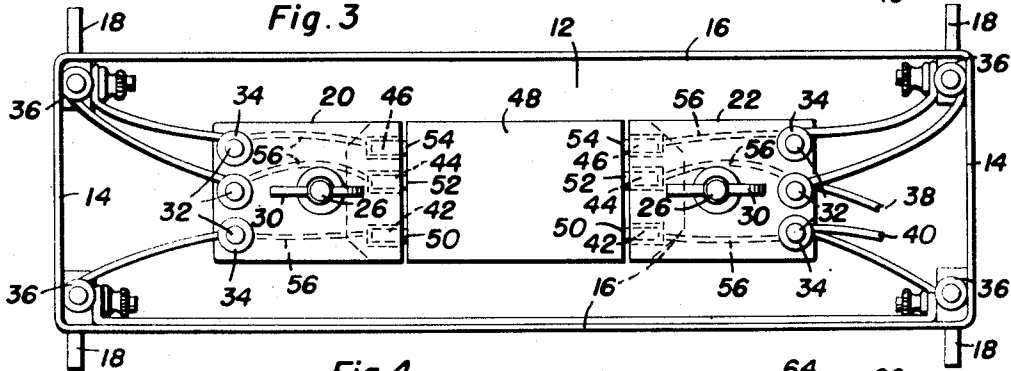
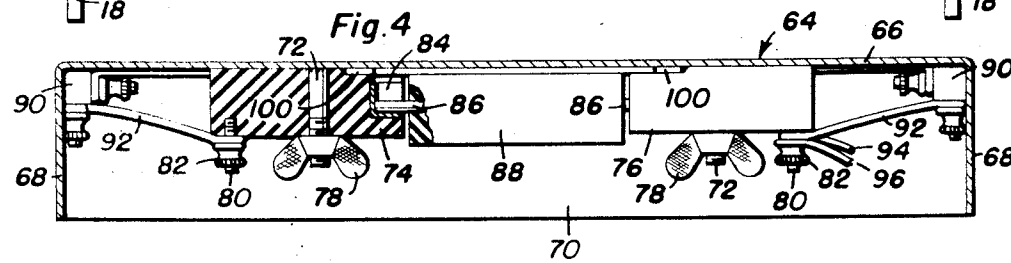


Fig. 4



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FLUORESCENT LAMP BALLAST FIXTURE

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3 Claims. (Cl. 339-147)

This invention relates to an improved fluorescent lamp ballast fixture whereby the ballast for fluorescent lights may be easily and quickly replaced.

In the conventional fluorescent lights the ballasts are generally provided with long wires which extend outwardly therefrom and are connected at their ends to various terminals and other wires within the housing of the fluorescent light. When it is necessary to replace a worn out ballast, it is necessary to disconnect the various connections at the ends of the wires of the ballast in order to install another ballast in place of the worn out one. Due to the number of wires on a ballast, it is quite easy to confuse which wire is connected to a certain terminal and therefore the ballast can be put in incorrectly. Furthermore, because of the number of wires and the various types of connections it is a time consuming job to replace a ballast.

The primary object of this invention is to provide an improved fixture for mounting a ballast within a fluorescent light whereby said ballast may be quickly and easily replaced.

Another object of this invention is to provide an improved fixture for mounting a ballast within a fluorescent light, said ballast and said fixture being so constructed that the ballast will fit within the fixture in one position only.

Another object of this invention is to provide an improved fixture for fluorescent lamp ballasts whereby a ballast may be placed without disconnecting the various wires which normally lead to a ballast and are connected thereto.

Another object of this invention is to provide a pair of spaced complementary connecting blocks having a plurality of aligned sockets therein for receiving terminal fingers of a fluorescent lamp ballast, said connection blocks being provided with a plurality of terminal posts connected to the sockets whereby the wires leading to the ballast may be connected to the terminal post and the ballast removed from the fluorescent light without disconnecting the wires from the terminal post.

Another object of this invention is to provide an improved fluorescent lamp wherein the housing has mounted on its top wall a pair of spaced connecting blocks disposed within the interior of the housing, said housing being provided with an opening in vertical alignment with the space between the connecting blocks whereby the ballast secured to said connecting blocks may be quickly and easily replaced through said opening in the housing of the fluorescent light.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangement of elements and portions as will be hereinafter described in detail in the specification, particularly pointed out in the appended claims, and illustrated in the accompanying drawings which form a material part of this application and in which:

Figure 1 is a perspective view of the upper portion of a conventional supporting housing for a pair of fluorescent lamps;

Figure 2 is an enlarged longitudinal vertical sectional view taken substantially upon the plane indicated by the section line 2-2 of Figure 1 and showing the construction of the fixture for supporting a fluorescent lamp ballast within the housing, the ballast being only partially broken away and shown in section;

Figure 3 is an enlarged plan view of the underside of

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the housing of Figure 1 and showing the arrangement of the ballast with respect to the connecting blocks and the various connections required to connect the sockets of the fluorescent lamps to the terminal posts of the connecting blocks; and

Figure 4 is a longitudinal vertical sectional view similar to Figure 2 and showing a modified construction, the connecting blocks being intended to be removed from the housing and the ballast removed from the underside of the housing.

Similar characters of reference designate similar or identical elements and portions throughout the specification and throughout the different views of the drawings.

Referring now to the drawings in detail, it will be seen that there is illustrated in Figures 1, 2 and 3 a conventional fluorescent light supporting housing 10 having a top wall 12, end walls 14 and side walls 16. Carried by the side walls 16 adjacent their connections with the end walls 14 are fluorescent lamp mounting sockets 18.

Secured to the underside of top wall 12 is a pair of spaced connection blocks 20 and 22 which are formed of an insulating material. Each connection block has a recess 24 therethrough in which is mounted a bolt 26 extending through an opening 28 of the top wall 12. The respective connection block is clamped against the top wall 12 by a wing nut 30 threadedly engaged on the bolt 26. Each of the connection blocks 20 and 22 is provided with a plurality of terminal posts 32 adjacent its outer end, the individual terminal posts each having a nut 34 threadedly engaged thereon.

Each of the fluorescent lamp sockets 18 is provided with a terminal block 36 to which are connected wires whose other ends are connected to the terminal post 32 of the connection blocks 20 and 22. In order that current may be supplied to the fluorescent lamps adapted to be supported in the sockets 18, certain of the terminal posts 32 of the connection block have connected thereto lead-in wires 38 and 40.

The inner ends of the connection blocks 20 and 22 are provided with a plurality of U-shaped sockets 42, 44 and 46. The respective sockets are in longitudinal alignment with each other and each of the sockets open inwardly and outwardly. Mounted between the connection blocks 20 and 22 is a conventional ballast structure 48 which is provided with contact fingers 50, 52 and 54 projecting from each end thereof. The contact fingers 50, 52 and 54 are resiliently retained within their respective sockets 42, 44 and 46. In order that the contact fingers of the ballast 48 may be connected to the terminal posts 32, each of the connection blocks 20 and 22 are provided with insulated internal wires 56 extending between the terminal posts 32 and their respective sockets.

In order that the ballast 48 may be easily replaced, the top wall 12 of the housing 10 is provided with an opening 58 in vertical alignment with the space between the connection blocks. It will be obvious that the ballast 48 may be readily lifted from between the connection blocks 20 and 22 and a similar new ballast be replaced through the opening in a reverse manner. The opening 58 is closed by a plate 60 which is integral with the ballast 48 and acts as a cover.

Since the ballast 48 will be most likely replaced by one who has little knowledge as to the wiring of a fluorescent light, the contact fingers 52 and 54 of the ballast have been placed much closer together than the contact fingers 50 and 52. The sockets 42, 44 and 46 are similarly spaced in order to receive the ballast in the correct position only.

In Figure 4 there is illustrated a modified housing 64 having a top wall 66, end walls 68 and side walls 70. It will be understood that the housing 64 is intended to be mounted where the upper surface of the top wall is either not readily accessible or it is not desired for some other reason to place an opening and an associated cover plate therein. In this type of fluorescent light, the housing 64 is provided with a pair of studs 72 welded to the underside of the wall 66 with connection blocks 74 and 76 secured in place by wing nuts 78 threadedly engaged on the studs 72. The connection blocks 74 and 76 are similar to the connection blocks 20 and 22 and have terminal posts 80 with nuts 82 thereon, and sockets 84 for receiving

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contact fingers 86 of the ballast 88. The ballast 88 is identical with the ballast 48. Mounted on the side walls 70 adjacent the ends 68 are conventional fluorescent lamp sockets (not shown) which have on the interior of the housing 64 terminal blocks 90. The terminal blocks 90 are connected to the terminal posts 80 by wires 92 and the fluorescent light functions in the same manner as the fluorescent light of Figures 1, 2 and 3. It will be understood that lead-in wires 94 and 96 are connected to certain terminal posts 80 of the connection blocks 76 in the same manner as the lead-in wires 38 and 40 of Figures 1 through 3.

When it is necessary to replace the ballast 88, both of the wing nuts 78 are disengaged from their respective studs 72 and their associated connection blocks are removed therefrom. The ballast 88 is then removed from the connection blocks 74 and 76 and replaced by a new ballast. The connection blocks 74 and 76 are once again slid over the studs 72 and clamped in place by the wing nuts 78.

It will be noted that the ballast 88 is provided with a flat plate 98 similar to the plate 60. In order to provide space for the plate 88, the inner upper portions of the connection blocks 74 and 76 are cut away as at 100. The plate 98 is clamped against the top wall 66 of the housing 64 by the connection blocks 74 and 76 and the ballast retained in its proper position.

The operation of this device will be understood from the foregoing description of the details thereof, taken in connection with the above recited objects and drawings. Further description would appear to be unnecessary.

Minor modifications of the device, varying in minor details from the embodiment of the device illustrated and described here, may be resorted to without departure from the spirit and scope of this invention, as defined in the appended claims.

Having described the invention, what is claimed as new is:

1. A fluorescent lamp ballast fixture comprising a support, a pair of connecting blocks rigidly secured to said support in spaced aligned relation, opposed end portions of said connection blocks being provided with aligned contact finger receiving sockets, said sockets opening towards said support and having ends opening through opposed ends of said connection blocks, a ballast positioned between said connection blocks, said ballast having contact fingers projecting from opposite ends thereof and disposed in the general confines of said end portions of said connecting blocks, said contact fingers being re-

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ceived within said sockets, said contact fingers being disposed between said support and the bottoms of said connection blocks remote from said support.

2. A fluorescent lamp ballast fixture comprising a support, a pair of connecting blocks rigidly secured to said support in spaced aligned relation, opposed end portions of said connection blocks being provided with aligned contact finger receiving sockets, said sockets opening towards said support and having ends opening through opposed ends of said connection blocks, a ballast positioned between said connection blocks, said ballast having contact fingers projecting from opposite ends thereof and disposed in the general confines of said end portions of said connecting blocks, said contact fingers being received within said sockets, said contact fingers being disposed between said support and the bottoms of said connection blocks remote from said support, said ballast being received in an opening in said support, a cover plate carried by said ballast overlying said opening.

3. A fluorescent lamp ballast fixture comprising a support, a pair of connecting blocks rigidly secured to said support in spaced aligned relation, opposed end portions of said connection blocks being provided with aligned contact finger receiving sockets, said sockets opening towards said support and having ends opening through opposed ends of said connection blocks, a ballast positioned between said connection blocks, said ballast having contact fingers projecting from opposite ends thereof and disposed in the general confines of said end portions of said connecting blocks, said contact fingers being received within said sockets, said contact fingers being disposed between said support and the bottoms of said connection blocks remote from said support, said ballast being provided with an enlarged plate portion, said plate portion being clamped between said support and said connection blocks.

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