Dec. 11, 1945. S. R. NAYSMITH 2,390,807

FLUORESCENT LIGHTING FIXTURE

Filed June 4, 1943 2 Sheets-Sheet 1

Fig. 1.

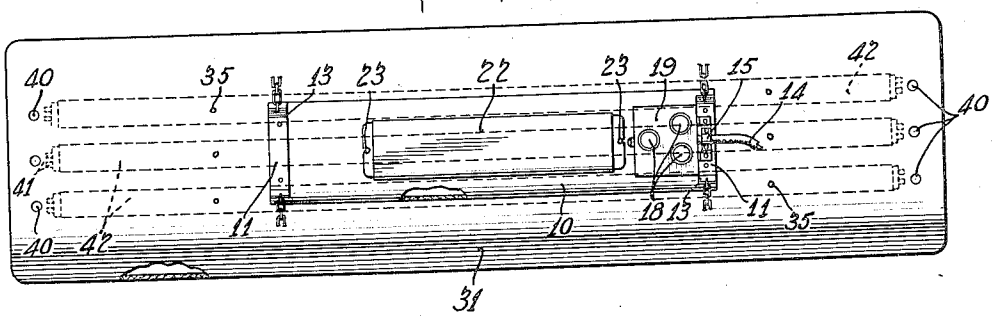
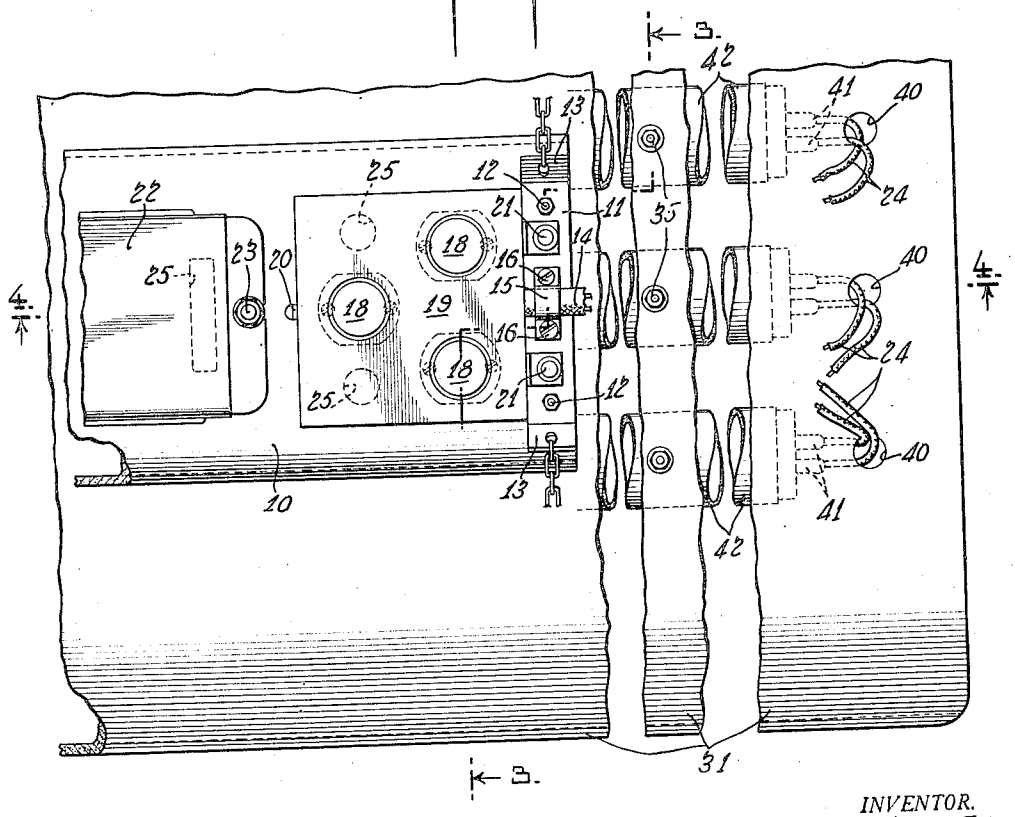


Fig. 2.



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Filed June 4, 1943 2 Sheets-Sheet 2

Fig. 3.

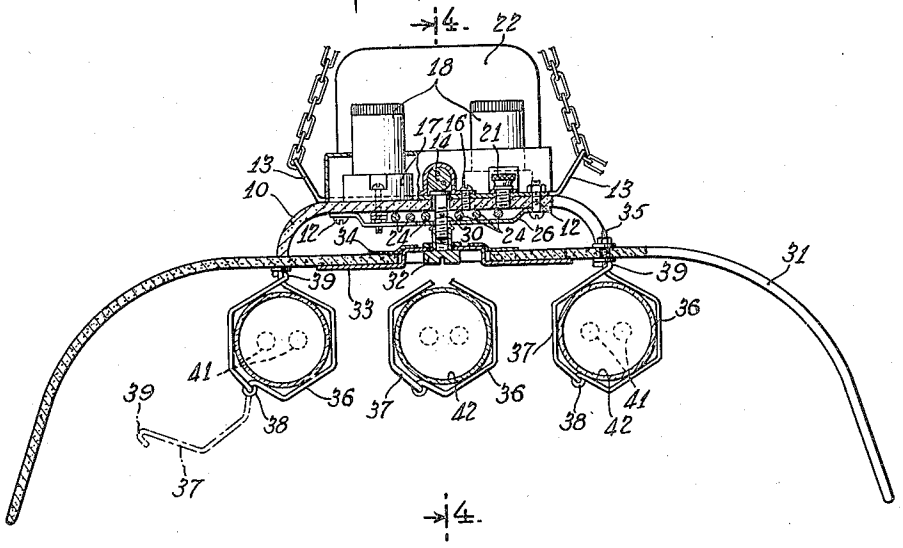
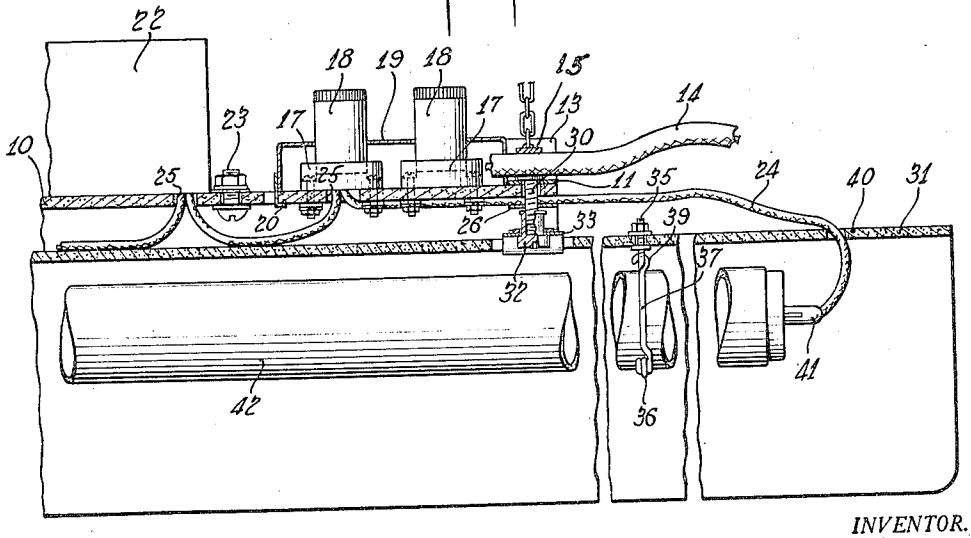


Fig. 4.



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UNITED STATES PATENT OFFICE

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FLUORESCENT LIGHTING FIXTURE

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Application June 4, 1943, Serial No. 489,603

3 Claims. (Cl. 240—78)

The present invention relates to fluorescent lighting fixtures, and is more particularly directed toward fluorescent lighting fixtures largely composed of non-metallic parts and employing metal parts in an extremely economical manner.

The present invention contemplates fluorescent lighting fixtures more particularly of the type wherein each fixture is a complete unit adapted to be supported and wired independently of other electrical equipment.

The present invention contemplates lighting fixtures of this nature wherein the only metal parts used, in addition to those necessary for their electrical and magnetic properties, are reduced to a minimum, for example, the only metal parts required being the supporting screws, bolts, straps and the like, and a small splicing chamber cover plate.

According to the present invention a non-metallic body, which may be a shallow inverted channel, is employed to support all parts of the fixture. The length of this channel is determined by the length necessary for the ballast and starter sockets as these parts require much less length than the lamps and reflector for the fixture. The lamps and reflector extend substantially beyond the supporting body member.

According to the present invention the input wires are led into a splicing chamber above an end of the body member, where the starter sockets are housed. Wires extend from the splicing chamber to the lower face of the body member through holes and are then connected to the ballast, also supported by the body member, and to the lamps as necessary for lamp operation.

Other and further objects will hereinafter appear as the description proceeds.

The accompanying drawings show, for purposes of illustrating the present invention, an embodiment in which the invention may take form, it being understood that the drawings are illustrative of the invention rather than limiting the same.

In these drawings:

Figure 1 is a top plan view of a complete lighting fixture with parts broken away to show interior construction;

Figure 2 is a fragmentary top plan view at an enlarged scale with parts broken away;

Figure 3 is a transverse sectional view taken on the broken line 3—3 of Figure 2; and

Figure 4 is a longitudinal section taken on the line 4—4 of Figures 2 and 3.

The body member of the lighting fixture is illustrated at 10, the same being in the form of a straight, shallow, inverted, trough shaped piece of insulating, non-metallic material. Straps 11, 11 are secured across the upper flat face of the body member at its ends by bolts 12, 12 and these straps have ears 13, 13 struck up for attachment to chains or other supports as indicated.

A current supply lead 14 is secured to the top of the strap 11 by a small strap 15 held in place by screws 16. Adjacent one of the end straps 11 three starter sockets 17 are mounted for three starters 18. A cover plate 19 is secured about the starter sockets by hooks 20, one shown at the left end of Figure 4, and by screws indicated at 21. The ballast 22 is secured to the top of the channel shaped body member by bolts indicated at 23. The current supply wires are connected to the starter sockets, to the ballast and to cord terminals 24 in the usual circuit relations for the number of lamps and type of ballast employed. These connections are made by passing wires from the splicing chamber down through holes, such as illustrated at 25, 25 in the body member, and the cord terminals 24 are clamped in place by straps 26 held in place by the bolts 12. It will thus be seen that the body member 10 supports not only the input wires, but all the electrical parts of the apparatus and carries the cord terminals 24 for connection with the fluorescent lamps.

This body member can be made to have a short overall length which should (for purposes of balance) be a little more than the length of the ballast and twice the length required for housing the starter sockets. The starter sockets are all preferably located at one end so as to be in one splicing chamber and are preferably placed on vertical axes, as this disposition makes it easier to locate the starter which is not properly functioning, should failure take place.

The straps 11 carry centrally disposed, downwardly extending, threaded studs 30. These studs are utilized for supporting the reflector illustrated at 31. This reflector is also made of non-metallic, rigid material. The support for the reflector includes a thumb nut 32, non-removably carried by a strap 33, this strap member having a portion below the reflector and a portion 34 above the reflector so as to hold the strap and reflector together. The reflector can be held securely in place and can be removed without likelihood of separation of the parts or of developing too much strain when the parts are secured together. The reflector 31 carries lamp holders 35 in the form of two pieces 36 and 37 of wire

hinged as illustrated at 38 and adapted to be hooked together as indicated at 39.

The reflector 31 is provided with holes 40 near its ends and these holes are utilized to pass the cord terminals 24 down through the reflector after it has been hung in position. These terminals are adapted to be fastened to the usual pin type terminals found on fluorescent lamps 42 by receptacles indicated at 41.

All the wiring for the fixture may be completed at the factory and the electrical parts of the fixture completely installed. Then the assembly of the reflectors and lamps on the body of the fixture is very easily accomplished and lamp renewals may be readily made when necessary.

Since it is obvious that the invention may be embodied in other forms and constructions within the scope of the claims, I wish it to be understood that the particular form shown is but one of these forms, and various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

1. In a multiple lamp fluorescent lighting fixture, a rigid horizontal flat topped body substantially shorter than the lamps with which it is to be used, a multiple lamp fluorescent lamp ballast secured on the upper side of the body midway of its ends, starter sockets secured to the top of the body near one end, a current supply cord secured to the top of the body adjacent the starter sockets, and wiring interconnecting the current supply cord with the starter sockets and the ballast and including a plurality of lamp leads having pin receptacle contacts for supplying a plurality of fluorescent lamps, a cover detachably secured to the body and forming a splicing chamber about the starter sockets, the body having wire receiving holes under the ballast and adjacent the starter sockets so that all the wiring except the cord and that in the splicing chamber is below the body, and means for securing the lamp leads under the body.

2. In a multiple lamp fluorescent lighting fixture, a rigid horizontal flat topped body substantially shorter than the lamps with which it is to be used, cross straps secured to the top of the body at its ends, a multiple lamp fluorescent lamp ballast secured on the upper side of the body midway of its ends, starter sockets secured to the top of the body near one end, a current supply cord secured to the cross strap adjacent the starter sockets, wiring interconnecting the current supply cord with the starter sockets and the ballast and including a plurality of lamp leads extending beyond the ends of the body and having pin receptacle contacts for supplying a plurality of fluorescent lamps, a cover forming a splicing chamber about the starter sockets and secured to the adjacent strap, the body having wire receiving holes under the ballast and adjacent the starter sockets so that all the wiring except the cord and that in the splicing chamber is below the body, and straps secured under the ends of the body and supporting the lamp leads.

3. A lighting fixture comprising a rigid non-metallic body having a flat top and narrow depending side flanges, a multiple lamp fluorescent lamp ballast secured to the top face of the body, starter sockets carried by the top of the body and adapted to carry fluorescent lamp starters, body supports secured to the ends of the body, a cover about the starter sockets apertured for the starters and adapted to form a splicing chamber, current supply leads extending into the splicing chamber, cord terminals adapted for connection with the posts at the ends of a plurality of lamps, wiring interconnecting the supply leads, the sockets, the ballast and the cord terminals, the wiring to the ballast and cord terminals passing through holes in the body so as to be underneath the body, downwardly extending studs carried at the ends of the body, a downwardly acting non-metallic reflector detachably secured to the studs and held against the flanges of the body, and lamp supporting rings carried by the reflector, the reflector having holes for the cord terminals.

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