

Sept. 15, 1942.

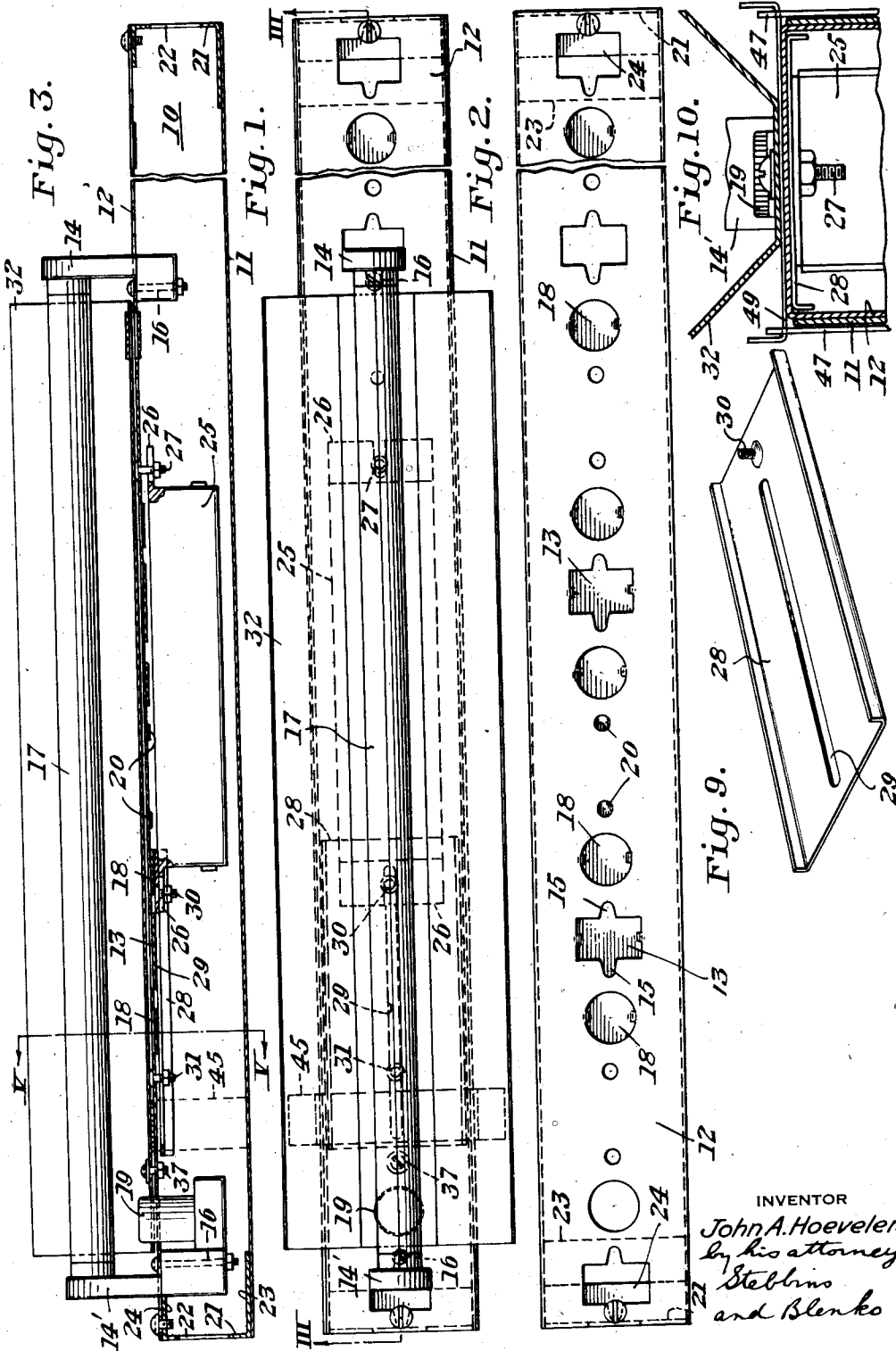
J. A. HOEVELER

2,295,788

SUPPORT AND REFLECTOR FOR LUMINOUS TUBES

Filed Dec. 13, 1940

2 Sheets-Sheet 1



INVENTOR

John A. Hoeverler  
By his attorneys  
Stebbins  
and Blenko

Sept. 15, 1942.

J. A. HOEVELER

2,295,788

SUPPORT AND REFLECTOR FOR LUMINOUS TUBES

Filed Dec. 13, 1940

2 Sheets-Sheet 2

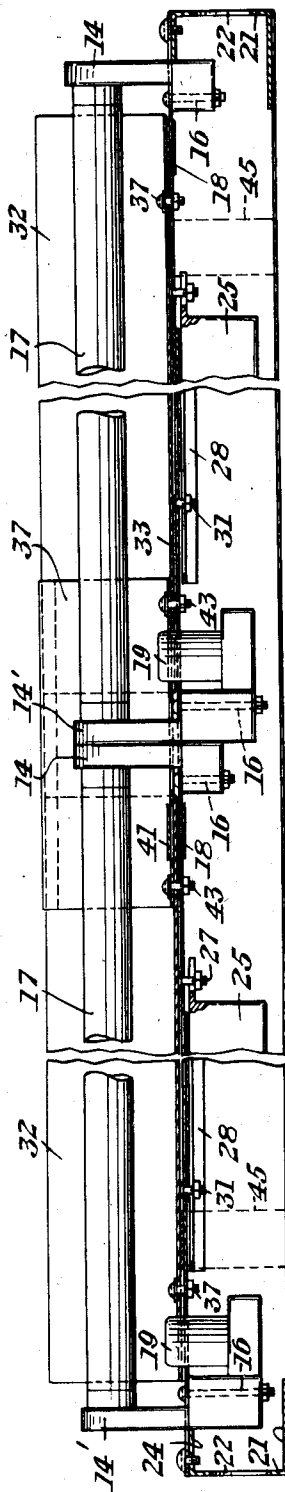


Fig. 4.

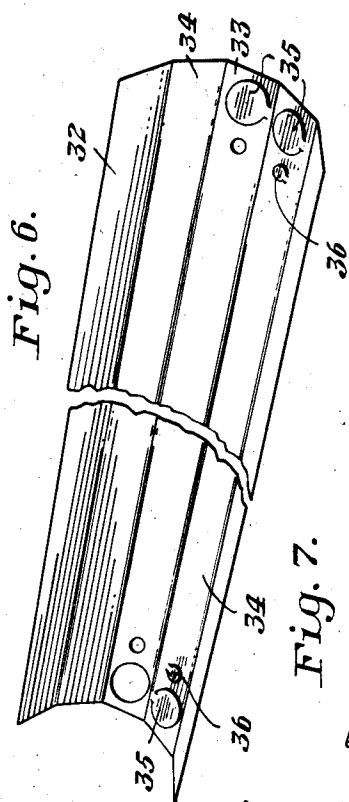


Fig. 6.

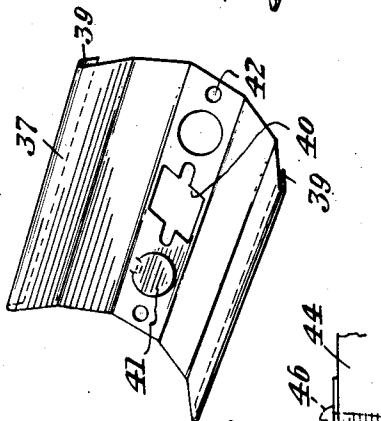


Fig. 7.

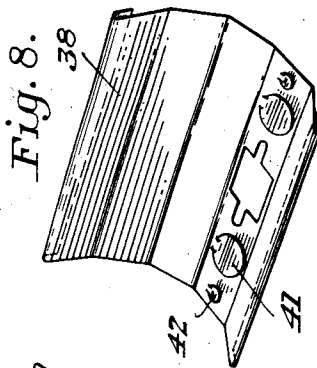


Fig. 8.

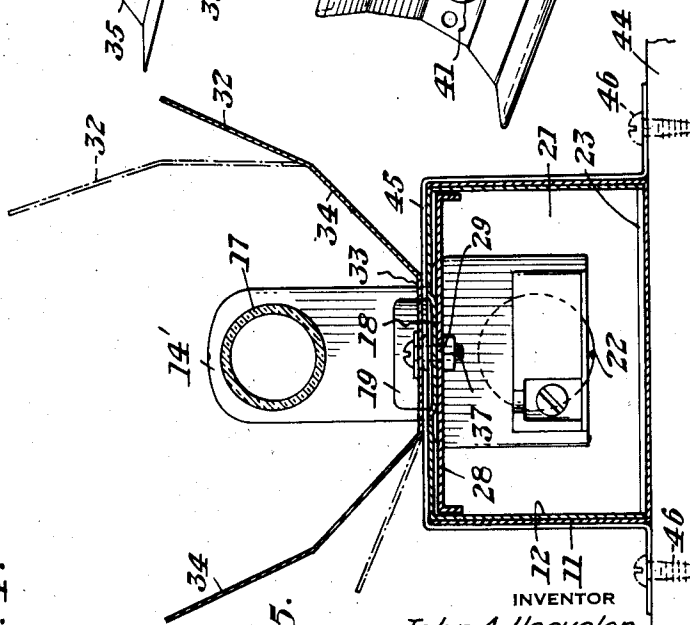


Fig. 5.

INVENTOR  
John A. Hoever  
by his attorneys  
Stebbins and Blenko

## UNITED STATES PATENT OFFICE

2,295,788

SUPPORT AND REFLECTOR FOR  
LUMINOUS TUBES

John A. Hoeveler, Mount Lebanon, Pa., assignor  
to Pittsburgh Reflector Company, Pittsburgh,  
Pa., a corporation of New Jersey

Application December 13, 1940, Serial No. 369,935

2 Claims. (Cl. 240-1)

This invention relates to a mounting and reflector for illuminating devices and, particularly, to a mounting for luminous tubes and a reflector adapted for use therewith.

Luminous tubes have now come into extensive use for general illuminating purposes. Such tubes require sockets or holders quite different from those employed for general incandescent lamps. For this reason, it has not been possible to utilize for supporting such sockets or holders, the mountings previously developed for incandescent lamp sockets. In addition, luminous tubes have certain special requirements. Each tube, for example, requires a starting switch and a ballast device. The tubes themselves, furthermore, are made in various lengths to suit special requirements.

I have invented a novel form of mounting which is particularly designed for supporting the holders for luminous tubes and the auxiliary devices and equipment used in connection therewith. I provide a mounting in the form of a tubular duct comprising two separable pieces, i. e., a back or base and a face or cover, which may be made up in any convenient lengths and cut to any specific length as may be required. The base and cover are of channel section and are dimensioned to fit together closely. The cover is provided with knockouts suitably spaced therealong whereby holes may be formed at appropriate intervals to receive the lamp-holders or sockets. Additional knock-outs are provided which, when removed, admit removable starting switches cooperating with one of the holders for each tube.

A further feature of the invention is a trough-shaped reflector adapted to be secured to the cover of the mounting. The reflector is preferably formed in various lengths suited to the lengths of the tubes and each section thereof has a flat bottom and inclined flat side faces whereby it may be disposed on the mounting cover in symmetrical or asymmetrical relation thereto.

Further features of the invention include an auxiliary plate for supporting a ballast device inside the mounting duct, connectors joining adjacent reflector sections, an end closure for the duct, and means for securing the duct to a supporting surface such as a floor, wall, or the like.

The following detailed description of the various features of the invention refers to the accompanying drawings illustrating a preferred embodiment. In the drawings—

Fig. 1 is a plan view of a mounting having one

length of tube and one section of reflector secured thereon;

Fig. 2 is a plan view of the mounting with the tube and reflector removed;

Fig. 3 is a sectional view taken substantially along the plane of line III—III of Fig. 1 showing the tube and its holders or sockets in elevation;

Fig. 4 is a view similar to Fig. 3 showing a plurality of tubes positioned on the mounting, a reflector section cooperating with each tube and a connector bridging the gap between the ends of adjacent reflector sections;

Fig. 5 is a transverse sectional view taken substantially along the plane of line V—V of Fig. 3;

Fig. 6 is a perspective view of a reflector section;

Figs. 7 and 8 are similar views of reflector connectors;

Fig. 9 is a perspective view of the auxiliary plate for supporting the ballast devices; and

Fig. 10 is a partial sectional view similar to Fig. 5 showing a modified form of securing means for the mounting duct.

Referring now in detail to the drawings, the tubular mounting duct 10 comprises a back or base 11 and a cover or face 12. The base and cover are of channel shape in section and fit closely together as shown in Fig. 5 but may easily be separated when desired. The cover 12 is provided with knock-outs 13 spaced along the length thereof. The knock-outs are of such size and shape as to receive the upwardly projecting portions of a pair of tube sockets or holders 14, 14' disposed back to back, as shown in Fig. 4. The knock-outs 13 also include notches 15 adapted to receive the shanks of bolts 16 whereby the holders 14 are secured to the cover.

Luminous tubes 17 are removably inserted in the holders 14 and 14'. These tubes come in several lengths, i. e., 18", 24", 36" and 48". The knock-outs 13 are, therefore, spaced on 6" centers, in order to accommodate any combination of different lengths of luminous tubes, the spacing between centers of adjacent knock-outs being a factor common to the various tube lengths.

The cover 12 is also provided with knock-outs 18 on opposite sides of the knock-outs 13. The knock-outs 18 are shaped and positioned appropriately to admit starting switches 19 removably disposed in the holders 14' with their upper ends projecting above the cover. The cover is also provided with knock-outs 20 adapted to provide holes for bolts securing the reflector sections.

End caps 21 are provided for closing the ends

of the duct 10 and are substantially U-shaped in section, having a knock-out formed therein adapted to provide a hole 22 for supply conductors. The caps 21 have flat portions 23 bearing on the interior of the base 11 and flat portions 24 adapted to cover one-half of the area of the knock-out 13 at the end of the duct where only a single holder 14 or 14' is employed.

A ballast device 25 is connected in circuit with each luminous tube 17. The ballast device is provided with slotted end flanges 26 whereby it may be secured to the cover 12 by bolts 27. The ballast devices of different manufacturers, however, differ in length. In order to accommodate ballast devices of any length, I provide an auxiliary supporting plate 28 adapted to fit inside the cover 12 and having a central, longitudinal slot 29 therein. The plate 28 is provided with a screw 30 having a counter-sunk head welded thereto. The plate may be secured in position as shown in Figs. 3 and 4 by a bolt 31 passing through a hole provided by removing one of the knock-outs 20 and through the slot 29. When the bolt 31 is loosened, the plate 28 may be adjusted longitudinally of the duct to position the screw 30 properly to enter the slotted end of the ballast device 25.

A reflector 32 is mounted on the cover 12. The reflector is trough-shaped in section having a flat bottom 33 and inclined flat sides 34. The reflector is made in lengths conforming to those of the tubes 17. The reflector has knock-outs 35 therein whereby it may be fitted down over the upper end of the starting switch 19. The knock-outs 35 are positioned in the flat bottom 33 and in one of the flat side portions 34 of the reflector. Knock-outs 36, similarly positioned, provide holes for bolts 37 passing through holes in the cover 12 provided by the knock-outs 20 for securing the reflector thereto. The location of the knock-outs 35 and 36 permits the reflector to be mounted symmetrically, as shown in solid lines in Fig. 5, i. e., with its flat bottom 33 engaging the cover 12 flatwise. The reflector may also be mounted asymmetrically as shown in dotted lines in Fig. 5, when the flat side 34 thereof, having the knock-outs 35 and 36 therein, is disposed flatwise against the cover 12.

Reflector connectors 37 and 38 have the same sectional shape as the reflector 32 and have their edges bent over as at 39. The connectors are adapted to bridge the gap between the ends of adjacent reflectors 32, as shown in Fig. 4. The connectors have knock-outs 40, 41 and 42. In the connectors 37, these knock-outs are disposed in the flat bottom portion whereas in the connector 38, they are disposed in one of the flat side portions. The holes provided by the knock-outs 42 admit the upstanding portions of the holders 14, 14'. Similarly, the hole provided by the knock-outs 41 receives the upper end of the starting switch 19. The knock-outs 42 provide holes admitting bolts 43 for securing the connectors and the ends of the associated reflectors to the cover 12. The connector 37, of course, is used with the symmetrical mounting of the reflector shown in solid lines in Fig. 5, while the connector 38 is used when the reflector is asymmetrically disposed as shown in dotted lines.

The assembled mounting duct may be secured to a floor, wall or other supporting surface 44 by a U-shaped strap 45 and screws 46 as shown in Fig. 5. An alternate form of duct-securing means is shown in Fig. 10 which comprises a U-shaped stirrup 47 attached by suitable screws.

The ends of the stirrup 47 extend slightly beyond the cover 12 and have holes therein adapted to receive a tie 49. The ends of the tie are bent up after insertion to hold the duct in place.

In using the invention, certain of the knock-outs 13 of the cover 12 are removed, depending on the lengths of the tubes to be installed. The holders 14 and 14' are next attached, the knock-outs 18 being removed as required to receive the starting switches 19. The ballast devices are next attached to the cover. The necessary wiring connections are then attached. This is facilitated because the cover 12 is entirely open at the back when removed from the base 11. The reflectors 32 are then secured in place and the connectors 37 or 38 attached. The connectors may be seated over the ends of the reflectors merely by manually collapsing the edges of the reflectors slightly at their ends and forcing the connectors downwardly thereover. The cover 12 is then assembled with the base 11 after attachment of the end caps 21 to the former. The completed mounting is then secured in place by straps 45 or stirrups 47 and ties 49, after which the luminous tubes may be inserted in the holders. If the straps 45 are employed, they are disposed over the cover before the reflectors are put in place. If the stirrups 47 and ties 49 are used, the reflector bolts 37 may be loosened slightly to admit the ties 49 between the reflectors and the cover 12.

It will be apparent from the foregoing description that the invention provides a mounting for luminous tubes having numerous advantages. In the first place, the spacing of the knock-outs for the lamp-holders and starting switches is such as to accommodate any standard length tube in any position. The lamp-holder knock-outs are designed to receive a pair of holders back to back, the usual arrangement when a continuous installation is desired. At the ends of the duct, the end caps cover the unoccupied half of the knock-out opening. The reflector is adapted for symmetrical or asymmetrical mounting, depending on the distribution of light desired, and the connectors bridge the gaps between adjacent reflectors, providing a substantially continuous reflecting effect. The auxiliary supporting plate for the ballast device is highly useful to accommodate devices of different manufacturers which vary in length.

The entire construction is simple so that it can be readily assembled without elaborate instructions and at the same time is relatively inexpensive to manufacture. It provides a continuous, rigid support for the luminous tubes and also a housing for the necessary wiring. The mounting also presents a neat appearance so it may be used in exposed locations.

Although I have illustrated and described but a preferred embodiment of the invention, it will be understood that changes in the details of construction and arrangement of parts may be made without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A mounting for luminous tubes comprising a sheet metal duct including a cover several times as long as the tubes, having knock-outs spaced therealong adapted to receive lamp-holders and additional knock-outs adapted to receive starting switches, a trough-shaped reflector adapted to be mounted on said duct, said reflector also having starting switch knock-outs, the reflector knock-outs being so positioned as to be in aline-

ment with the starting switch knock-outs in the duct cover when the reflector is mounted thereon, said reflector including sections disposed end to end and connectors between sections, said connectors having knock-outs adapted to aline with both the lamp-holder knock-outs and the starting switch knock-outs of the duct cover.

2. A mounting for luminous tubes comprising a sheet metal duct having a cover provided with knock-outs spaced therealong adapted to receive

lamp-holders, one of said knock-outs being located adjacent an end of the duct cover, and a cap adapted to fit in the end of the duct, said cap having a body portion constituting a transverse wall in the end of the duct and a portion at right angles thereto adapted to fit against the duct cover, and extending over substantially half the area of the knock-out adjacent the end of the duct.

JOHN A. HOEVELER.