

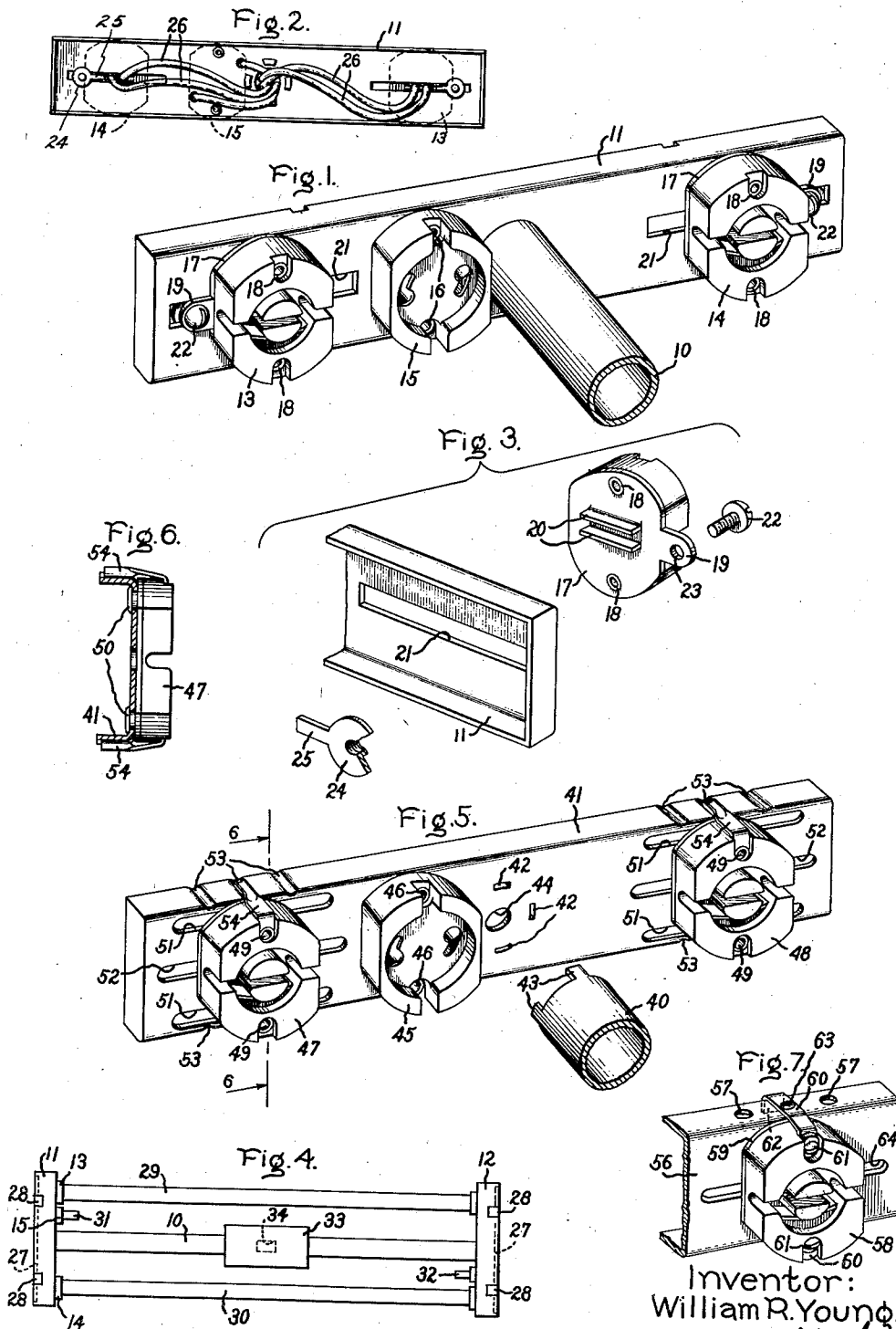
April 30, 1946.

W. R. YOUNG

2,399,531

FIXTURE FOR TUBULAR LAMPS

Filed Aug. 23, 1943



Inventor:
William R. Young,
by *Harry E. Dunham*
His Attorney.

UNITED STATES PATENT OFFICE

2,399,531

FIXTURE FOR TUBULAR LAMPS

William R. Young, Fairfield, Conn., assignor to
General Electric Company, a corporation of
New York

Application August 23, 1943, Serial No. 499,634

1 Claim. (Cl. 240—78)

The present invention relates to fixtures for tubular lamps having a tubular envelope with contact means at the end or ends for conducting current thereto. The invention is of particular interest in connection with fluorescent lamps having two spaced prongs at each end and requiring special starting means although it is not necessarily limited thereto.

The object of my invention is to provide lamp fixtures of the type above specified which are simple in construction, easy to assemble and dismantle and which may be produced at relatively low cost.

For a consideration of what I believe to be novel and my invention, attention is directed to the following description and the claim appended thereto in connection with the accompanying drawing.

In the drawing, Fig. 1 illustrates a perspective view of a part of a fixture embodying my invention; Fig. 2 is a back view of Fig. 1; Fig. 3 is an exploded perspective view of certain parts of Fig. 1; Fig. 4 is an assembly view of a fixture with tubular lamps; Fig. 5 is a modification of the arrangement shown in Fig. 1; Fig. 6 is a section along line 6—6 of Fig. 5; and Fig. 7 is a modification of a part of Fig. 5.

The fixtures shown in the drawing are especially adapted for assembly with fluorescent lamps, each having two prongs at each end for engaging a lamp holder and each lamp requiring a starter socket and a starter together with ballast means for starting the lamp during operation. Broadly, a fixture according to my invention includes tubular supporting means, preferably in the form of a metal tube, and a pair of parallel channels secured to spaced portions of such metal tube for receiving lamp sockets and starter sockets to support and operate a lamp or lamps on the fixture. The arrangement in Figs. 1 to 4 comprises a tube 10 and two like channels 11, 12 suitably secured in spaced parallel relationship to the ends of the tube 10. The channels may be made of channel stock or formed sheet metal. A central portion of each channel is secured to an end of the tube 10. Each channel carries two lamp sockets 13, 14 of standard construction and a starter socket 15, likewise of standard design. The starter socket 15 is closely spaced with the tube 10 and fastened to the channel 11 by means of hollow rivets 16.

Each lamp socket 13, 14 is adjustably supported on the channel 11. To this end each socket is secured to a mounting plate 17 engaging the back of the socket by means of hollow rivets 18. The

mounting plate 17 has a lateral projection or ear 19 and two parallel projections or strips 20 (Fig. 3) lanced out from a central portion of the mounting plate. The front wall of the channels 11, 12 has rectangular openings 21 for receiving and guiding the projections 20 of the mounting plates. The mounting plates are secured in position on the channels by means of a screw 22 projecting through an opening 23 of the ear 19 and threaded into a tapped plate 24 engaging the back of the front wall of the channel. The tapped plate 24 has a rectangular projection 25 slidably extending into the space formed between the projections 20 of the mounting plate 17. The channels 11, 12 and the tube 10 provide wiring space for the conductors or wires connecting the lamp holders and the starter socket into an electric circuit by means of wires 26 (Fig. 2). The back of each channel may be closed by a sheet 27 (Fig. 4) held in place by small, sheared lancements 28. In Fig. 4 the fixture is assembled with two lamps 29, 30, a starter 31 for the lamp 29, a starter 32 for the lamp 30 and a ballast 33 for both lamps. The ballast is suitably fastened to a central portion of the metal tube 10. The tube 10 serves as a raceway for the wires 26, as shown in Fig. 2. Some of these wires are connected in known manner to the ballast 33 through an opening 34 in the tube 10. Further details of the electric circuit are not described because such circuits are well known and do not form a part of my invention.

Thus, a fixture according to my invention as described above is very simple in construction, consisting of a metal tube and two like channel members with sockets mounted thereon and secured to the ends of the tube. The fixture may be easily assembled by the customer. This permits shipping with the several parts dismantled, thus reducing greatly the necessary shipping space. The adjustability of the lamp sockets 13, 14 on the channels 11, 12 permits the use of a standard reflector for different ceiling heights and different areas to be illuminated. In order to adjust a lamp on the fixture, all that is necessary is to loosen the screws 22 and slide the respective lamp holders along the openings 21 in the channels until the desired position of the lamp is reached whereupon the lamp holders may be fixed by retightening of the screws 22.

Whereas in the arrangement of Figs. 1 to 4 the lamp holders may be adjusted and moved into any position within the range of the openings 21, the arrangement shown in Figs. 5, 6 permits movement of the lamp holders into several fixed

positions. The fixture of Figs. 5 and 6 comprises a light, metal tube 40 with like channels 41 for attachment to the ends of the tube 40. The attaching means in the present example includes four angularly spaced openings 42 in the central portion of the channel 41 for receiving four tabs 43 formed at the end of the tube 40. These tabs are inserted into the openings 42 and subsequently bent, thus rigidly securing the channel 41 to the tube 40 and definitely locating the two relative to each other. A central opening 44 in the channel forms a passageway for wires extending from the channel 41 into the tube 40. A starter socket 45 corresponding to the socket 15 in Fig. 1 is securely fastened to the channel in close proximity to the tube 40 by means of hollow rivets 46. Two lamp sockets 47, 48 are attached to opposite ends of the channel 41. Each lamp holder is held on the channel 41 by means of two hollow rivets 49 which have rear heads 50 (Fig. 6) located in back of the channel. The rivets 49 project slidably through parallel slots 51, permitting adjustment of the lamp holder by sliding it along the channel 41 and acting as guide means in place of the projections 20 and 25 in Figs. 1 to 3. An intermediate slot 52 between the slots 51 is provided to facilitate movement of wires when connected to the holder 47 upon movement of the latter. Each lamp socket 47, 48 may be moved into any position within the range of the slots 51, 52. Three positions, however, are fixed, an intermediate, an inner, and an outer position. This is accomplished by providing a portion of the channel 41 with three indentations 53 on top and bottom for each lamp socket cooperatively associated with spring fingers 54 secured to the lamp socket. In the present example the spring finger 54 has an end portion connected to one of the rivets 49 and another end portion biased into one of the indentations 53. In Fig. 5 the lamp sockets are in an intermediate position. If it is desired to illuminate a larger area, the sockets are moved outward, that is, towards the ends of the channel 41 until the spring fingers 54 drop into their respective indentations 53.

The arrangement of Fig. 7 includes a channel 55 corresponding to the channel 41 of Fig. 5. Top and bottom portions of the channel are provided with spaced perforations 57. A socket 58 is mounted on the channel by means including a back plate 59 and spacing fingers 60. The socket is attached to the back plate by means of rivets 61. The rivets 61 like the rivets 18 in Fig. 1 do not project through the wall of the channel as in the arrangement of Fig. 5. Each spring finger 60 has a bent or hooked portion 62 engaging the rear edge of the channel and a projection 63 for extending into one of the perforations 57. Thus, the spring fingers with the perforations 57 serve positively to position the socket and to support it on the channel. A slot 64 in the channel 55 serves to accommodate wiring when attached to the rear of the socket in the several positions of the lamp. When it is desired to change the position of the lamp, all that is necessary is to push the sockets connected to the lamp along the respective slots 64.

Having described the method of operation of my invention, together with the apparatus which I now believe to represent the best embodiment thereof, I desire to have it understood that the apparatus shown is only illustrative and that the invention may be carried out by other means.

What I claim as new and desire to secure by Letters Patent of the United States is:

In a fixture for tubular lamps, the combination of a channel having a slot, a lamp socket and means adjustably supporting the lamp socket on the channel comprising a mounting plate attached to the back of the lamp socket and forming two projections located in the slot, an ear on the mounting plate located in front of the slot and a tapped plate located in back of the slot, and having a projection guided between the first mentioned projections and means projecting through the ear and engaging said tapped plate.

WILLIAM R. YOUNG.