June 30, 1953 E. M. CAFERRO 2,644,027

OUTDOOR FIXTURE FOR TUBULAR LIGHTS

Filed Sept. 6, 1949 2 Sheets-Sheet 1

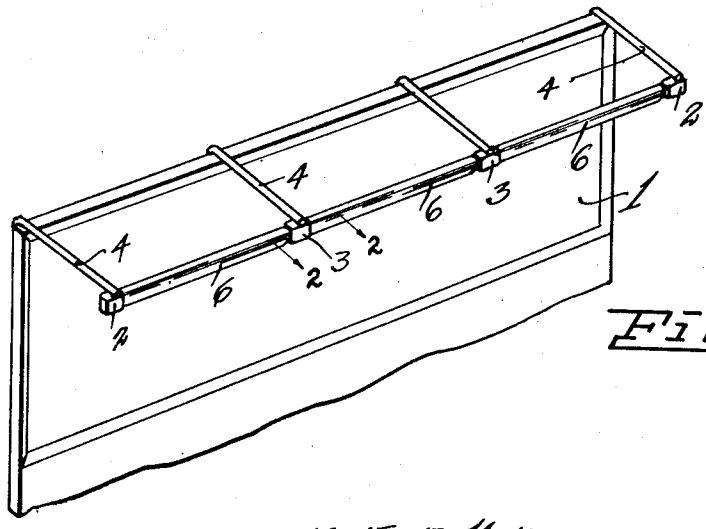


Fig. 1

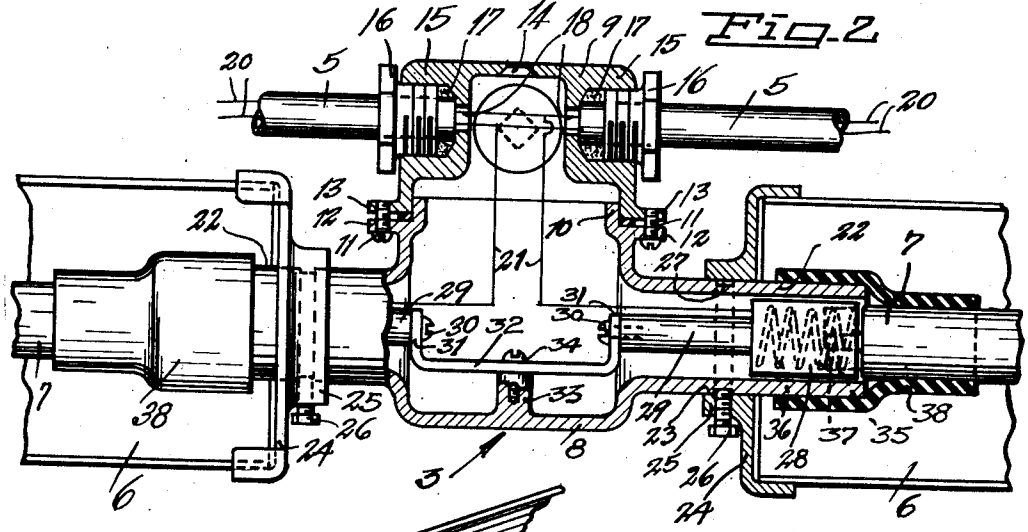


Fig. 2

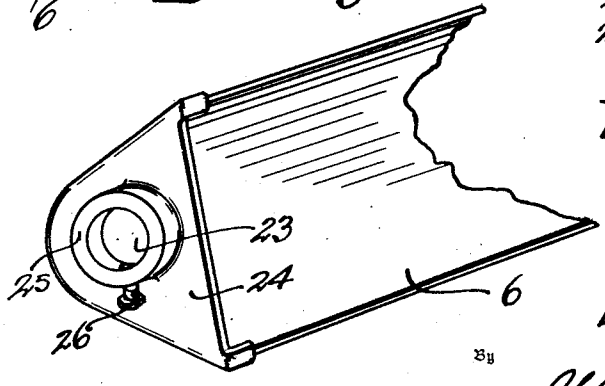


Fig. 3

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OUTDOOR FIXTURE FOR TUBULAR LIGHTS

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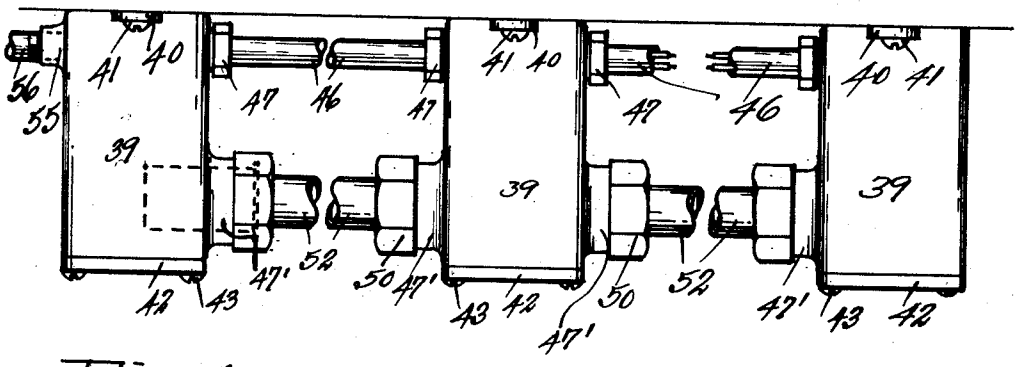


Fig. 4

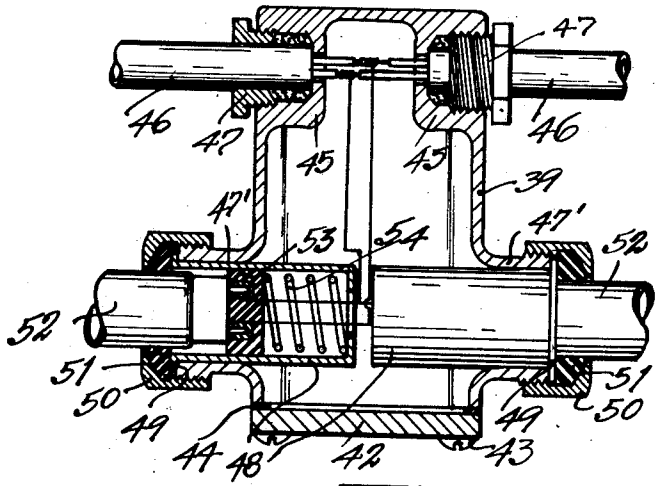


Fig. 5

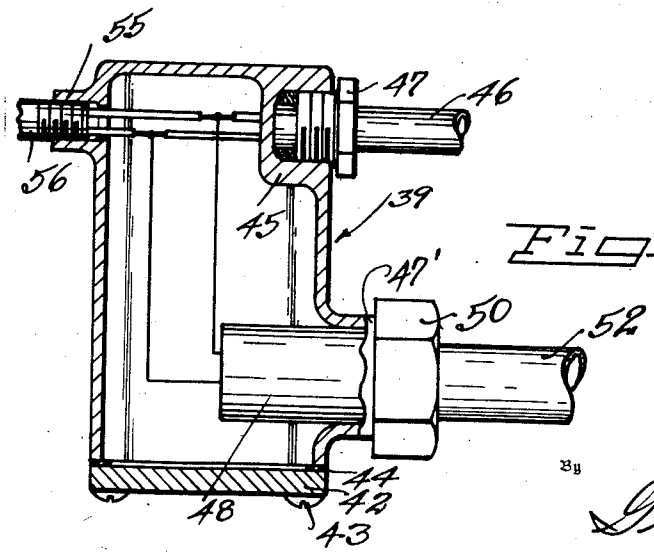


Fig. 6

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UNITED STATES PATENT OFFICE

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OUTDOOR FIXTURE FOR TUBULAR LIGHTS

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1 Claim. (Cl. 174—52)

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This invention relates to lighting fixtures which are used for illuminating signs and the like and it is one object of the invention to provide a lighting fixture which may be installed outdoors in position for use and will be of such construction that rainwater or water from melting snow or ice can not enter a conduit through which conductors pass and cause a short circuit.

Another object of the invention is to provide a fixture which is particularly adapted for use with tubular lights and will serve as supporting means for reflectors as well as for the tubes.

Another object of the invention is to so form elements of the fixture that tubes may be cut a predetermined length and very easily applied to tube-carrying members forming elements of the fixture, thus allowing a new tube to be easily installed when necessary and also allowing installation of new tubes to be effected without use of a wrench, screw driver or other tools.

Another object of the invention is to provide a lighting fixture formed of conduits, junction boxes and connections which are of simple formation and can be very easily assembled.

With these and other objects in view the invention consists of a special construction and arrangement of parts illustrated in the accompanying drawings wherein:

Fig. 1 is a perspective view of an outdoor sign equipped with a lighting fixture of the improved construction.

Fig. 2 is a fragmentary view upon an enlarged scale taken along the line 2—2 of Figure 1.

Fig. 3 is a perspective view of one end portion of a reflector forming part of the lighting fixture.

Fig. 4 is a front elevation of a lighting fixture having a modified construction.

Fig. 5 is a sectional view taken vertically through an intermediate junction box or outlet box of the modified construction.

Fig. 6 is a sectional view taken vertically through an end box of the modified construction.

In Figure 1 of the drawings the improved lighting fixture has been shown mounted in front of an outdoor sign 1 which may be of any dimensions desired, it being understood that use of the lighting fixture is not restricted to a sign of the particular type illustrated and that it may be used for lighting other objects.

This lighting fixture has an outlet box 2 at each end a suitable number of intermediate outlet boxes 3 according to the length of the fixture. Arms 4 project rearwardly from the boxes and are of such length that when their rear ends are secured to the sign the fixture will be supported

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in predetermined forwardly spaced relation to the sign. Tubular conduits 5 formed from metal pipes of suitable length and diameter extend between the outlet boxes and the outlet boxes also carry elongated reflectors 6 which extend partially about lighting tubes 7 and direct light from these tubes onto the sign.

The outlet boxes 2 and 3 are of duplicate construction and each has a main section or casing 8 and an upper auxiliary casing or head 9 which has its open end fitting snugly about the reduced upper portion or neck 10 of the main section and is secured by screws 11 which are passed upwardly through ears 12 of the main casing and screwed into threaded openings formed through ears 13 projecting from the upper section. An opening 14 is formed through the top of the head to receive a screw by means of which the head is secured to its supporting arm 4. Side walls of the head are inwardly thickened and drilled to form inwardly projecting sockets 15 into which fit ends of the conduit pipes 5 and into these sockets are screwed nuts 16 by means of which packing 17 is compressed about the pipes to firmly hold the pipes in the sockets. Ends of the pipes register with openings 18 are formed at inner ends of the sockets so that power wires 20 may pass through the head and have attached to them branch wires 21 which extend downwardly into the main section of the casing.

The main casing section is of box-like formation and from its walls project sleeves 22 of such length that they may pass through openings 23 formed through the end walls or heads 24 of the reflectors 6, the openings 23 being surrounded by collars 25 formed with threaded side openings to receive set screws 26 which are tightened and engage in grooves 27 formed circumferentially of the pipes and hold the reflectors against longitudinal movement and also hold the reflectors after being turned about the sleeves to adjusted positions in which they will direct light upon the sign 1.

Sockets 28 fit into the sleeves and carry arms 29 which extend longitudinally in the sleeves axially thereof and at their inner ends are secured by screws 30 to the upstanding arms 31 of a bracket 32 which is supported upon a lug or boss 33 at the bottom of the casing 3 by a screw 34. Plugs 35 which are formed of insulation slidably fit into the sockets 28 and are urged outwardly by springs 36, current being supplied to the plugs by the wires 21 and pins 37 at ends of the light tubes 9 being fitted into the plugs so that when a switch is closed to allow current to flow through the cir-

cuit the light tubes will be energized and light directed upon the sign. Since the plugs 35 are urged outwardly by the springs 36 they may be forced inwardly and the light tubes disconnected from the plugs and thus allow a burned out or broken light tube to be easily removed and another installed. Rubber coupling sleeves 38 are fitted about the sleeves 22 and end portions of the light tubes and prevent the light tubes from accidentally becoming detached from the plugs. The end boxes have their outer sleeves closed in any suitable manner or they may be formed without sleeves at their outer sides.

In Figures 4 through 6 there has been shown a fixture of modified construction wherein the outlet boxes 39 are of one piece formation and have ears 40 at their upper ends through which screws 41 are passed to secure them to an overhead support. The lower ends of the boxes are closed by plates 42 which are removably secured by screws 43, a tight joint being formed with a gasket 44. Opposed walls of the boxes are formed with sockets 45 corresponding to the sockets 9 and into which fit ends of conduit pipes 46 which are secured by nuts 47 corresponding to the nuts 16. Necks 47' corresponding to the necks 22 project from the side walls of the boxes or casings 39 and through these necks are mounted sockets 48 having flanges 49 about their outer ends which bear against ends of the necks. Nuts 50 are screwed upon the necks and serve to compress packing 51 about the light tubes 52 as well as against the flanges 49 and thus form water tight joints about ends of the light tubes. The terminate pins of the light tubes 52 fit into the plugs 53 which correspond to the plugs 35 and are urged towards outer ends of the sockets by springs 54 disposed in the sockets between the plugs and inner ends of the sockets. Comparing Figure 5 with Figure 6 it will be seen that the intermediate boxes and the end boxes are quite similar in construction but the end sockets have one side arm or sleeve 47' and also only one socket 45, the outer side wall of one end socket being formed with a neck or sleeve 55 into which is screwed the conduit pipe through which the power wires pass into the outlet box. The other end box has been shown with the neck 56 omitted but it will be understood that it may be provided with such a neck and this neck closed by a cap screwed upon it.

Having thus described the invention, what is claimed is:

An outlet box comprising a main section having a bottom, side walls, and end walls, said main section being open at its top, an auxiliary section over said main section having an open bottom detachably secured about the open top of said main section and constituting a supporting hood for the main section, said auxiliary section having opposite end portions inwardly thickened and formed with conduit receiving sockets, there being centrally located openings at inner ends of said sockets constituting passages for power wires, tubular sleeves projecting outwardly from end walls of the main section about openings therein and spaced upwardly from the bottom of the main section, a boss projecting upwardly from the bottom of the said main section midway the ends thereof and formed with a threaded bore leading from its upper end, a bracket consisting of a strip of stiff metal resting midway its length upon the upper end of said boss and secured thereon by a screw passed downwardly through the strip and screwed tightly into the threaded bore of the boss, ends of said strip being bent upwardly and forming short upstanding arms disposed adjacent the inner ends of the sleeves leading from the end walls of the said main section and formed with openings aligned with the sleeves axially thereof, sockets in the outer end portions of said sleeves and being open at their outer ends and having stems extending from their inner ends longitudinally through said sleeves and connected with the bracket by screws passed through the openings in the arms of the bracket and into threaded bores formed in the stems of the sockets, terminal plugs in the last mentioned sockets slidable longitudinally therein and urging the plugs outwardly, and springs in the last mentioned sockets engaging said plugs and urging the plugs outwardly.

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