Aug. 30, 1932. W. O. PROUTY 1,875,179

CONNECTING DEVICE

Filed Feb. 10, 1930

Fig. 1

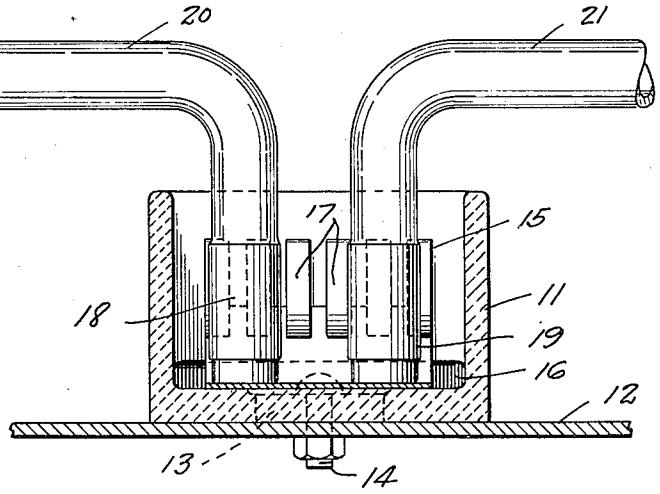


Fig. 3

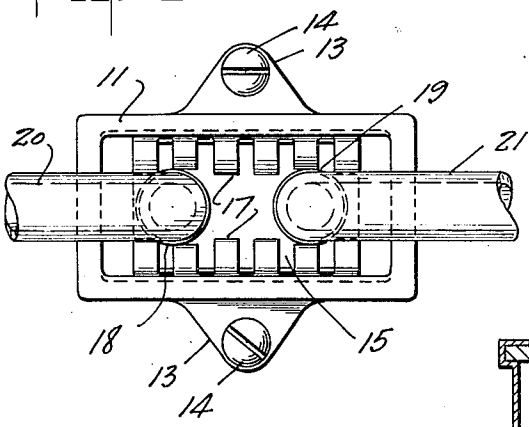
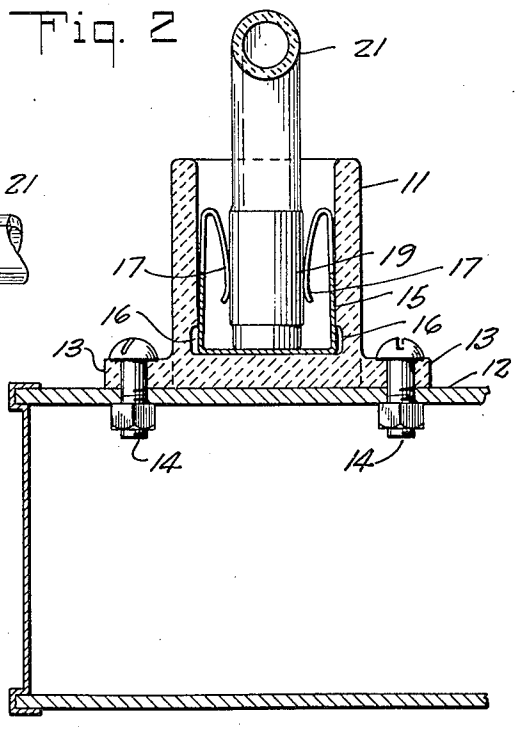


Fig. 2



INVENTOR
Willis O. Prouty
BY John Flam
ATTORNEY

Patented Aug. 30, 1932

1,875,179

UNITED STATES PATENT OFFICE

WILLIS O. PROUTY, OF HERMOSA BEACH, CALIFORNIA, ASSIGNOR TO METLOX CORPORATION, LTD., OF MANHATTAN BEACH, CALIFORNIA, A CORPORATION OF CALIFORNIA

CONNECTING DEVICE

Application filed February 10, 1930. Serial No. 427,227.

This invention relates to a device for connecting in series, sections of luminous tubings, such as are in common use for advertising purposes and for signs.

Luminous tube signs are now quite extensively used. These usually employ a gaseous filling of a few millimeters of pressure, forming a column of gas across which a potential difference is impressed to cause it to conduct current and thereby to luminesce. The potential differences employed are quite high, but are readily available by suitable alternating current transforming apparatus.

Tubes of this character are bent to appropriate forms to form letters or borders, and are supported in any appropriate manner, as on a box or on a base. For practical considerations, it is advisable to keep the tube lengths down to about five or six feet; and if the design requires a longer continuous luminous line, to connect these lengths in series. This limitation of practical tube length is imposed by the impracticability of pumping long tubes, as well as of manipulation by the glass blower. Also, the longer the tube, the greater the danger of breakage.

It is one of the objects of my invention to provide a connector of simple and effective design, for placing such luminous tube sections in series.

It is another object of my invention to provide such a connector which will make it possible readily to place the ends of the tube sections so close together that a continuous light effect is obtained when the tube is energized.

It is another object of my invention to provide a connector for luminous tube sections that obviates the necessity of any reverse bends at the tube ends.

It is another object of my invention to provide a connector of this type that can effectively insulate the tubes from the supports upon which the connectors are fastened.

My invention possesses many other advantages, and has other objects which may be made more easily apparent from a consideration of one embodiment of my invention. For this purpose I have shown a form in the drawing accompanying and forming part of the present specification. I shall now proceed to describe this form in detail, which illustrates the general principles of my invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of my invention is best defined by the appended claim.

Referring to the drawing:

Figure 1 is a vertical longitudinal section of a connector embodying my invention and shown in use in a sign;

Fig. 2 is a transverse section of the connector and its associated parts; and

Fig. 3 is a plan view thereof.

In general, the connector includes a hollow body 11 of insulating material, such as porcelain or other ceramic. This body has an open top and a closed bottom, which can rest on a supporting surface 12 as of a sign structure. Ears 13 extending from the sides of the body 11 can be used for fastening it to the support 12 as by bolts or screws 14.

Inside of the body 11 there is a metal connector 15 of such springy sheet material as phosphor bronze. It is generally U-shaped, having a width just a trifle larger than the width of the body 11, so that it snaps into the position of Fig. 2 and is retained therein by friction. Recesses 16 running longitudinally at the bottom of the body accommodates the bottom edges of the connector 15. The legs of the connector are slotted to form a series of resilient fingers 17 that are bent back on themselves, the bent back portions facing each other.

These fingers 17 can resiliently clasp the tube ends 18, 19, which are inserted between the fingers. These ends are at right angles to the main portions 20, 21 of the luminous tubes, the connector 15 serving to connect these portions in series. These ends can have metallic cap portions to provide the contact to the tube interior. The ends 18, 19 can be placed close together in body 11, so that there is no appreciable interruption in the luminosity of the border formed by the tubes such as 20, 21 that are placed end to end in the series.

It is apparent that the live current carry-

ing parts of the tubes and of the connector are well insulated from structure 12, due to the use of the ceramic body 11.

The resilient fingers 17 serve their purpose very effectively due to their reentrant form. They readily accommodate themselves to the tube ends, so as to connect them in series, even if there should be some slight variation in the tube diameters.

I claim:

In a device for connecting luminous tubes in series, a hollow body, a U-shaped connector member, the sides of the U being held by friction against the inside surface of the body, the ends of the U being slotted and extended reversely to form opposed spring fingers to grasp the luminous tube ends inserted into the body, one portion of the opposed spring fingers being adapted to receive one tube, another portion being adapted to receive another tube, and both portions being connected by a common conducting medium.

In testimony whereof I have hereunto set my hand.

WILLIS O. PROUTY.