Dec. 19, 1933. C. U. PAGE 1,940,368

CONNECTER FOR NEON TUBES

Filed March 17, 1930

Fig. 1.

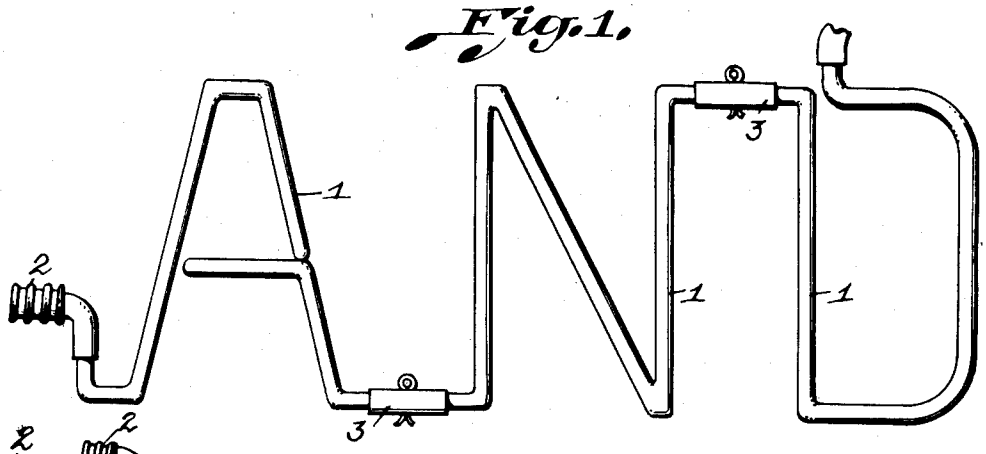



Fig. 2.

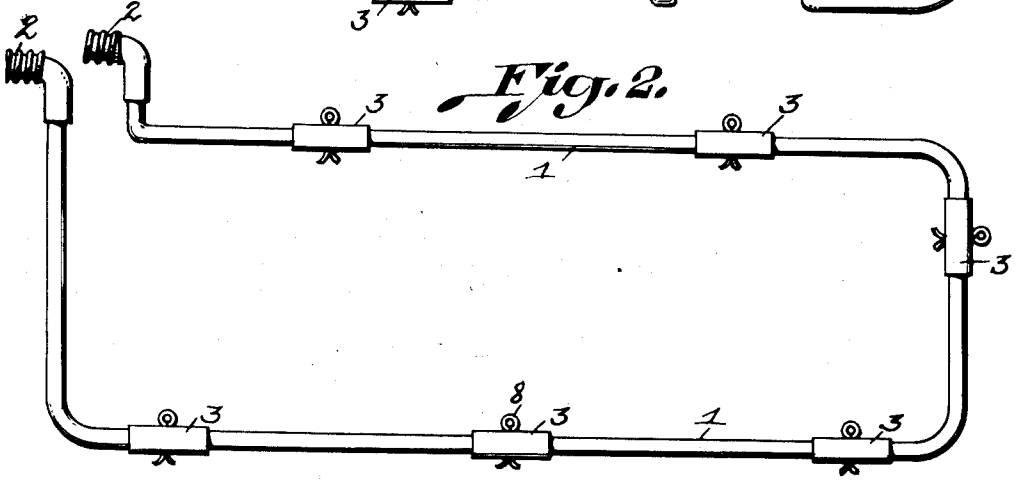



Fig. 3.

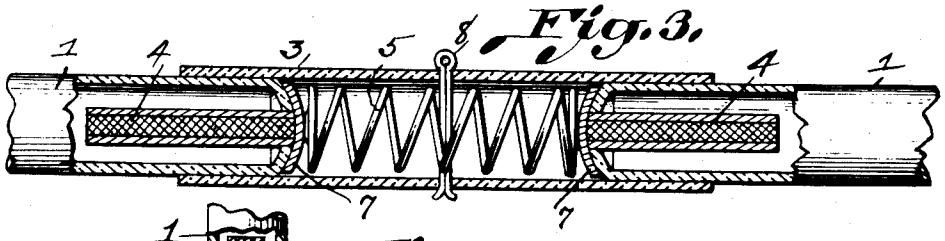



Fig. 4.

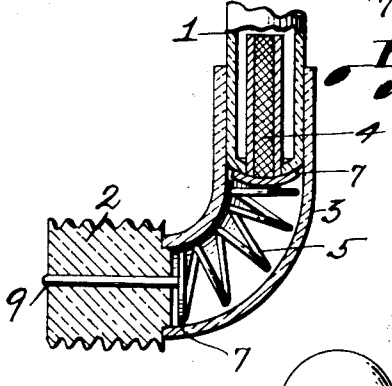



Fig. 5.




Fig. 6.

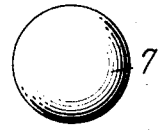



Fig. 7.




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## CONNECTER FOR NEON TUBES

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Application March 17, 1930. Serial No. 436,457

1 Claim. (Cl. 173—328)

The object of the present invention is to provide an improved connecter for mechanically joining the ends of the sections of neon tubes and electrically connecting the electrodes thereof, to afford a strong, secure and neat joint which will not detract from the normal operation or appearance of the tube.

The invention is also adapted for use in connecting the end tube of a neon light with the porcelain attaching plug.

A practical embodiment of the invention is hereinafter described and is shown in the accompanying drawing, in which:

Figure 1 is a side view of a neon tube sign provided with the present improvements;

Fig. 2 is a similar view of a neon tube border for a sign, equipped with the present connecters;

Fig. 3 is a detail longitudinal section through the connecter and the ends of the tubes, certain parts being in full lines;

Fig. 4 is a similar view of an elbow connection having a porcelain plug;

Fig. 5 is a detail view of the spring, the terminal discs being in section;

Fig. 6 is a face view of one of the terminal discs; and

Fig. 7 is a cross section therethrough.

The sections of a neon light tube are shown at 1, the porcelain connecter screw threaded plugs for the attachment of the tube to the electric socket appearing at 2.

The improved connecter constituting the present invention is shown, generally, at 3.

Fig. 1 illustrates the use of the connecter on a neon tube constituting a sign.

Fig. 2 illustrates the use of the connecter on a neon tube constituting a border for a sign.

The connecter constituting the present invention has an outer glass tube 3, whose ends receive the ends of the neon tubes 1. The neon tubes or sections are provided with the usual electrodes or terminals 4.

Contained within the connecter tube 3 is an expansible coil spring 5 whose ends are connected by welding or soldering to terminal discs or plates 7 which are of concavo-convex and are adapted to bear against the ends of the electrodes 4, as shown in Fig. 3.

The improved connecter spring structure is shown in Fig. 5.

To retain the spring 5 within the connecter tube 3, there is provided a suitable cross pin or connection such as a cotter pin 8 which extends through holes in the side of the tube 3 and is engaged with the spring 5 in any suitable manner.

The connecter is shown in its straight form in Figs. 1, 2 and 3.

In Fig. 4, there is shown a form of the connecter where an elbow-shape is necessary as, for instance, where the neon tube is connected to the electric socket. In this form of the invention, the spring 5 is as previously described, being contained within the tube 3 and carrying the plates or discs 7 at its ends, to the outer one of which is attached the terminal or contact 9 which extends through the screw threaded porcelain plug 2.

The connecter constitutes a constantly tight or secure electrical connecter or wiring between the electrodes 4 of the connected tubes or between a terminal tube and the attaching screw plug, and the tube 3 also mechanically connects the neon tube sections.

What I claim is:

A combined mechanical and electrical connecter for neon tubes comprising an outer tube adapted to telescope with and positively connect the adjoining terminal ends of the neon tube sections, and an expansible coil spring conductor contained within the connecter tube and engaged with the neon tube terminals, and a cross-fastening carried by the connecter tube which engages and positively holds the coil spring conductor inside of said connecter tube.

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