May 10, 1932. L. A. KOCH, JR 1,857,916

ELECTRIC SIGN

Filed Sept. 2, 1931

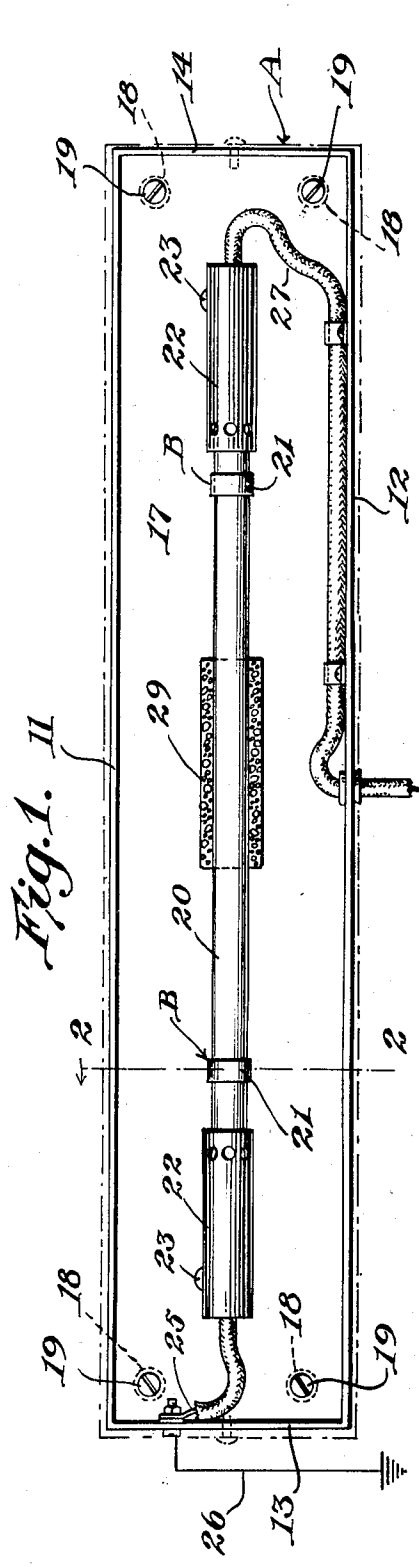


Fig. 1.

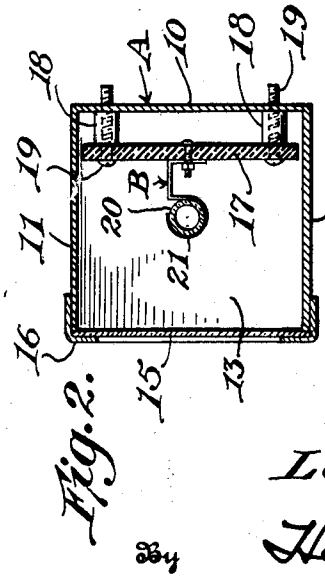


Fig. 2.

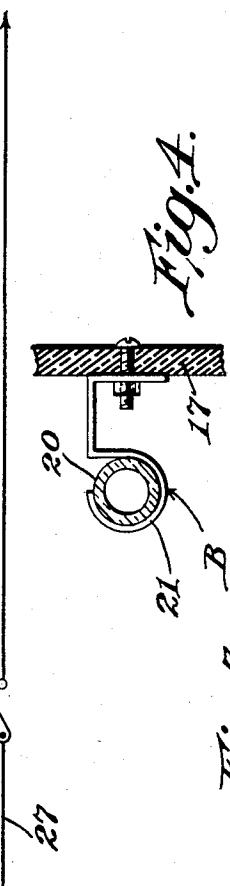


Fig. 4.

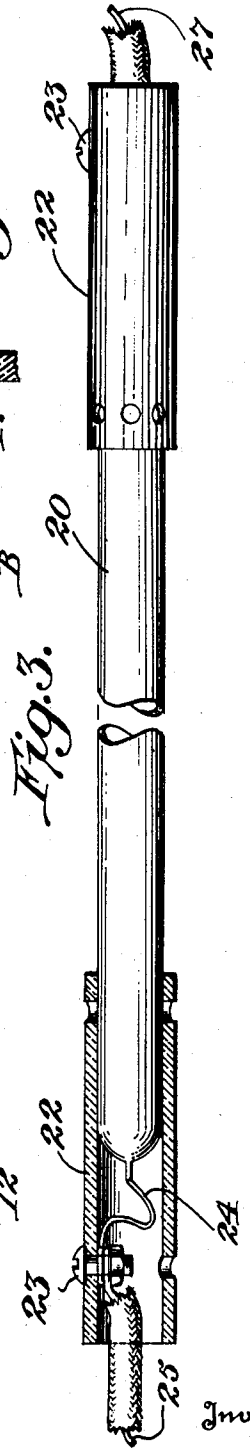


Fig. 3.

Inventor

Louis A. Koch Jr

By Henry T. Bright

Attorney

Patented May 10, 1932 1,857,916

UNITED STATES PATENT OFFICE

LOUIS A. KOCH, JR., OF LOUISVILLE, KENTUCKY

ELECTRIC SIGN

Application filed September 2, 1931. Serial No. 560,800.

My invention relates to electric signs and particularly to the type set forth in my co-pending application Serial Number 542,999 wherein the sign embodies a casing and an illuminating element in the form of a "neon" tube mounted in the casing.

It is the purpose of my present invention to provide a mounting plate of "bakelite" or other suitable material for the "neon" tube which is adapted to be detachably secured within a casing in covering and spaced relation to the rear wall of the latter, the securing means of the plate also constituting means for mounting the casing upon a desired support. Furthermore, by providing such a mounting plate the "neon" tube is secured thereon while the plate is removed from the casing so that a self contained unit is produced whose mounting in the casing is effected merely by the securance of the plate thus avoiding the necessity of effecting the mounting of the tube directly within the casing, an operation having obvious disadvantages.

A further purpose of my present invention is to provide an improved connection between the terminals of the "neon" tube and the terminals of the circuit in which the tube is included, such connection being also adapted for assembly in the self contained unit heretofore mentioned before said unit is secured within a containing case.

In the drawings chosen to illustrate my invention the scope whereof is set forth in the appended claims:

Figure 1 is a front elevation of a sign embodying my invention with the sign element which constitutes the front of the casing disclosed removed and with some of the electric wiring associated with the sign shown diagrammatically;

Figure 2, a section on the line 2—2 of Figure 1 with the sign element in place;

Figure 3 a detail view of the "neon" tubes with the flexible insulating members engaged thereon, one of the members being shown in section; and

Figure 4, an enlarged detail view of one of the "neon" tube supporting brackets.

Referring to the drawings, A indicates a casing having a rear wall 10, a top wall 11, a bottom wall 12, and side walls 13 and 14. The front of the casing is adapted to be closed by a suitable sign element 15 which is held in place by a frame 16 formed to telescope over the casing A as shown in Figure 2. The sign element 15 is, in this instance, shown as a glass pane on which the desired sign is delineated in any preferred manner, so as to be properly visualized when the sign is illuminated. Disposed in the casing A in covering relation to the rear wall 10 is an insulating plate 17 of "bakelite" or other suitable material. The plate 17 is spaced from the rear wall 10 by tubular bushings 18 preferably of insulating material and screws 19 are engaged through the plate 17, bores of respective bushings 18 and then threaded through the rear wall 10 so as to project to the exterior of the latter and provide means for attaching the casing to a fixed support when desired. The illuminating structure of the sign is assembled with the plate 17 as a unit while the latter is removed from the casing. This facilitates the manufacture of the sign by rendering it easier to mount such illuminating structure on the plate and then mount the plate carrying the structure within the casing.

The illumination of the sign is had through the instrumentality of a "neon" tube 20 which is supported from the plate 17 by brackets B, each of which latter is formed of a metal strip having one end secured to the plate 17 and its other end bent to form an eye 21. The eyes 21 of the brackets are axially alined longitudinally of the plate 17 and the tube 20 engages through these eyes. Engaged over each end of the tube 20 is a flexible tube 22 of insulating material, preferably of stout rubber. Mounted transversely through the wall of each tube 22 is a binding post 23 and each of said posts is connected to the adjacent terminal of the tube 20 by a flexible conductor 24 which is disposed entirely within the related tube 22. One end of the tube 20 is grounded through a conductor 25 leading from a binding post 23, casing A, and conductor 26. The other end of the tube 20 is connected to a suitable

coil (not shown) by a conductor 27, leading from the related binding post 23. A switch 28 is included in the conductor 27 for making and breaking the circuit through the tube 20 as will be obvious. A cushion 29 is interposed between the tube 20 and plate 17 to protect the tube against damage as a result of vibration.

I claim:

1. An electric sign unit comprising a plate of insulating material adapted to be detachably secured in a casing in covering relation to the rear wall thereof, a "neon" tube mounted on the plate, a flexible tubular insulating member engaged on each end of the tube, a binding post carried by and projecting into the bore of each member, and an electrical connection leading from each binding post to the adjacent terminal of the tube.

2. An electric sign unit comprising a plate of insulating material adapted to be detachably secured to a casing in covering relation to the rear wall thereof, brackets secured to said plate, each bracket comprising a metallic strip having its free end bent to form an eye portion, the eye portions of the several brackets being disposed in axial alinement; and a "neon" tube engaged through the eye portions of the brackets to be supported by the latter.

3. An electric sign comprising a casing, a plate of insulating material therein, said plate being disposed in covering relation to the rear wall of the casing, insulating tubular spacing members interposed between the plate and the rear wall of the casing, screws securing said plate to the rear wall of the casing and passing through the bores of the spacing members, said screws also providing means for securing the casing to a support; and a "neon" tube mounted on the plate.

In testimony whereof I hereunto affix my signature.

LOUIS A. KOCH, Jr.