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ELECTRICAL DISCHARGE ILLUMINATED SIGN

Filed March 11, 1931

Fig. 1.

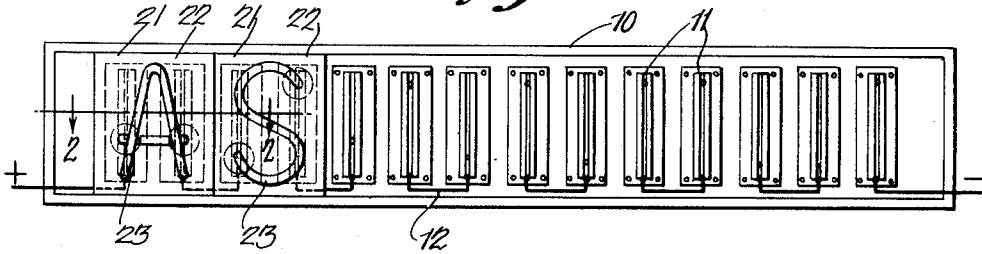


Fig. 2.

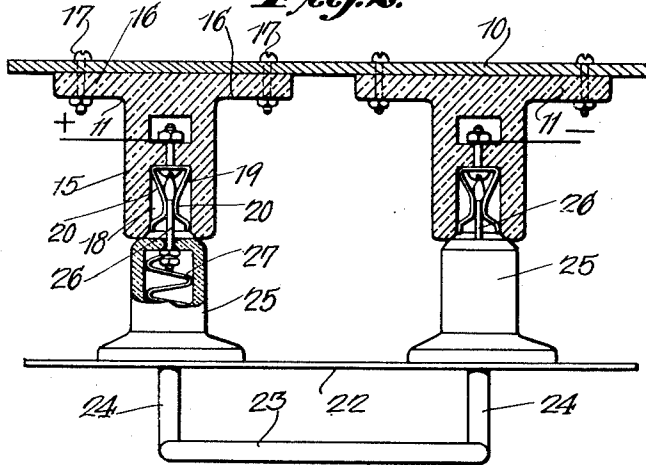
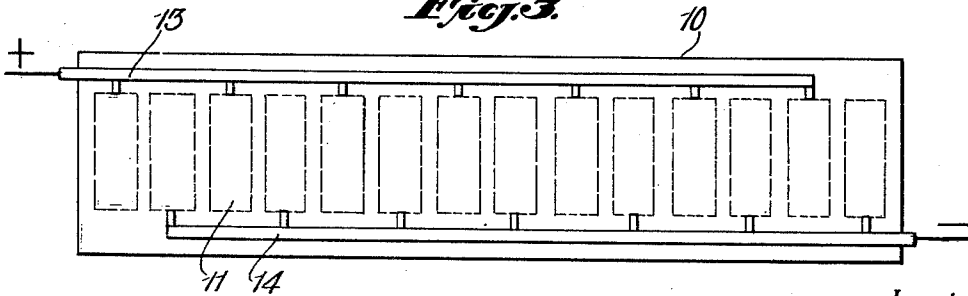


Fig. 3.



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ELECTRICAL DISCHARGE ILLUMINATED SIGN

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This invention relates to improvements in electrical discharge illuminating signs and has particular reference to electrical receptacles for interchangeably receiving different sign characters.

The primary object of the invention resides in a supporting panel having equi-distantly spaced receptacles thereon which are common to all of the electrodes of different luminous tube sign characters to enable the sign characters to be interchanged upon the panel without requiring the adjustment of the receptacles to receive the same.

Another object is to provide an electric discharge sign which facilitates the easy and quick interchanging of the sign characters during the changing of the display.

A further object of the invention is the provision of an electric discharge sign in which the electrodes of the sign characters extend therefrom in a manner to be received in any one of a plurality of equi-distantly spaced receptacles, that is, any sign character may be electrically connected by association with any receptacle in the formation of a sign.

With these and other objects in view, the invention resides in the certain novel construction, combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawing, in which:

Figure 1 is a front elevational view.

Figure 2 is an enlarged detail horizontal sectional view on the line 2—2 of Figure 1.

Figure 3 is a rear elevational view of the supporting panel and illustrating the manner in which the receptacles are wired for use in a 110 volt circuit.

Referring to the drawings by reference characters, the numeral 10 designates a supporting panel, on one side of which are arranged equi-distantly spaced pairs of receptacles 11, and in Figure 1 of the drawing, one of the receptacles of one pair is electrically connected to one of the receptacles of the next adjacent pair by a wire 12, while the opposite end receptacles are connected by

wires of a high voltage circuit. In a high voltage circuit where a transformer is used, the receptacles are connected in series while in a 110 volt circuit, the receptacles of each pair are respectively connected to busbars or other conductors 13 and 14 which extend along the length of the supporting panel 10 at the rear thereof and as best seen in Figure 3 of the drawing.

Each of the receptacles 11 comprises an elongated body 15 having outwardly extending flanges 16 which fit against the front of the panel 10 and through which flanges and panel securing elements 17 pass for fixedly connecting the receptacle in position. Receptacles are disposed transversely of the panel 10, or in a vertical position as shown. The front of each body 15 is provided with an elongated slot 18 extending the length thereof in which is mounted an electrical spring contact 19, which extends the length of the slot 18. The spring contact 19 includes a pair of expansible resilient jaws 20 which flare outwardly to provide a mouth for the introduction of a coating contact member which will presently be described.

Associated with the receptacles carried by the panel 10, are electric discharge sign characters 21, each of which comprises a flat rectangular shaped body 22. Mounted on the front side of each of the bodies 22 is an electric discharge tube 23, which tube is of a shape to form a particular letter, numeral, or the like. The terminal ends of each tube 23 extend rearwardly as at 24 and connect with housings 25 of insulating material which are mounted on the rear of the body 22. Electrodes 26 extend from the housings 25 and are electrically connected with the ends of the discharge tube by resilient springs 27, which springs serve to provide a flexible connection between the electrodes 26 and the terminal ends of the discharge tube. The discharge tube 23 of each character is of the same height, while the receptacles 11 are of a length approximating the height of these characters for a reason now to be explained. It will be understood that the terminal ends 24 of one particular character may extend rearwardly on a horizontal plane different from the ter-

- minal ends of another character. For instance, in the letter A shown in Figure 1 of the drawing, the terminal ends 24 extend rearwardly on the same horizontal plane whereas the sign character S, the electrode at the top of the S is on a different plane than the electrode which terminates at the tail of the S. Thus it will be seen that the electrodes or terminal ends of the characters may extend rearwardly on various horizontal planes of the height of the discharge tube, but these electrodes extend on the same plane on opposite sides of the longitudinal axis of the body 22 so as to be common to all of the receptacles 11. This permits of the interchanging of the sign characters with respect to the pairs of receptacles without the necessity of adjusting the receptacles or the terminal electrodes of the sign characters.
- Hereinbefore we mentioned that the terminal electrodes 26 were loosely connected to the ends of the discharge tube and this facilitates of the easy insertion of the plugs or electrodes between the jaws 20 of the spring contacts 19.
- While we have shown and described what we deem to be the most desirable embodiment of our invention, we wish it to be understood that various changes in construction may be resorted to if desired without in any way departing from the spirit of our invention, and we do not limit ourselves to anything less than the whole of the invention as comes within the scope of the appended claims.
- Having thus described the invention, what we claim as new and desire to secure by Letters Patent is:—
1. In an electric discharge sign, a plurality of evenly spaced pairs of vertically elongated receptacles, electric discharge sign characters, each sign character having its two electrodes extending therefrom and spaced apart for a distance at least equal to the distance between the receptacles of each pair, the receptacles being of a length substantially equal to the height of said sign characters, whereby the electrodes of said sign characters are receivable in any of said pairs of elongated receptacles along the lengths thereof.
 2. In an electric discharge sign, a supporting panel, pairs of evenly spaced vertically elongated contact members carried by said panel, a plurality of sign characters, each sign character including a body and a discharge tube mounted on said body and forming a character, the pairs of contact members being of a length approximating the height of said discharge tube, and a pair of electrodes extending beyond the rear of said body and spaced apart for a distance equal to the distance between the spaced contact members of each pair for engagement with any of said pairs of spaced contact members along the lengths thereof.
 3. In an electric discharge sign, a support-
- ing panel, pairs of spaced elongated contact members carried by said panel, a plurality of sign characters, each sign character including a body and a discharge tube mounted on said body and forming a character, the pairs of contact members being of a length approximating the height of said discharge tube, and a pair of electrodes extending beyond the rear of said body for engagement with any of said pairs of spaced contact members, the said pairs of electrodes of the respective sign characters being disposed on the same plane on opposite sides of the longitudinal axis of the bodies thereof, but at different planes transversely thereof.
- In testimony whereof we affix our signatures.
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