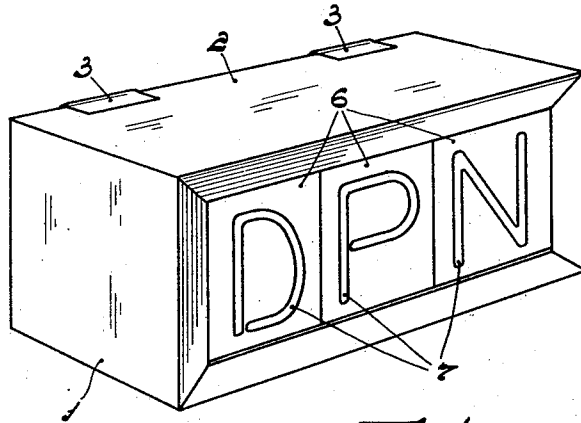


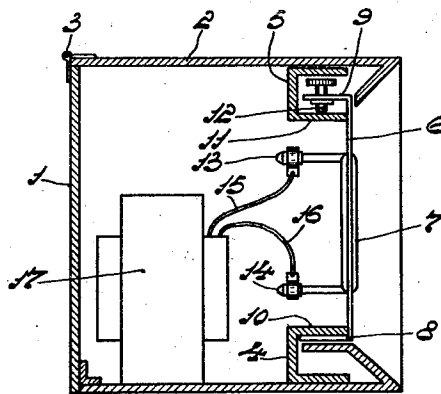
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ADVERTISING INSTALLATION  
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**Fig. 1.**



**Fig. 2.**

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## UNITED STATES PATENT OFFICE

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## ADVERTISING INSTALLATION

Application filed November 21, 1929, Serial No. 408,878, and in the Netherlands December 5, 1928.

The invention concerns an installation comprising one or more electric discharge tubes destined for the radiation of light. Such installations are frequently utilized for advertising purposes, the discharge tubes which, for example, are filled with neon and which radiate in that case the known red neon light, having the shape of definite signs, for example of characters or words. By providing each character on a separate shield and by placing a plurality of shields side by side it is rendered possible to form words. In many cases it is desirable to vary the characters or words at will; for this purpose the shield or shields must be interchangeable. It is of great importance that the shield can be interchanged in a simple manner, within a very short time and by persons who are not technically trained. Not until these conditions have been fulfilled can these installations be generally utilized for example for purposes of publicity.

The invention has for its object an installation which meets the said requirements and which comprises one or more shields which can be interchanged extremely quickly and in a very simple manner.

An installation according to the invention comprises a plurality of electric discharge tubes destined for the radiation of light, which are secured to preferably metallic shields which are arranged between rails and each of which can be arranged and replaced independently of the adjacent shields. The shields may be provided with rims adapted to engage the rails and one of the rims of each shield is preferably clamped against a rail with the aid of one or more screws which pass through threaded apertures of another rim of the shield and which bear on a second rail. The rails may be secured in a box in such manner that the shields arranged between the said rails constitute a wall of the box.

The latter may be provided with a cover which may have a rim which when the box

is closed, extends some distance over the shields. Within the box may also be arranged the other members pertaining to the installation, such as one or more transformers, choke coils, resistances. The said box should preferably be made of metal and be connected to earth so that all the parts being under high tension are surrounded by a grounded box. If the shields to which the discharge tubes are secured consist of metal, preferably at least one of the rails should be made of metal and be brought into electrical connection with the earth terminal of the installation.

The invention will be more clearly understood by referring to the accompanying drawings which represent by way of example a mode of realization of an installation according to the invention. In the drawings

Figure 1 is a perspective view and

Figure 2 is a cross-sectional view of the installation.

The installation represented in the drawings comprises a metallic box 1, provided with a cover 2 which is adapted to turn on hinges 3. Within the box are arranged two rails 4 and 5 which in the example illustrated consist of U-iron. The shields 6 to which the discharge tubes 7 are secured have two rims 8 and 9 adapted to engage the flanges 10 and 11 of the U-shaped rails. The rim 8 is clamped against the flange 10 of the rail 4 by means of a screw 12 which bears on the lower flange 11 of the rail 5 and which is screwed through a threaded bore of the rim 9. If desired, each shield may be clamped by a plurality of screws. It is also possible that the rims of the shields engage the two flanges of a single U-iron. The shields are preferably made of metal, owing to which it becomes needless to cover part of the discharge tubes with a conducting layer which is connected to one of the electrodes as is commonly done to reduce the starting voltage of the tubes.

The discharge tubes may be arranged in openings provided in the shields, said openings having the shape of the signs represented by the tubes. These openings may be  
 5 surrounded by a thin colored strip. It has been found that the installation particularly strikes the eye, by day as well as by night, when the strips surrounding the openings have a brightly yellow color and the other  
 10 portion of the shields is of a deep-blue color.

The discharge tubes contain a suitable gaseous filling whose composition may determine the color of the light emitted. The tubes may be operated with an independent  
 15 discharge; it is also possible to provide incandescent cathodes. The ends of the discharge tubes are provided with connecting caps 13 and 14 to which connecting wires 15 and 16 which lead to a transformer 17, may  
 20 be connected for example by means of clamps. This transformer may show a great drop of voltage, owing to which steadying impedances in series with the discharge tubes can be dispensed with. Characters of each group  
 25 may be fed from each transformer and may be connected in series.

The shields can be interchanged in an extremely simple manner. After lifting the cover, which, if desired, may have secured  
 30 to it a contact whereby the tension is cut out when the cover is lifted, the connections with the electrodes can be broken and after the screws 12 have been loosened it is possible to remove the shields from the device in a  
 35 direction perpendicular to the rails and consequently independently of the adjacent shields and to replace them by others or to give them another grouping. This does not take up much time and can be done by  
 40 technically untrained persons.

The rim of the cover 2 somewhat overlaps the shields. If during the operation of the installation the screws would work loose, the shields are prevented from falling out of the  
 45 installation by the overlapping rim of the cover.

What I claim is:

1. An installation comprising a box, containing at least two rails, a plurality of  
 50 shields carrying discharge tubes shaped as symbols being arranged between said rails and constituting a wall of said box, this box being provided with a cover showing a rim, which, when the box is closed, overlaps  
 55 the shields.

2. An installation comprising upper and lower rails of substantially U-shaped section, a plurality of shields, each carrying a gas-filled discharge tube and having flanges along  
 60 the edges thereof adapted to cooperate with the said rails, the said shields being clamped by their flanges to the said rails, and means for clamping the shields to the said rails independently of each other in such manner  
 65 that they are separately and independently

removable therefrom without disturbance of the remaining shields.

3. An installation comprising upper and lower substantially U-shaped rails, a plurality of shields each carrying a gas-filled discharge tube and having flanges thereon  
 70 adapted to cooperate with the said U-shaped rails, the said shields having their flanges clamped between the legs of the U-shaped rails, and means for clamping the said shields  
 75 by their flanges to the said rails in such manner that any shield is separately and independently removable from the rails without disturbance of the remaining shields.

4. An installation comprising upper and lower substantially U-shaped rails, a plurality of shields, each having a gas-filled discharge tube thereon and having flanges at their extremities adapted to cooperate with the said U-shaped rails, the said shields being  
 80 mounted on the rails by means of their flanges which engage between the legs of the said U-shaped rails, at least one of the flanges of each shield having a threaded aperture therein, and a set screw threaded through the said  
 85 aperture and engaging against the inner surface of one of the legs of one of the rails, in such manner that the corresponding shields are clamped and are separately and independently removable from the rails without disturbance of the other shields.  
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5. An installation comprising upper and lower substantially U-shaped rails, each rail having its central, web portion arranged substantially vertically, and the legs of each  
 100 rail extending in the same direction, a plurality of shields, each carrying a gas-filled discharge tube thereon and having laterally extending flanges on their extremities, the said shields being mounted on the rails in  
 105 such manner that their flanges extend between the legs of the said rails, and a threaded bolt threaded through the upper flange of each shield and abutting against the inner face of the lower leg of the upper rail to clamp the  
 110 shield in place in such manner that each shield is separately and independently removable from the rails without disturbing the remaining shields.

6. An installation comprising upper and lower substantially U-shaped rails, the central, web portions of the said rails being arranged substantially vertical, and legs of each rail extending in the same direction  
 120 from the said web portions, a plurality of shields, each carrying a gas-filled discharge tube and having laterally extending flanges on the edges thereof, the said shields being secured to the said rails by means of the said  
 125 flanges which extend between the legs of the said U-shaped rails, and means for clamping the said shields between the rails independently of each other in such manner that they are separately and independently removable  
 130

from the rails without disturbance of the remaining shields.

7. An installation comprising a box, at least one rail in the said box, a plurality of shields carrying gas-filled discharge tubes thereon independently clamped to the said rail, means for clamping the shields to the rail in such manner that they are separately and independently removable therefrom without disturbance of the remaining shields, and a cover on the said box having a rim which, when the box is closed, overlaps the said shields.

In testimony whereof I have signed my name to this specification.

PIETER SCHOUWSTRA.

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