

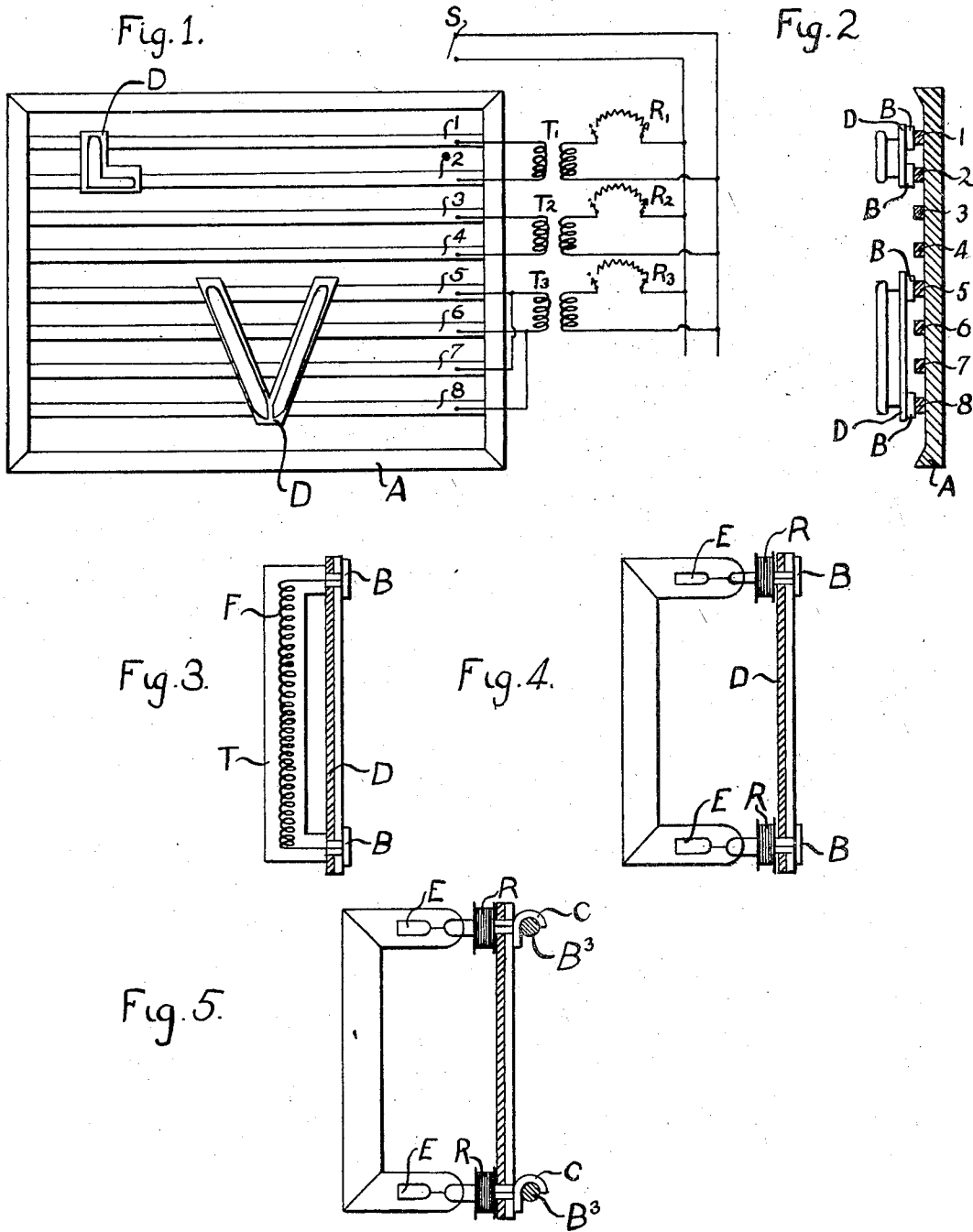
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SIGNBOARD WITH REMOVABLE LETTERS

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SIGNBOARD WITH REMOVABLE LETTERS

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The invention relates to signboards or signs with removable letters capable of being electrically illuminated and in which the supports of said letters serve as conductors of electrical current. The principal object is to greatly facilitate and accelerate the setting of letters on their supports without interrupting the current which supplies these letters if so desired, so as to produce the lighting of the letters at the same time they are placed upon the supports.

For this purpose, the supports are composed of one or several pairs of metal bars positioned on a vertical plane and to which the letters are simply applied and immediately held either by magnetic adherence or by their own weight through the intermediary of suspension hooks. The letters themselves are composed either of filament lamps or luminescent discharge tubes or by a series of lamps mounted on frames with plates or with insulated metal hooks serving as fastening devices and at the same time, as contact terminals.

Numerous methods for realizing the principle of the invention may be conceived. This invention is not limited to the embodiments described and shown on the accompanying drawing by way of example.

For example, let us consider signboards with luminous removable letters which are to be supported by magnetized members. The signboard may be formed of a series of magnetized plates or bars, on which the letters adhere by means of soft iron frames connected thereto; or on the contrary, each letter could have a magnetized frame for adherence on to soft iron plates or bars.

These plates or bars are connected two by two to the terminals of an electric current source. The letters may be constituted by filament lamps or luminescent tubes mounted on soft iron sockets or bases and fitted with terminals suitably spaced so that when being applied two by two to strips or plates of different polarities, they will close a circuit through the lamp or luminescent tube, which thus becomes lighted at the same moment that the letter adheres to the signboard.

Similar arrangements could be applied in the case where the signboard has bars or plates on which the letters are to be supported, no longer by magnetization, but by hooks.

Other features and advantages of the invention will result from the following description with reference to the accompanying diagrammatical drawing, in which:

Fig. 1 is a diagrammatical view of a signboard

of magnetized bars according to the present invention.

Fig. 2 is a side cross sectional view of the invention.

Fig. 3 is a side elevation of a letter on an enlarged scale and which is formed by a luminescent tube.

Fig. 4 is a side view of a letter formed by a luminescent tube.

Fig. 5 is a side view of a modification of the preceding letter using hooks capable of being fixed on conductor bars of support connected with an electric current source.

The signboard shown diagrammatically on Figs. 1 and 2 is of the magnetized strip or bar type. It is formed by an insulating frame or support A, on which are fixed the magnetized bars numbered 1 to 8, it being naturally possible to increase or decrease this number according to requirements. These bars are connected two by two to the respective terminals of any suitable electric current source S, which in the example of Fig. 1 is a source of alternating current.

The letters or elements may be formed as shown in Fig. 3 of one or several tubular lamps T of the vacuum type, comprising a filament F of a resistance suitable to the voltage of electrical current to be used therewith, of tungsten, charcoal or other material as commonly used in incandescent lamps and of which each extremity is connected with a terminal B mounted on a soft iron frame D, suitably insulated. The distance between these terminals corresponds with the space which separates either the two consecutive strips as for example letter L between strips 1 and 2, or any two strips of even and odd numbers, as for example letter V between strips 5 and 8.

The metal frames D may assume the shape of the luminous element and constitute a black or colored background.

When the element as aforesaid is applied to the magnetized bars of the signboard, it adheres and permits the current passing through said magnetized bar to pass through the filament causing the lighting of the luminous sign. Switches may be placed either on the general supply circuit of the signboard, or on the shunts of the bars. Adjustable resistances may also be placed on the circuit of certain bars, permitting the luminosity of the signs to be decreased or increased at will and to thus obtain such decorative or optical effects as desired.

The luminous tubes may be of clear or opal, white, colored or fluorescent glass.

The same general arrangements apply to the luminous elements constituted by luminescent tubes of the inert gaseous atmosphere type. In this case, it is the electrodes E (Fig. 4) which are connected with the terminals B, if necessary with the interposition of individual resistances R to compensate the differences of actual resistances of the tubes according to their length and the nature of the gases used (neon, argon, helium, xenon, etc.). In such cases, when utilizing alternating current, individual transformers may be provided for each strip circuit with the secondaries coupled parallel or in series so as to realize voltages appropriate to the length of the elements.

In the example of Fig. 5, the letter instead of being connected on the bars by magnetic adherence is provided with metal suspension hooks C which, as soon as applied to their respective bars, operate as contact terminals. That is, the letters carry upper and lower suspension hooks C which can readily be placed upon their respective support and current supply bars B3. In this case, the current passes from support bars B3 through the metal hooks C to the electrodes or filaments E of the tube forming the letter. As in other cases, resistances R may be interposed between the electrodes or filaments E and the current supplying bars B3.

The signboard may constitute the back of a small box which would house the connections and if necessary the batteries or transformers or yet the productive means of ionization fields.

Numerous methods of realizing the principle of the invention may be conceived. Thus, instead of constituting each letter by a sole tube, of suitably shaped filament, it could be constituted by a series of lamps provided for example with lamp caps with midget screws, of the type used in pocket lamps and which may be connected either in series or parallel to the contact terminals according to the voltage used.

The bars forming the supports may be supplied with current in pairs parallel or in series according to the voltage at disposal.

When the letters or luminous signs are formed of luminescent tubes which require relatively high voltages, it would be of advantage in general to provide each letter or luminous sign, or if necessary each electrode, with a small individual transformer, in place of or in addition to the resistances R, so that the supports may be fed in low voltages.

Mixed sign boards could also be established where one part of the supports is magnetized while the other is not, etc.

I claim:

1. A device relating to signboards with removable luminous letters comprising removable illuminating means formed as letters, supports serving as conductors of electrical current composed of pairs of magnetized current conducting bars suitably connected with an electrical current source and positioned on a vertical plane and magnetically attracted means for connecting said illuminating means to said magnetic support by magnetic adherence and serving at the same time as current conductors from said supports to said illuminating means.

2. A device relating to signboards with removable luminous letters comprising removable illuminating means formed as letters, supports serving as conductors of electrical current composed of pairs of magnetically attracted current conducting bars suitably connected with an electrical current source and positioned on a vertical plane and magnetic means for connecting said illuminating means by magnetic adherence to said supports and serving at the same time as current conductors from said supports to said illuminating means.

3. A device relating to signboards with removable luminous letters comprising removable illuminating means formed as letters, supports serving as conductors of electrical current composed of pairs of current conducting bars suitably connected with an electrical current source and positioned on a vertical plane and suspension hooks carried by said illuminating means and being removably mounted upon said supports for supporting said illuminating means and at the same time serving as current conductors from said supports to said illuminating means.

4. A signboard having removable luminous letters comprising in combination a plurality of pairs of current conducting bars arranged one above the other in a vertical plane and being suitably connected with an electrical current supplying source and a plurality of luminous letters each comprising a plate formed of insulation material, illuminating means formed as a letter mounted upon one face of said insulation plate, a pair of metallic suspension hooks carried by the opposite face of said plate and being removably mounted upon one of said pairs of supports for supporting said plate, and means electrically connecting said pair of hooks to said illuminating means in such a manner that current passing from said pair of supports to said pair of hooks is passed to said illuminating means via said electrical means.

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