

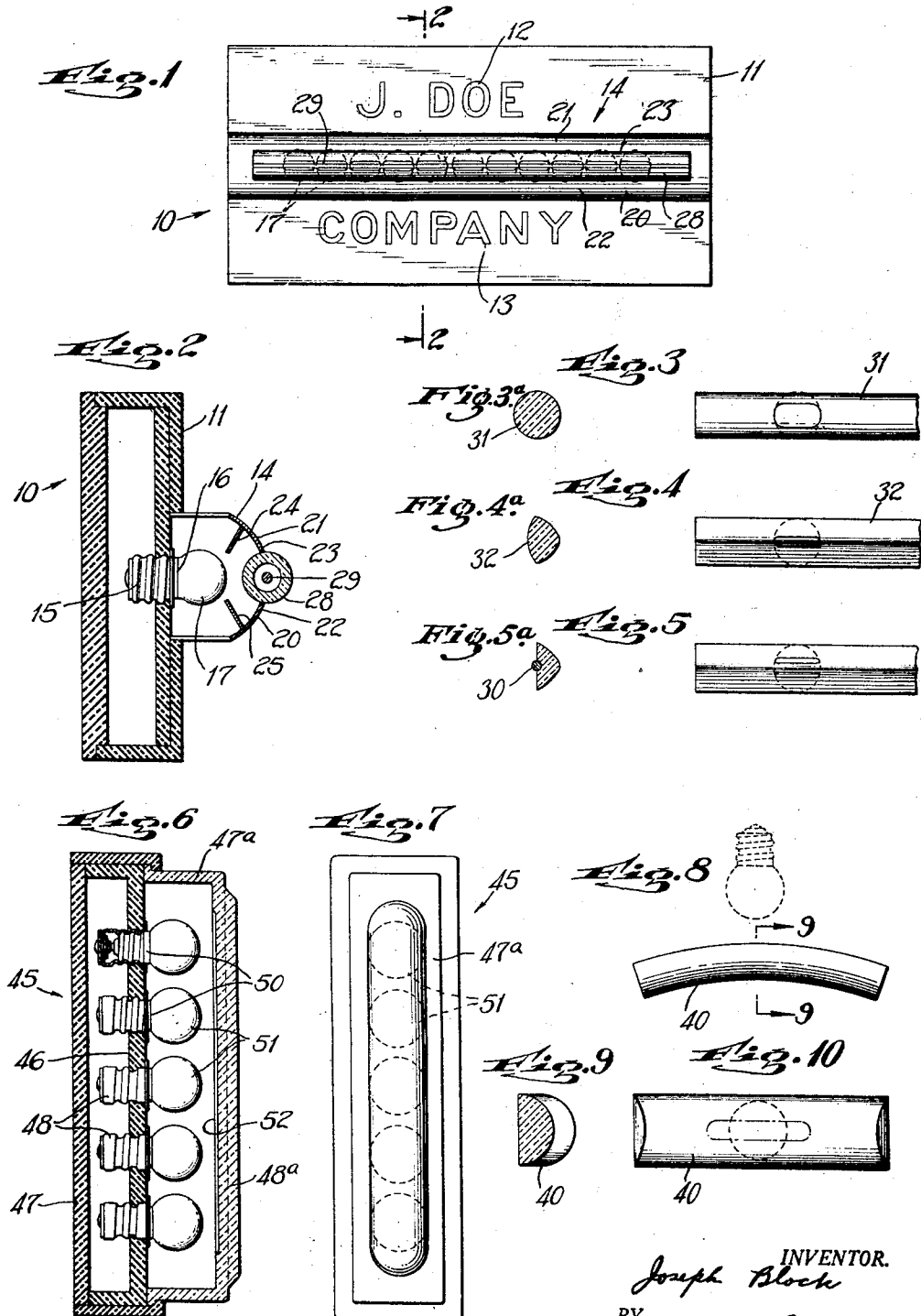
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ELECTRIC ILLUMINATING DEVICE

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ELECTRIC ILLUMINATING DEVICE

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This invention relates to electric illuminating devices such as signs, display devices and the like articles.

An object of this invention is to provide in a device of the character described having an electric lamp or series of lamps, means for giving the lamp bulbs a distorted appearance whereby highly attractive and novel visual effects may be obtained with the use of ordinary lamps, for example, miniature lamps having round bulbs.

A further object of this invention is to provide a unitary electric illuminating unit in the form of a letter of the alphabet, number, or other display element of definite configuration, employing ordinary electric lamps and having means for changing the appearance or visual shape of the lamp bulbs whereby a more or less continuous, comparatively thin line of light having the shape of the display element may be produced.

Another object of this invention is to provide a neat, compact and rugged construction of the character described, comprising comparatively few and simple parts which shall be relatively inexpensive and easy to manufacture in a large variety of shapes and forms and which shall be attractive in appearance and withal practice and efficient to a high degree.

Other objects of the invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter described and of which the scope of application will be indicated in the following claims.

In the accompanying drawing, in which is shown one of the various possible illustrative embodiments of this invention,

Fig. 1 is a front elevational view of the sign embodying my invention;

Fig. 2 is a cross-sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a side elevational view of a lens and showing a bulb behind the lens in dotted lines and the apparent shape of the bulb as seen through said lens in full lines;

Fig. 3a is a transverse cross-sectional view of the lens shown in Fig. 3;

Fig. 4 is a view similar to Fig. 3 but illustrating another lens;

Fig. 4a is a transverse cross-sectional view of the lens shown in Fig. 4;

Fig. 5 is a view similar to Fig. 3 but illustrating still another lens; and

Fig. 5a is a transverse cross-sectional view of the lens shown in Fig. 5.

Fig. 6 is an elevational, cross-sectional view of a display unit embodying the invention here shown in the form of a sign element designating the numeral 1 or the letter I;

Fig. 7 is a front elevational view of the structure shown in Fig. 6;

Fig. 8 is a top plan view of a bulb and lens adapted to produce an apparent flattened, elongated shape to a lamp bulb;

Fig. 9 is a cross-sectional view taken on line 9—9 of Fig. 8; and

Fig. 10 is a front elevational view of the structure shown in Fig. 8.

Referring now in detail to the drawing, 10 designates an electrically illuminated device embodying the invention, here shown in the form of a sign wherein the sign elements are illuminated by a lighting unit. Said device 10 comprises a front board or wall 11 having spaced sign or display elements 12 and 13 adapted to be illuminated by an intermediate illuminating unit 14. Said unit 14 comprises a row of screw shell sockets 15 embedded within said wall 11 and electrically connected to each other in any suitable manner (not shown). Received within the sockets 15 are electric lamps 16 having bulbs 17. For the purpose of illustration, the lamps 16 are shown to be miniature decorative lamps having small round colored or frosted bulbs, and the sockets 15 are preferably wired in series to produce a low voltage across each lamp. The lamps 16 may be spaced from one another so that when the lamps 16 are illuminated, a person observing the lamps from the front of the device 10 would ordinarily see a plurality of spaced illuminated colored circular areas. Means is provided, however, for distorting the apparent shape of the illuminated bulbs 17 so that a person looking at the

front of the sign instead of seeing a plurality of spaced circular illuminated portions will see illuminated portions having a different shape, for example, a plurality of aligned thin illuminated portions giving an effect of continuity, simulating or approaching a single elongated line of light.

To this end there is attached to the front of the device 10 an opaque member 20 comprising curved, spaced portions 21 and 22 formed with an elongated slot or opening 23 between them. The member 20 is spaced from and covers the lamps 16 so that the lamps may be seen only through said slot or opening 23. Attached to the inner side of the curved portion 21 and 22, in any suitable manner, are walls 24 and 25 for reflecting light from the lamps 16 upwardly and downwardly, respectively, to illuminate the sign elements 12 and 13. Fixed within the opening or slot 23 is a lens 28 made of glass or any other suitable material here shown in the form of an elongated tube of glass. The lens 28 is adapted to change the apparent shape of the illuminated bulbs 17 so that a person looking through the lens, instead of seeing round bulbs will see a series of flattened or thinned lines of light, whereby the visual shape of the series of illuminated circles is changed from a series of spaced discs of light to a series of thin aligned portions of light simulating an elongated line of light. There may be mounted within the tube 28, a core or rod 29 which may be seen through the lens and acts as a connector between the illuminated portions, and also serves to break up the apparently illuminated portions of each lamp into two parallel lines of light.

The lens 28 may be colored or transparent or translucent, may be cylindrical or in fact formed with any desirable cross-sectional shape to distort the appearance of the illuminated bulbs, in any desired manner. In Figs. 3, 4, and 5, there are shown three differently shaped lenses for producing different effects. In Fig. 5, there is employed a rod 30 for breaking the light into two parallel lines. The rod, however, may be omitted as for example in lens 31 shown in Fig. 3 and lens 32 shown in Fig. 4. The lenses are preferably non-absorbing of light being adapted for merely distorting the apparent shape of the bulbs. It will now be understood that bulbs of any shape may be used, and that by proper selection of the lens a large variety of apparent shapes may be produced whereby highly attractive and novel visual effects may be obtained.

In Figs. 8, 9 and 10 there is shown a lens adapted to both flatten and elongate the observed shape of an electric lamp having a round bulb. The lens 40 is round in transverse cross-section for flattening the apparent shape of the bulb, and is also curved longitudinally for elongating the apparent

shape of the bulb. With this construction, a pair of bulbs disposed side by side and spaced from one another may be made to produce an apparent continuous line of light since the illuminated portions seen through the lens may be made to touch or overlap so that no spaces may be seen between the lamps. Thus with the miniature decorative, colored, low voltaged Mazda lamps, a single continuous line having any desired shape or outline may be produced. Obviously, sinuous or spotted lines of light may also be produced by properly selecting the lens.

In Figs. 6 and 7 there is illustrated a complete display unit in the form of an illuminated sign element here shown for the purpose of illustration, as the letter I or number 1. The element 45 comprises a wall 46 made of insulating material. Attached to the said wall 46 is a rear wall 47 spaced therefrom, and mounted within the said front wall are a plurality of spaced lamp sockets 48 electrically connected, wired to one another in any suitable manner, the unit being provided with a suitable outlet (not shown) for connecting the same to an electric source of power or to other similar units. Removably attached to said front wall 46 in any suitable manner is a glass casing 47a having a front wall 48 overlying the sockets 48. Attached to said sockets 48 are lamps 50 having bulbs 51 disposed within the casing 47a. The front wall 48 in accordance with my invention may be in the form of a lens adapted to change the apparent shape of the illuminated bulbs 51 to produce, for example, a continuous line of light. Lens 48a may be formed with a rear corrugated or ribbed surface 52 for producing a series of thin lines of light. It will now be seen that substantially any letter of the alphabet or number or the like sign element may be made up as a unit and that a number of such units may be assembled together to form a single sign having various words, numbers or other elements thereon.

Although the drawing shows sign elements or display devices, my invention may be embodied in display lamps or fixtures or other illuminating devices, it being a dominant feature of my invention to distort the apparent shape of the illuminated areas so that electric lamps such as miniature lamps having round bulbs, may be employed and the apparent shapes thereof changed or distorted, to produce highly attractive and decorative visual effects, for example continuous lines particularly suitable for signs and hence obviating the need for tubular lamps.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various

changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A display device comprising a support, a row of lamp sockets mounted thereon, lamps attached to said sockets, and an elongated lens superimposed over said row of lamps, said lens being of irregular shape in cross-section and longitudinally.

2. A display device comprising a support, a row of lamp sockets mounted thereon, lamps attached to said sockets, and an elongated lens superimposed over said row of lamps, a portion of said lens being corrugated.

In testimony whereof I affix my signature.
JOSEPH BLOCK.

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