L. R. GRANNIS.

ILLUMINATED LICENSE PLATE.

APPLICATION FILED FEB. 3, 1921.

1,395,491. Patented Nov. 1, 1921.

Fig. 1.

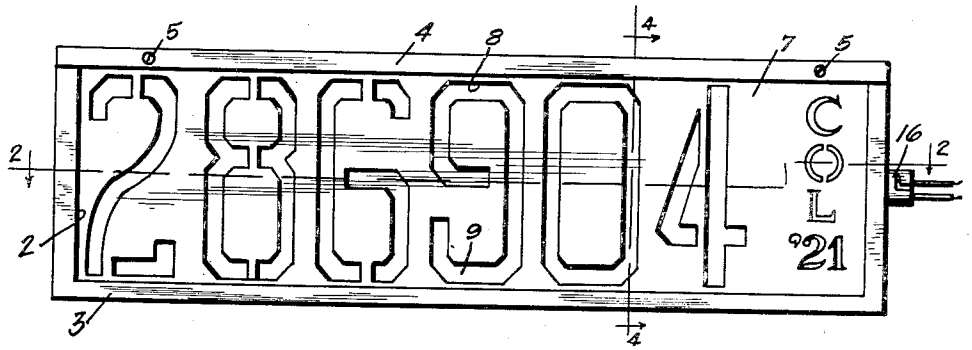


Fig. 2.

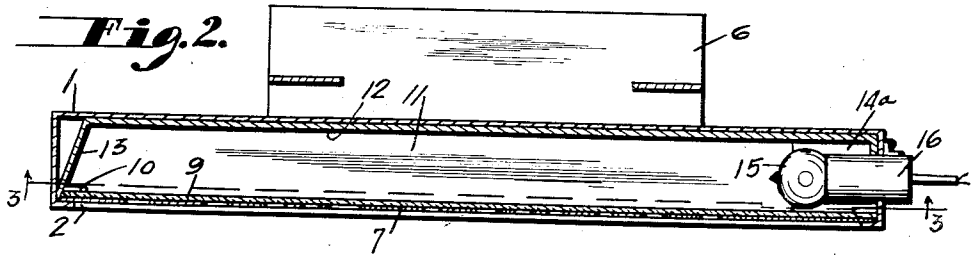


Fig. 3.

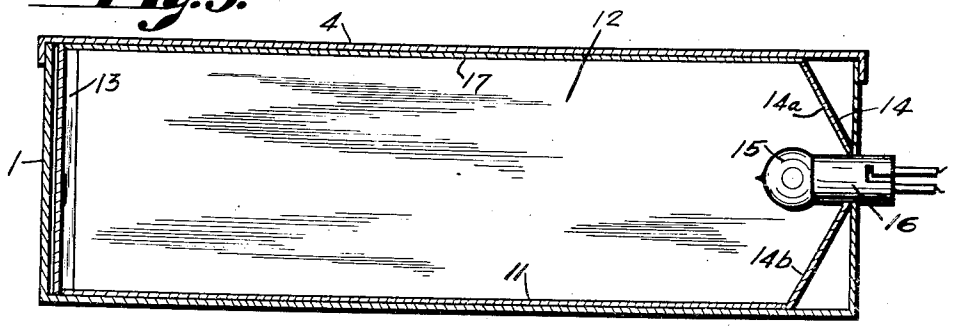
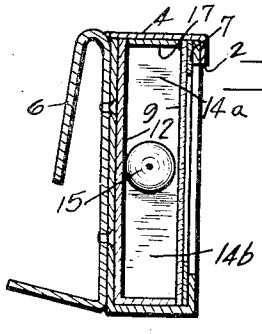


Fig. 4.



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ILLUMINATED LICENSE-PLATE.

1,395,491. Specification of Letters Patent. Patented Nov. 1, 1921.

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To all whom it may concern:

Be it known that I, LEON R. GRANNIS, a citizen of the United States, residing at Long Beach, in the county of Los Angeles and State of California, have invented new and useful Improvements in Illuminated License-Plates, of which the following is a specification.

It is the object of this invention to provide an illuminated sign member particularly adapted to be employed as an illuminated license plate for a vehicle.

The invention contemplates the provision of a lamp box readily mounted upon a vehicle and having illuminating means therein provided with suitable reflecting means arranged to project the rays of light outwardly through the front of the lamp box which is formed with a stencil sign member shown as a license plate. The stencil member is interchangeably mounted at the front of the lamp box so that the device may show any desired license plate or other sign element.

The invention will be readily understood from the following description of the accompanying drawings, in which—

Figure 1 is a front elevation of the device constructed in accordance with the invention.

Fig. 2 is a longitudinal section on the line 2—2 of Fig. 1.

Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2.

Fig. 4 is a transverse section on the line 4—4 of Fig. 1.

In the present embodiment of the invention I have shown the device as comprising a lamp box 1 formed of suitable material and having an open front 2 surrounded by a frame 3. The top 4 of the lamp box is removable in order to readily interchange sign elements carried by the lamp box at its open front, and this removable top may be secured in position by screws or bolts 5. The rear of the lamp box is provided with suitable supporting means shown as a bracket 6 by means of which it may be readily mounted upon a convenient part of a motor vehicle or the like.

The sign element supported within the lamp box at the open front is received against frame 3 and includes a stencil plate 7 having the cut-out portions 8 which may form a license number or other desired sign. A transparent plate 9 preferably of colored glass is mounted in rear of the stencil plate, and the two plates may be removably held against frame 3 by means of clips 10 projecting from the lamp box over the edge of the plates. By the arrangement as thus described the sign formed upon the stencil plate will be displayed in day light, when the lamp box is not illuminated, by means of the colored transparent plate 9 shown through the openings in the stencil plate and at night when the lamp box is illuminated, the sign will be similarly shown by the rays of light projecting through the transparent plate 9 and the openings in the stencil plate.

The illuminating means provided within the lamp box includes a source of light and a suitable reflector for the same so as to uniformly distribute the light projected through the stencil plate throughout its entire area. As an instance of this arrangement a reflector is provided, preferably of polished metal, and including a base 11 received against the base of the lamp box, a rear surface 12 received against the back of the lamp box, and end surfaces 13 and 14 positioned at the ends of the lamp box. The end surface 13 of the reflector is preferably vertically disposed and inclined outwardly from the rear reflector surface 12, as clearly shown in Fig. 2, in order to reflect the rays of light from suitable illuminating means within the lamp box outwardly and through the stencil plate. The illuminating means shown as a usual incandescent lamp 15 is mounted in a socket 16 which preferably extends within the lamp box through the end wall of the same having reflecting surface 14 adjacent the same.

As clearly shown in Fig. 3, the reflecting surface 14 preferably includes reflectors 14^a and 14^b extending from the lamp socket 16 to the top and the bottom of the lamp box and inclined inwardly toward said top and bottom of the lamp box. These reflectors are preferably at right angles to the reflecting surface 12 and will thus reflect rays of light downwardly against the bottom reflecting surface 11 and upwardly against a reflecting surface 17 carried by the top 4.

The construction of the reflecting surfaces as thus described prevents any glare through the stencil plate of the lamp box, since the rays of light, instead of being reflected directly against the inclined reflector 13 and thence directly through the stencil plate so as to create a glare, are diffused and thrown

against the upper and lower reflecting surfaces and from thence against the remaining reflecting surfaces so that finally a uniformly distributed light is projected through the stencil plate.

It will be noted that by removing top 4 any desired stencil plate may be readily placed in position within the lamp box in order to form an interchangeable license plate or the like, and that the illuminating means provided within the lamp box of the device and including a suitable source of light in connection with reflectors, is so arranged as to reflect the light evenly throughout the lamp box, and thereby cause substantially uniform projection of the rays of light outwardly throughout the surface of the stencil plate.

It will also be understood that while I have shown and described the illuminating means as including a source of light extending within the lamp box through one end wall thereof, that the lamp forming the illuminating means may be variously positioned within the lamp box, as at the center of the same for example, in which case the reflecting surfaces at the respective ends of the lamp box will be both arranged similar to the reflecting surface 12.

Various changes may be made without departing from the spirit of the invention as claimed.

What is claimed is:

1. An illuminated sign comprising a lamp box, a transparent plate forming the front wall of said box, a stencil sheet positioned immediately against said transparent plate, a source of light within the lamp box at one end thereof, and reflecting surfaces for the same upon the walls of said lamp box, the reflecting surface upon the end wall opposite the source of light being inclined so as to project the rays of light outwardly through the open front of the lamp box, and the reflecting surface upon the end wall at the source of light comprising reflectors inclined upwardly and downwardly from the source of light so as to project the rays of light against the top and bottom reflecting surfaces of the lamp box.

2. An illuminated sign comprising an elongated housing, a transparent plate forming the front wall thereof, a stencil sheet removably positioned against the outer face of said transparent plate, an electric lamp in one end of said housing, reflectors arranged above and below said lamp, which reflectors are inclined so as to direct reflected light rays from the lamp upwardly and downwardly throughout the length of the housing, reflecting surfaces on the inner faces of the top and bottom of the box, a reflecting surface on the inner face of the rear wall of the box, and a reflector on the inner surface of the end of the box opposite from the lamp, which last mentioned reflector is inclined so as to project direct and reflected rays of light from the lamp outwardly through the transparent front plate and the openings in the stencil sheet.

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

LEON R. GRANNIS.