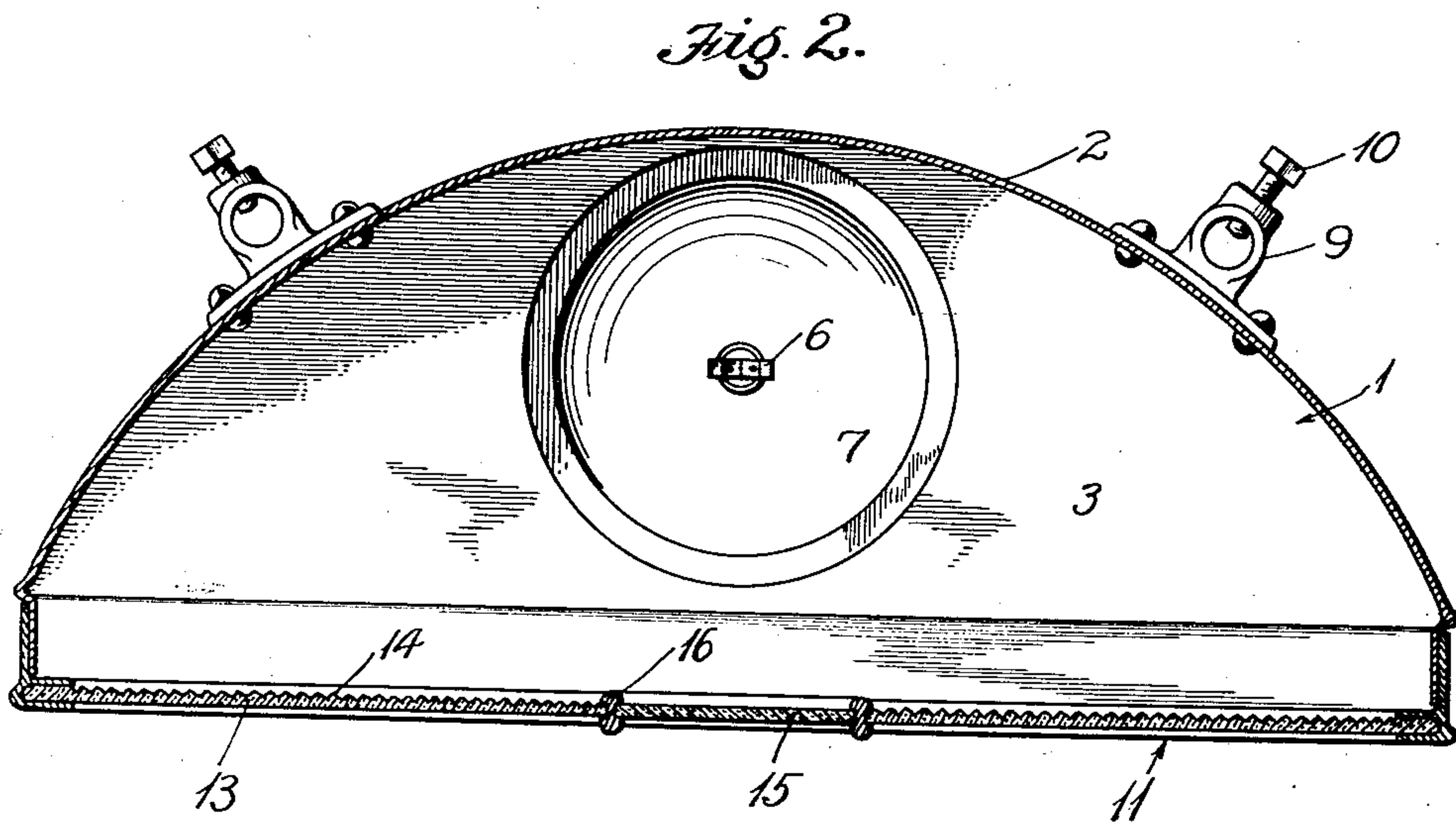
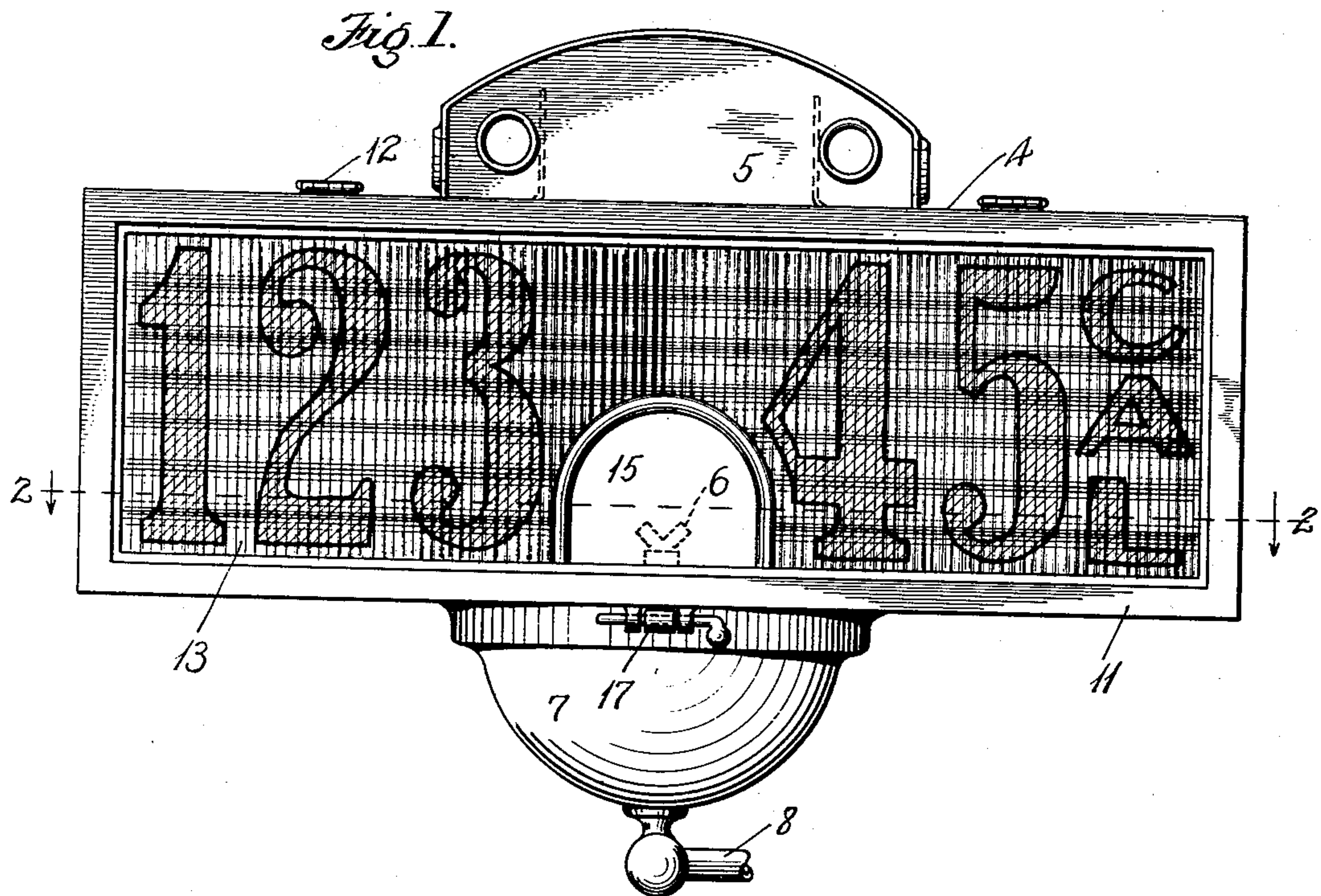


W. E. JEPSON.
ILLUMINATED SIGN AND SIGNAL LAMP.
APPLICATION FILED DEC. 9, 1909.

969,374.

Patented Sept. 6, 1910.



Witnesses.
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UNITED STATES PATENT OFFICE.

WORTH E. JEPSON, OF LOS ANGELES, CALIFORNIA.

ILLUMINATED SIGN AND SIGNAL-LAMP.

969,374.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed December 9, 1909. Serial No. 532,196.

To all whom it may concern:

Be it known that I, WORTH E. JEPSON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Illuminated Signs and Signal-Lamps, of which the following is a specification.

This invention relates to illuminated signs or signal lamps and the invention is particularly applicable in the construction of tail lights to be used by automobiles or similar vehicles.

The object of the invention is to produce a device of this class having a transparency and reflector of such construction and arrangement as will insure a substantially uniform illumination of the sign, and further, to construct the transparency so as to insure that the red light or danger signal will always be plainly perceptible.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

In the annexed drawing which fully illustrates my invention, Figure 1 is a front elevation of an illuminated sign or signal constructed according to my invention. Fig. 2 is a horizontal section taken through the sign substantially on the line 2—2 of Fig. 1.

Referring more particularly to the drawing, the device comprises a case 1 which is preferably in the form of a segment of a circle presenting a rear wall 2 which may be approximately parabolic in form. The case has a bottom plate 3 and an upper plate or cover plate 4 which cover plate is provided with an upwardly extending hood 5 through which the heated air from a lamp or burner 6 may escape. Under the burner 6 a bowl or dish 7 is formed through which a pipe connection 8 leads gas or electric wires for producing an illumination at the point 6. The outer side of the curved wall 2 is provided with sockets 9 comprising set screws 10 which enable the device to be attached rigidly to the frame of an automobile or to a fixed support. The rear wall of the case is formed of a rectangular frame 11 which may be attached by hinges 12 at its upper edge to the upper wall 4 of the case. In this frame 11 there is held a transparency or plate 13 of glass or similar transparent or translucent material. The forward side of this plate presents a substantially plain sur-

face, but the rear side is of "prism" form, that is, it is formed with vertically disposed corrugations or ribs 14 of substantially triangular cross section as indicated in Fig. 2. At the middle point of the plate 13 a portion of the plate is removed so as to form an opening which is filled by a small plate or inset 15 of glass or similar material. This plate 15 is of red color or of a similar conventional color used to indicate danger. This small plate 15 is retained in its opening by a lead frame 16 in a well understood manner.

The outer face of the transparency or main plate 13 has a number placed thereupon by means of an opaque pigment or in any other suitable manner. And this number may be the license number of the motor car. Characters may also be used indicating the State in which the license is taken out. The digits of this number are preferably arranged partly on one side of the plate 15 and partly on the other side as indicated.

The lower edge of the frame 11 is provided with a fastening 17 by means of which the frame with the plate 13 may be secured in a closed position. In this way the rear wall operates as a door to be raised on the hinges 12 so that access may be had to the interior of the lamp.

The inner face of the rear wall 2 constitutes a reflecting surface so that the rays of light which come rearwardly from the illuminated point 6 are reflected forwardly and through the transparent plate 13. In this way the ends of the transparent plate 13 are lighted by reflected light coming from the rear wall 2 directly behind them and inclined rays from the illuminated point, and the prisms or ribs 14 diffuse this light at a point along the plate. In this way I produce a very uniform lighting effect of the transparency.

Special attention is called to the fact that the illuminated point 6 is in direct line with the colored signal plate 15 so that the illumination of this signal plate is insured at all times, and whatever may be the condition of the reflector 2 and the refracting prisms 14. In this way I produce an illuminated sign of very simple construction which is particularly adapted to be used as a tail light giving a substantially uniform illumination of the sign, while at the same time the danger light does not depend in any way upon the condition of the reflecting sur-

face or the refracting surface. Special attention is also called to the ease with which the number on the sign can be changed when desired. This of course can be effected
5 simply by rubbing off the digits of the number with a suitable solvent and repainting a new number.

Special attention is called to the fact that none of the rays of light which pass into the
10 eye of an observer at a distance from the sign pass directly through the numbers of the sign, in other words the number part of the sign as it appears to the eye is lighted only by reflected and refracted rays of light.
15 This is an important feature because if direct rays pass through some of the digits of the sign those numbers would stand out with greater brilliancy and the fact that they were more brilliant would of itself tend to
20 make the other numbers more obscure and although the outer portions of the sign should be perfectly visible they might be made invisible by the middle portion of the sign which was too brightly lighted.

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

30 1. A sign of the class described having a case, a light within said case, a translucent plate disposed before said light and having corrugations on its inner face adapted to re-

fract the light and an opaque number inscribed on the outer face of said plate having its characters or digits removed laterally from the central axis of the case which
35 is transverse to said plate whereby the portion of the plate adjacent to said characters or digits transmits only refracted and reflected rays to an observer at a remote point.

2. A device of the class described having
40 a case, a burner within said case, a translucent plate disposed behind said burner having prismatic corrugations on the inner face thereof adapted to refract the inclined rays of light from said burner
45 through said plate, the outer side of said plate having opaque characters thereupon, the middle portion of said plate opposite said burner being without characters and having a color signal plate mounted in con-
50 junction with said first plate and disposed directly opposite to said burner, the characters of said plate being adapted to transmit only reflected and refracted rays to the
55 eye of a distant observer.

In witness that I claim the foregoing I have hereunto subscribed my name this 1st day of December, 1909.

W. E. JEPSON.

Witnesses:

F. D. AMMEN,
EDMUND A. STRAUSE.