Jan. 17, 1933. L. B. DWYER ET AL 1,894,857

ILLUMINATED SIGN

Filed Oct. 21, 1931

Fig. 1.

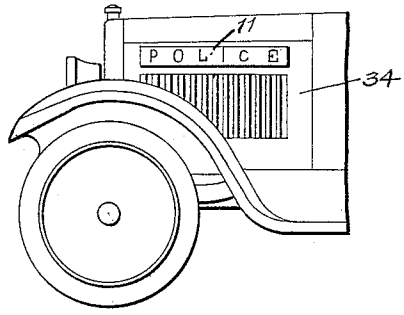


Fig. 2.

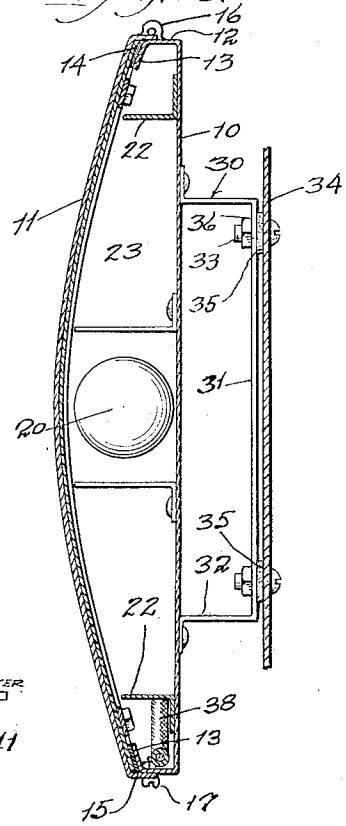


Fig. 4.

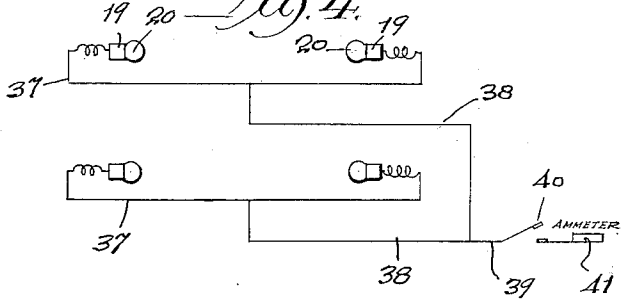
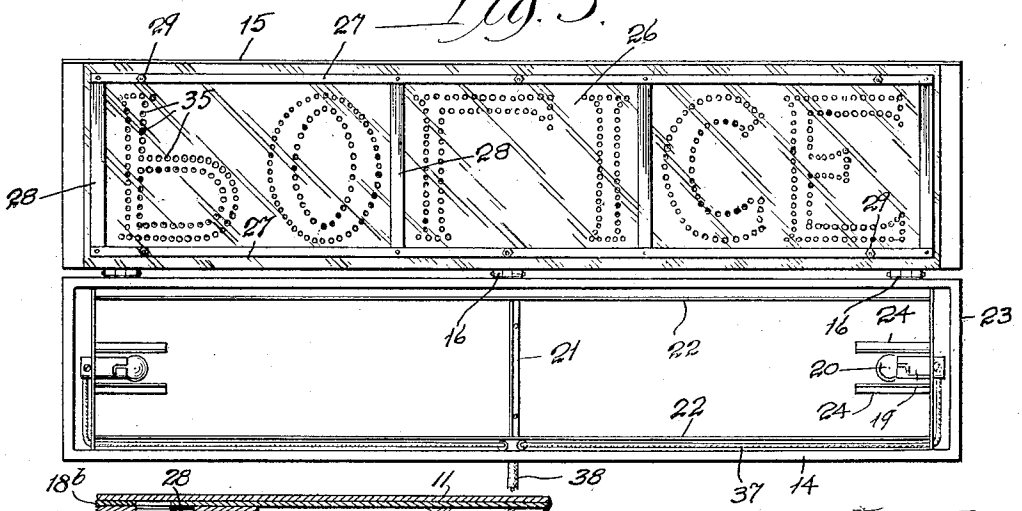


Fig. 3.



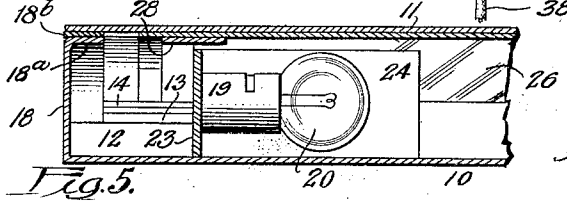


Fig. 5.

Inventors.
Leo B. Dwyer and
Erwin J. Wallmeier
By Samuel M. Cumming Jr. Attorney.

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UNITED STATES PATENT OFFICE

LEO B. DWYER AND ERWIN DRALLMEIER, OF HINSDALE, ILLINOIS

ILLUMINATED SIGN

Application filed October 21, 1931. Serial No. 570,126.

This invention relates to an illuminated sign.

The sign of the present invention is designed for the purpose of attachment to an official car, such, for instance, as a police car, for the purpose of conspicuously designating the character of the car, particularly at night, although the lettering of the sign also serves to indicate its official character when not illuminated during the day time.

In the use of police cars, it frequently happens that motorists on the road at night, when commanded to stop, disobey the order to do so and speed ahead, and when captured offer the excuse that the driver feared that a holdup was being attempted and that there were no adequate insignia indicating the official character of the car in pursuit.

The present invention is designed to permit instant illumination of the sign to display the word Police or other equivalent designation, so that when occasion arises, the official character of the pursuing car can be conspicuously indicated.

The invention furthermore relates to the general structure of the sign, which enables it to be applied to cars of standard make in such a way as to not disfigure the appearance of the car, and to the means provided for adapting it for instant illumination from a convenient point, as, for instance, on a dash board.

Further objects and details of the invention will appear from a description thereof, in conjunction with the accompanying drawing, wherein,—

Figure 1 is a side elevation of the forward portion of the car, showing the sign in position;

Fig. 2 is an enlarged cross sectional elevation of the sign;

Fig. 3 is a plan view showing the sign opened to reveal the interior;

Fig. 4 is a diagram showing a satisfactory method of wiring; and

Fig. 5 is a longitudinal sectional view of one end of the housing with the cover closed.

The sign as a whole comprises a relatively shallow boxlike housing composed of a flat rear wall 10 and a front wall 11, which front wall is of outwardly bowed or cylindrically curved configuration. The rear wall is surrounded by a flange 12, inturned along its margin to afford a rim 13 along which is laid a strip of rubber 14 or like cushioning material, which serves to cushion the outer or cover section 11, which latter is provided with a flange 15 which overlaps the flange 12 of the rear wall section.

The parts are hinged together by hinges 16 which may be continuous, if desired, and the parts are normally held in closed relation by the provision of a screw bolt 17 or any other convenient fastening means entered through the overlapped flanges of the front and rear sections. The rear or flat section has its ends upturned to form end walls 18, each having a straight base and an arcuate upper edge (see Fig. 5), and at each end of the rear section is located a lamp socket 19 adapted to receive a bulb 20.

The rear section, which may be termed the body section, is provided at or near its center with a cross partition 21 having the same arcuately formed upper edge as the end walls and separating the body of the sign into two compartments, and in order to increase the light reflecting properties of the inner wall surfaces, the latter are preferably of polished metal having high reflective capacity, or are painted white, or otherwise treated, to serve as a reflector for the light admitted from the respective bulbs.

The ends of the partition wall 21 abut against inner side flanges 22—22, the ends of which abut against end flanges 23, the inner side and end flanges being spaced away from the outer flanged walls of the body section to provide channels along the sides and at the ends of the body section, which flanges are preferably polished or otherwise treated to increase their reflective capacity.

Each of the lamp sockets is located within a space defined by two short plates 24 extending inwardly from the contiguous inner end flange 23.

The outer or curved cover section of the sign is formed of metal displaying the word Police in the form of rows of perforations 25 through which the light from the bulbs will

be projected, and on the outer face of the sign, and within the spaces delineated by the perforations which form the letters, the sign is painted to conspicuously display the word Police in such a manner as to be clearly legible during the day time and when the sign is not illuminated.

It is quite customary to paint the body of police cars a dark blue, and the face of the present sign can, if desired, be likewise painted in the same blue, with the letters of the sign delineated in gold, so that the body of the sign will not obtrude itself unduly or disfigure the appearance of the car, while at the same time the word Police will stand out prominently in gold against a dark background, as is customary in present day marking of police cars in which the word Police is painted directly upon the surface of the car hood.

Within the cover is a sheet or layer 26 of transparent celluloid or the like, which underlies the perforations delineating the word Police, and in order to hold the celluloid firmly against the inner curving surface of the cover, a frame is provided consisting of flat metal strips 27—27 and bowed or curving cross strips 28, which follow the curvature of the cover section and hold the celluloid snugly against the surface to prevent the ingress of moisture.

If desired, the celluloid or other transparent sheet may be further secured to the inner surface of the cover section by some suitable cementive or adherent material which does not interfere with the transparency of the sheet, or at least those portions thereof which underlie the perforations delineating the word Police. As shown, the inner frame may be secured by short bolts 29, or in any other suitable manner.

It is furthermore desirable to polish, paint, or otherwise treat the inner surface of the cover section adjacent the transparent layer, 20 in such a way as to improve its reflective capacity so that it will reflect back through said transparent layer and increase the illumination within the interior of the sign, so that it will not be necessary to employ large bulbs, or bulbs of excessively high candle power in order to secure the requisite illumination.

The rear wall 10 has secured thereto near each end an outstanding bracket 30 comprising a flat attaching section 31 and outstanding legs 32. The attaching section is preferably provided with a series of holes or perforations suitably spaced to permit the insertion therethrough of screw bolts 33, which are entered through the bracket and through the wall of the hood 34 of the car to which the sign is to be attached. It is desirable to provide a sufficient number of apertures for the bolts so that the bolts may be suitably spaced to meet the requirements of individual cars, and in order to prevent rattling, or marring of the car finish, each of the bolts is surrounded by a rubber washer 35 interposed between the inner face of the bracket and the outer surface of the hood. Nuts 36 serve to hold the bolts in position.

A convenient method of wiring is shown in Fig. 4. Each of the lamp sockets 19 is secured in metal to metal contact with the wall of the sign, which in turn is in metal to metal contact with the hood of the car through the bolts 33, so that a suitable ground connection is provided for each of the lamp sockets. Each pair of lamp sockets is connected by a current wire 37, and each of the wires 37 in turn is connected by means of a wire 38, which latter wires unite in a single wire 39 leading through a switch 40 to the ammeter 41 located on the dash board. By manipulation of the switch 40, both pairs of bulbs can be instantly illuminated.

The sign is one which can be readily applied to any police car of standard construction, and one sign is preferably located on each side of the car and secured to the hood immediately above the row of louvers, which locates the sign in a conspicuous position and at the same time permits the wires 38 to be led inwardly through one of the louvers and to make connection with the wire 39 beneath the hood.

In view of the fact that the sign must of necessity be relatively long and shallow or thin, it is desirable to divide the interior of the sign into two compartments by means of the partition 21, which acts on each side as a reflector to diffuse the light emitted by the respective bulbs, and this, together with the mirror surfacing of the walls, tends to distribute the illuminative effect evenly throughout, so that all of the letters composing the word Police will be adequately illuminated, and so that the illuminating effect, even of a small bulb, will not be mainly confined to the letters in immediate proximity to the bulb itself.

The provision of the inner transparent sheet 26, together with the provision of the sealing strip 14, serves to adequately seal the ingress of moisture, while the bulged or curving formation of the cover section provides adequate clearance through the longitudinal center of the sign for the location of the bulbs and at the same time serves as a reinforcement to prevent easy bending or distortion of the sign.

Inner reinforcement is further afforded by the provision of the inner end flanges 23, which are configured to follow the curvature of the outer bulged section, so that when the latter is closed, its inner surface will contact the flanges as well as the cushion strip 14, thereby affording a firm reinforcement against crushing or distortion. The partition wall 21 is preferably slightly

lower than the flanges so as to afford a narrow space between the edge of the flange and the curved outer section to prevent light from either compartment to illuminate the other compartment in case one of the bulbs should be broken or burned out.

The sign as a whole is so constructed that it presents a neat and attractive appearance when secured to the car, and serves the function of the ordinary inscription during the day time and at the same time affords the police officials an opportunity of instantly disclosing the official character of the car at night when an arrest is imminent, or when it otherwise becomes necessary to make such disclosure.

Although the invention has been described with considerable detail, it is not the intention to limit the invention to the precise construction here shown, since modifications within the scope of the appended claims are contemplated.

We claim:

1. In combination with the hood of a car, an official sign of relatively long, narrow and flat configuration extending flatwise longitudinally along the side of the hood and, comprising an inner body portion adapted to be secured to the hood of the car, and a cover portion secured to the body portion and in spaced relation thereto to afford an inner illuminable space, the cover portion being of outwardly cylindrically curving configuration from the top edge to the bottom edge and being provided with perforations delineating a word of official import, a source of illumination within the illuminable space, and electrical wiring leading to a convenient point of control.

2. In combination with the hood of a car, an official sign of relatively long narrow and flat configuration extending flatwise longitudinally along the side of the hood and, comprising an inner body portion adapted to be secured to the hood of the car, and a cover portion secured to the body portion and in spaced relation thereto to afford an inner illuminable space, the cover portion being of outwardly cylindrically curving configuration from the top edge to the bottom edge and being provided with perforations delineating a word of official import, a partition dividing the illuminable space into two compartments, a source of illumination in each of said compartments, and electrical wiring leading to a convenient point of control.

3. In combination with the hood of a car, an official sign of relatively long, narrow and flat configuration extending flatwise longitudinally along the side of the hood and, comprising an inner body portion adapted to be secured to the hood of the car, and a cover portion hinged to the body portion and in spaced relation thereto to afford an inner illuminable space, the cover portion being of outwardly cylindrically curving configuration from the top edge to the bottom edge and being provided with perforations delineating a word of official import, a source of illumination within the illuminable space, and electrical wiring leading to a convenient point of control.

4. In combination with the hood of a car, an official sign of relatively long, narrow and flat configuration extending flatwise longitudinally along the side of the hood and, comprising an inner body portion adapted to be secured to the hood of the car, and a cover portion hinged to the body portion and in spaced relation thereto to afford an inner illuminable space, the cover portion being of outwardly cylindrically curving configuration from the top edge to the bottom edge and being provided with perforations delineating a word of official import, a partition dividing the illuminable space into two compartments, a source of illumination in each of said compartments, and electrical wiring leading to a convenient point of control.

5. A sign of the character described, consisting of a body portion and a cover portion, a relatively long and narrow configuration and in relatively closely spaced relation to one another, the body portion comprising a flat wall provided around its edges with outstanding flanges inturned along their margins to afford a marginal strip, and a strip of cushioning material secured to said marginal strip, the end portions of the body flanges constituting end walls on the body and being of arcuate configuration and extending outwardly to a greater degree than the side portion of the body flanges, and the cover portion having a cylindrical bulged formation and being provided around its margin with flanges adapted to overlap the body flanges, including the end walls of the body portion, and the curvature of the cover portion being such as to bring it into closely abutting relation with the curved edges of the end body flanges and into abutting relation with the cushioning strip when the cover is closed, a hinge uniting the cover to the body, the cover being perforated to delineate a word of the intended import, a source of illumination within the body portion, and a protective sheet of transparent material underlying the perforations in the cover, and an electrical conductor leading from the source of illumination.

6. A sign of the character described, consisting of a body portion and a cover portion, of relatively long and narrow configuration and in relatively closely spaced relation to one another, the body portion comprising a flat wall provided around its edges with outstanding flanges inturned along their margins to afford a marginal strip, and a strip

of cushioning material secured to said marginal strip, the end portions of the body flanges constituting end walls on the body and being of arcuate configuration and extending outwardly to a greater degree than the side portions of the body flanges, and the cover portion having a cylindrically bulged formation and being provided around its margin with flanges adapted to overlap the body flanges, including the end walls of the body portion, and the curvature of the cover portion being such as to bring it into closely abutting relation with the curved edges of the end body flanges and into abutting relation with the cushioning strip when the cover is closed, a hinge uniting the cover to the body, the cover being perforated to delineate a word of the intended import, a partition dividing the interior of the body into two illuminable compartments, an electric bulb located in each of said compartments, side flanges laterally adjacent to each of said bulbs, and an electric conducter leading to each of said bulbs.

7. A sign of the character described, comprising a body section and a cover section hinged together to afford a relatively long, narrow and shallow housing, the body section comprising a rear wall having upper and lower side flanges and end flanges, the end flanges being of arcuate formation and extending inwardly to a greater degree than the side flanges, and the side and end flanges having a continuous inturned margin, a continuous cushioning strip secured to said margin, inner flanges in parallel relation to the side and end flanges of the body and furnishing a marginal channel in conjunction therewith, a partition wall extending between the inner flanges and having the same curved configuration as the end body flanges, a cover having a cylindrically curved body and a marginal flange, the curvature of the cover being complementary to the edge curvature of the end body flanges and the partition, to bring the inner surface of the cover into abutting relation with said end flanges and said partition when the cover is closed, an electric bulb located in each of the body compartments separated by the partition, an electrical conductor leading to each of said bulbs, the cover being provided with lines of perforations delineating a word of the intended import, and a protective sheet of transparent material secured to the inner surface of the cover.

8. A sign of the character described, comprising a body section and a cover section hinged together to afford a relatively long, narrow and shallow housing, the body section comprising a rear wall having upper and lower side flanges and end flanges, the end flanges being of arcuate formation and extending inwardly to a greater degree than the side flanges, and the side and end flanges having a continuous inturned margin, a continuous cushioning strip secured to said margin, inner flanges in parallel relation to the side and end flanges of the body and furnishing a marginal channel in conjunction therewith, a partition wall extending between the inner flanges and having the same curved configuration as the end body flanges, a cover having a cylindrically curved body and a marginal flange, the curvature of the cover being complementary to the edge curvature of the end body flanges and the partition to bring the inner surface of the cover into abutting relation with said end flanges and said partition when the cover is closed, an electric bulb located in each of the body compartments separated by the partition, an electrical conductor leading to each of said bulbs, the cover being provided with lines of perforations delineating a word of intended import, a protective sheet of transparent material underlying the perforations in the cover, and an open frame bearing against the protective sheet and secured to the cover to hold the sheet closely against the perforations.

LEO B. DWYER.
ERWIN DRALLMEIER.