Nov. 29, 1932. A. LÖBL 1,889,179

CASING FOR LIGHT SIGNS AND SIGNALING APPARATUS

Filed March 10, 1930

Fig. 1

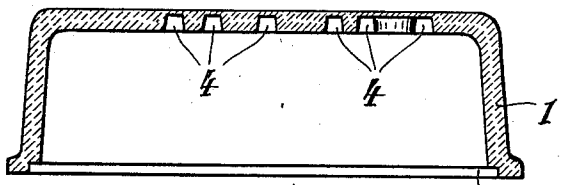


Fig. 3

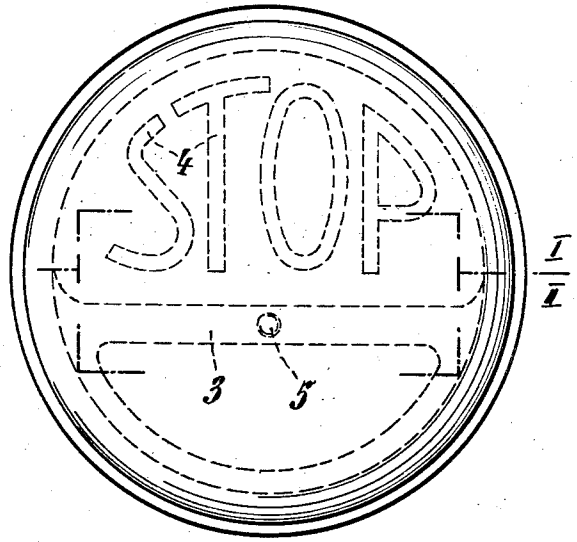
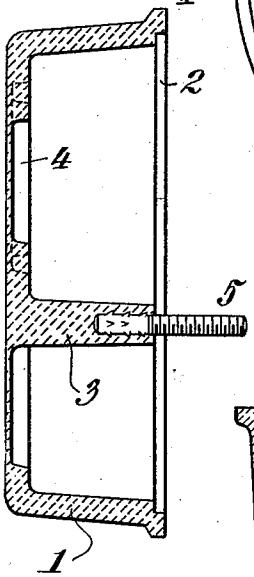
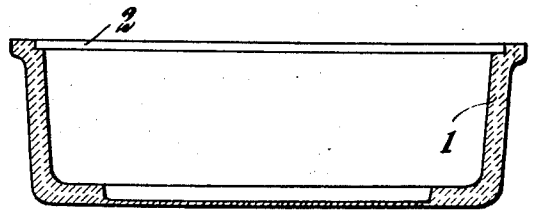


Fig. 2

Fig. 4





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Patented Nov. 29, 1932

1,889,179

UNITED STATES PATENT OFFICE

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CASING FOR LIGHT-SIGNS AND SIGNALING APPARATUS

Application filed March 10, 1930, Serial No. 434,477, and in Germany and Czechoslovakia January 27, 1930.

Applications have been filed in Germany on Jan. 27, 1930, Czechoslovakia Jan. 27, 1930, Austria Jan. 28, 1930, and Switzerland Jan. 28, 1930.

This invention relates to a casing for light-signs and signaling apparatus. The casings of devices used for this purpose, when they are intended for use in the open, and more particularly when they are subjected to constant vibration or shaking, are difficult to keep tight, since it is impossible to prevent cracks forming round the windows or apertures intended for the transmission of light. Consequently moisture and dust penetrate into the interior of the casing, as in the case of the rear lights of vehicles, and cause damage to the apparatus contained therein.

In accordance with the present invention, these drawbacks are avoided in that the portion of the casing containing the lighting aperture or apertures is formed of an artificial substance in one piece with irregular wall-thickness, in such a manner that only such portions as are intended for the transmission of light are transparent or translucent. For this purpose all such artificial substances can be used, as, in their natural state or coloured, are entirely or practically opaque in thicker layers, but transparent or translucent in thin layers. Artificial resins, compressed substances, etc., e. g. bakelite can suitably be employed, and the required portion of the casing can be formed in these substances by a pressing process. As a further stage in the realization of the present invention, the signs, words, or the like intended for signaling can be formed in one piece with the portion of the casing in question. To this end either the portions of the surface of the wall of the casing corresponding to these signs or the portions constituting the spaces between the signs are formed suitably thin and consequently transparent.

The subject matter of the invention is illustrated in the accompanying drawing, which shows, by way of example, the casing of a rear light for vehicles, in Figs. 1 and 2 in section, and in Fig. 3 in elevation. Also Figure 4 shows a vertical section taken diametrically through Figure 3.

The casing is in the form of the body of a round box, the cylindrical wall 1 of which is dimensioned sufficiently thick to ensure the required strength, and is provided with a step 2 in its thickened rim for the reception of a covering plate to which the electric signaling device proper is fitted. In the present instance the casing is divided into two compartments by means of a partition 3 formed in one piece with the casing itself. The lower of these two compartments contains the rear light, which burns continuously after dark, and the other contains the lamp for a "stop" sign, adapted to be switched on as occasion demands. The base plate of the casing below the partition 3 is made so thin (Fig. 2) that it is transparent or translucent, so that when the rear light is burning a bright segment is visible. The upper portion of the floor or base of the casing is of the same thickness as the cylindrical walling except for sparings 4 corresponding to the letters of the word "Stop" (Fig. 1). In the spared portions the floor is as thin as in the lower compartment, and therefore transparent, i. e. pervious to light. The written sign thus constitutes one piece with the floor or base of the casing. A bolt 5 is embedded in the material of the partition 3 and its free end is threaded, and serves for the attachment of the covering plate to the casing, and of the entire apparatus to the vehicle.

Since no joint of any kind is provided within the range of the light-emitting apertures, the penetration of moisture or dust on the front or window side of the apparatus is rendered absolutely impossible. The same danger can easily be averted for the rearward side by the provision of a suitably effective packing to the covering plate. The necessity for a special stencil or pattern for the sign to be signaled is avoided, implying simplification of the construction. The artificial material used can be coloured for the purpose of obtaining the desired signaling light, and would therefore be provided with

the addition of red colouring matter for the rear light of power-driven vehicles.

The described window has the further advantage over the thin transparent sheets of cellon or mica hitherto used, that it remains unaffected by moisture and heat, and is therefore not subject to warping. The smooth outer surface of the front of the casing prevents the settlement of dust and dirt. Further the means of attachment and packing hitherto necessary with inserted windows are dispensed with.

The invention can be advantageously applied to every branch of signaling, whenever there is a need for a casing embodying lighting windows or apertures, which shall be absolutely damp- and dust-proof on the window or aperture side. If the signs or letters themselves are rendered opaque by the thickening of the corresponding portions of the wall or base of the casing, they constitute an effective means of stiffening or bracing for the portion of the casing containing the lighting apertures.

I claim:

1. A signal casing comprising an integral cup-shaped member, an integral partition dividing said casing into upper and lower compartments, and extending for the full depth of said cup-shaped member to entirely separate said compartments, said casing and partition being formed of translucent material having a degree of light obstruction proportional to its thickness, an integral bottom portion formed in the upper compartment with relatively deep depressions conforming in outline to an indicating character, the thickness of the material at the bottom of said depressions being relatively less than the portions of the casing surrounding said depressions whereby the character is rendered distinguishable from the rear when the upper compartment of the casing is illuminated, a relatively thin integral bottom portion in the lower compartment forming a relatively translucent wall, and a threaded bolt embedded in the partition to receive a securing element for securing a cover plate to the rim of the casing.

2. A signal casing comprising an integral cup-shaped member having an annular rim, an integral partition dividing said casing into upper and lower compartments, and extending for the full depth of said cup-shaped member to entirely separate said compartments, said casing and partition being formed of translucent material having a degree of light obstruction proportional to its thickness, an integral bottom portion forming a wall of the upper compartment and provided with relatively deep depressions conforming in outline to an indicating character, the thickness of the material at the bottom of the depressions being relatively less than the portions of the casing surrounding said depressions whereby the character is rendered distinguishable from the rear when the upper compartment of the casing is illuminated, a relatively thin integral bottom portion in the lower compartment forming a relatively translucent wall, an annular recess formed in said annular rim for the reception of a cover plate, and means embedded in said casing for securing a cover plate thereto.

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