July 24, 1934. A. M. YOUNG 1,967,602

REFLECTING AND LIGHT DIFFUSING SIGN

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Fig. 1.

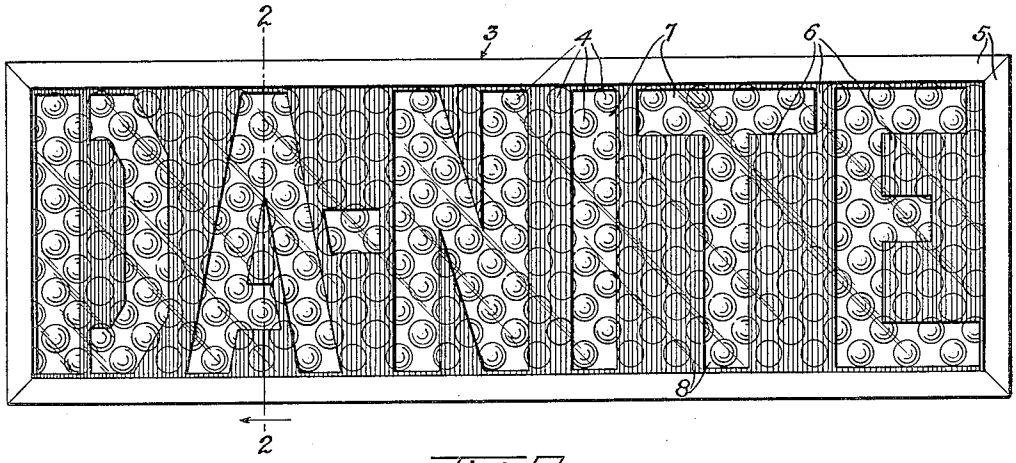
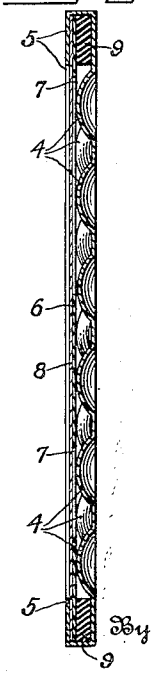


Fig. 2.



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REFLECTING AND LIGHT DIFFUSING SIGN

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3 Claims. (Cl. 40—135)

This invention relates to reflectors, and especially to an improved reflecting and light diffusing sign.

The main object of this invention is to provide an improved and comparatively simple and low-cost sign that is clearly discernible and distinguishable at considerable distances by night and by day when illuminated from a light-source at a distance from the sign.

Another object is to provide a sign of this kind having polished metal reflecting and diffusing lenses formed integrally with the base or frame which holds the sign-plate and the transparent sign-protecting plate or sheet, which latter is of material that is non-frangible and impervious to moisture.

Another object is to combine the transparent protecting plate with the base or frame in such manner that the lenses or convex reflectors are enclosed and sealed against the dimming effects of moisture, dust, smoke and other air-carried agencies that would tend to impair the efficiency of the sign.

Other objects and important features are pointed out or implied in the following details of description, in connection with the accompanying drawing in which:

Fig. 1 is a front or face view of a sign constructed according to this invention, and—

Fig. 2 is an enlarged sectional view along the line 2—2 of Fig. 1, viewed in the direction of the arrow.

Referring to the drawing in detail, in which similar reference numerals refer to similar parts in both views, the invention will presently be described in detail, but it should first be understood that the word "Da-nite", coined for the present illustration, merely shows one form or application of the very many to which the invention may be put, for instance, highway signals; vehicle signals for right-turn, left-turn, stop, go, back-up etc.; and for commercial signs, on streets, roads, and indoors.

The base or frame 3 has its main part embossed to form numerous closely arranged convex reflectors 4, the said base being of sheet metal, aluminum for instance, that will not rust or corrode, and that has its face or front side polished and bright so as to reflect very efficiently. Of course it is to be understood that the diffusion of the reflected light is due to the proximity of the numerous lenses to one another, and is intended to eliminate glare that would tend to dazzle the observers. If one of the baser metals is used, the front of the frame or base-plate may be coated with luminous paint, and in any event, it may be preferable to paint or coat the back of the plate with a suitable preservative that is of a dark or dull color, so that when its marginal edges are turned inward, as at 5, the margin will not detract from or interfere with the sign-face which the marginal edge surrounds.

The sign-plate 6, so called because the sign-letters are cut therethrough, is of translucent suitably colored sheet material such as celluloid, fiberloid, oiled paper or other non-frangible material which may be semi-transparent as well as translucent, so the convex reflectors can be seen therethrough, but not near so distinctly as through the letter-openings 7 of this sign-plate. The vertical parallel lines on the front of the plate 6 indicate "Red" or "Pink", according to the symbols in the Patent Office Rules of Practice, but the invention is not limited to any particular color or colors.

The transparent protecting plate or sheet 8 is preferably colorless and highly transparent so that the color of the sign-plate and the reflections from the embossed surface of the base-plate will be clearly distinguishable therethrough whenever the sign-face is illuminated, whether by natural or artificial illumination.

Again referring to the inwardly turned flanges or marginal parts 5, it is seen that they form a peripheral channel in which the edges of the plates or sheets 6 and 8 are seated; and now referring to Fig. 2, it is seen that the marginal channel has a gasket or marginal packing 9 therein, the same fitting tight against the inner wall of the channel and against the inner side of the sign-plate 6, this packing may be of rubber or other suitable weather-excluding material, and is preferably springy and compressed so that it continually presses the margins of the plates or sheets 6 and 8 against one another; however, to guard against entrance of moisture by capillary attraction, these marginal parts may be cemented together by any appropriate surface coating before the margins or flanges 5 are turned inward and pressed against the margin of the plate or sheet 8; and a similar coat on the inner surface of the flanges 5 will provide additional security.

I have no intention to limit my patent protection to the exact details of construction, arrangement, dimensions or materials as here described and shown, for the invention is susceptible of numerous changes within the scope of the inventive ideas as implied and claimed.

What I claim is:

1. In a reflecting and diffusing sign, the combination of a plate having its main part formed with convex reflectors while its marginal part forms a continuous channel around the reflectors, a colored translucent sign plate having sign-openings therethrough and lying over and against some of said reflectors so the latter are visible therethrough while others of the reflectors are more clearly visible through said sign-openings, and a transparent plate or sheet lying over and against said sign-plate, the margins of said sign-plate and transparent sheet being fitted snugly against one another and against a wall of the channel of the first said plate so as to exclude moisture from without.

2. In a reflecting and diffusing sign, the combination of a metal plate having a polished side including numerous closely arranged convex reflectors and also having a continuous marginal channel that opens inward toward the reflectors, a translucent colored plate of flexible material arranged so as to cover parts of the said polished side in proper relation to form letters or a letter of the part of the polished side uncovered by the said colored material, and an uncolored transparent impervious protecting plate or sheet overlying and against the said colored material so that the latter and the convex reflectors are visible therethrough, the margins of the colored material and transparent plate being seated in the said marginal channel of the said metal plate in such relation that the outer wall of the channel combines with the transparent protecting plate for excluding extraneous matter.

3. The combination defined by claim 2, and a continuous springy packing fitted in the said marginal channel in the proper relation for snugly closing the joints between the channel and the parts held therein.

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