

Sept. 30, 1924.

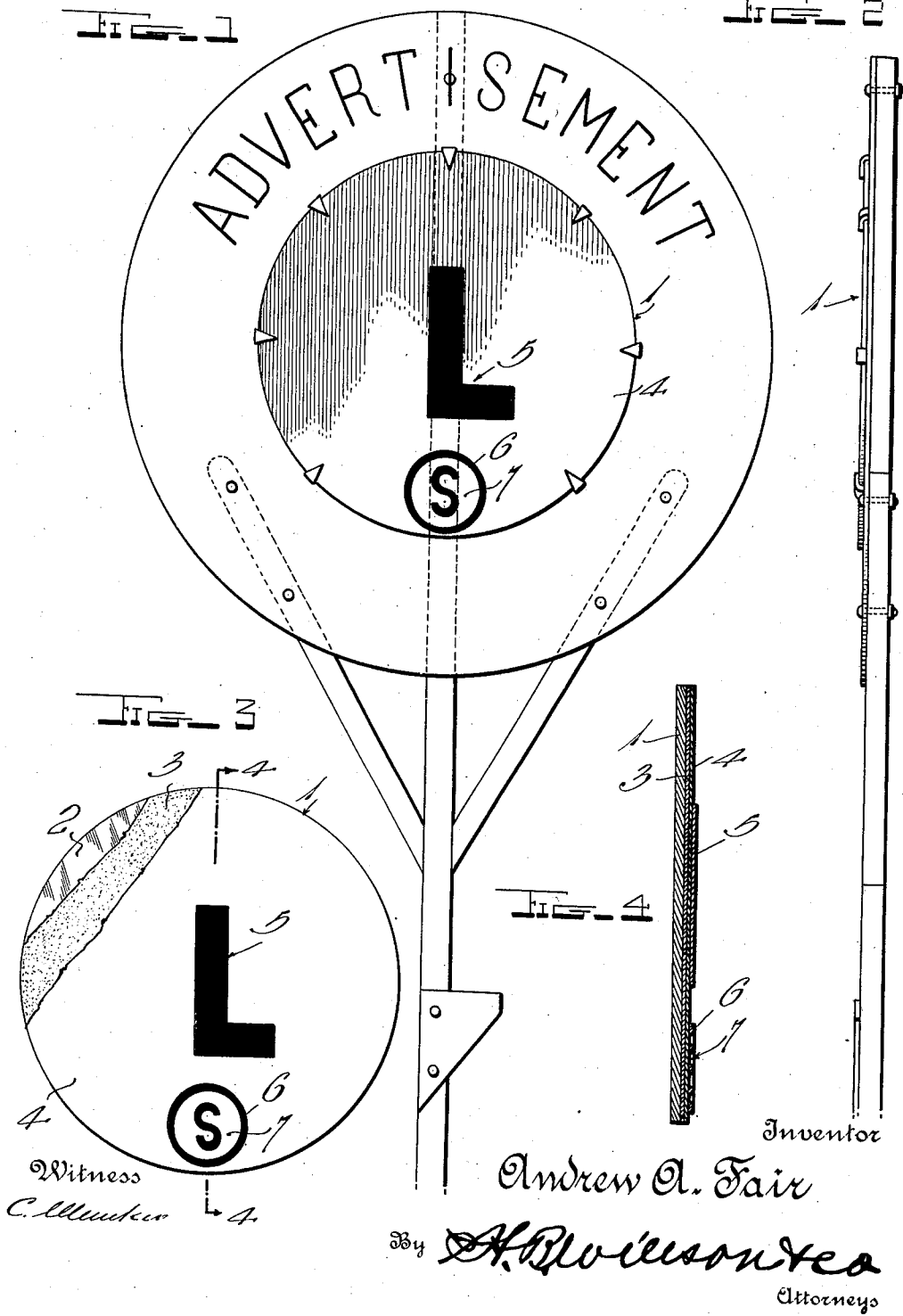
A. A. FAIR

1,510,049

LUMINOUS SIGN

Original Filed Jan. 15, 1923

2 Sheets-Sheet 1

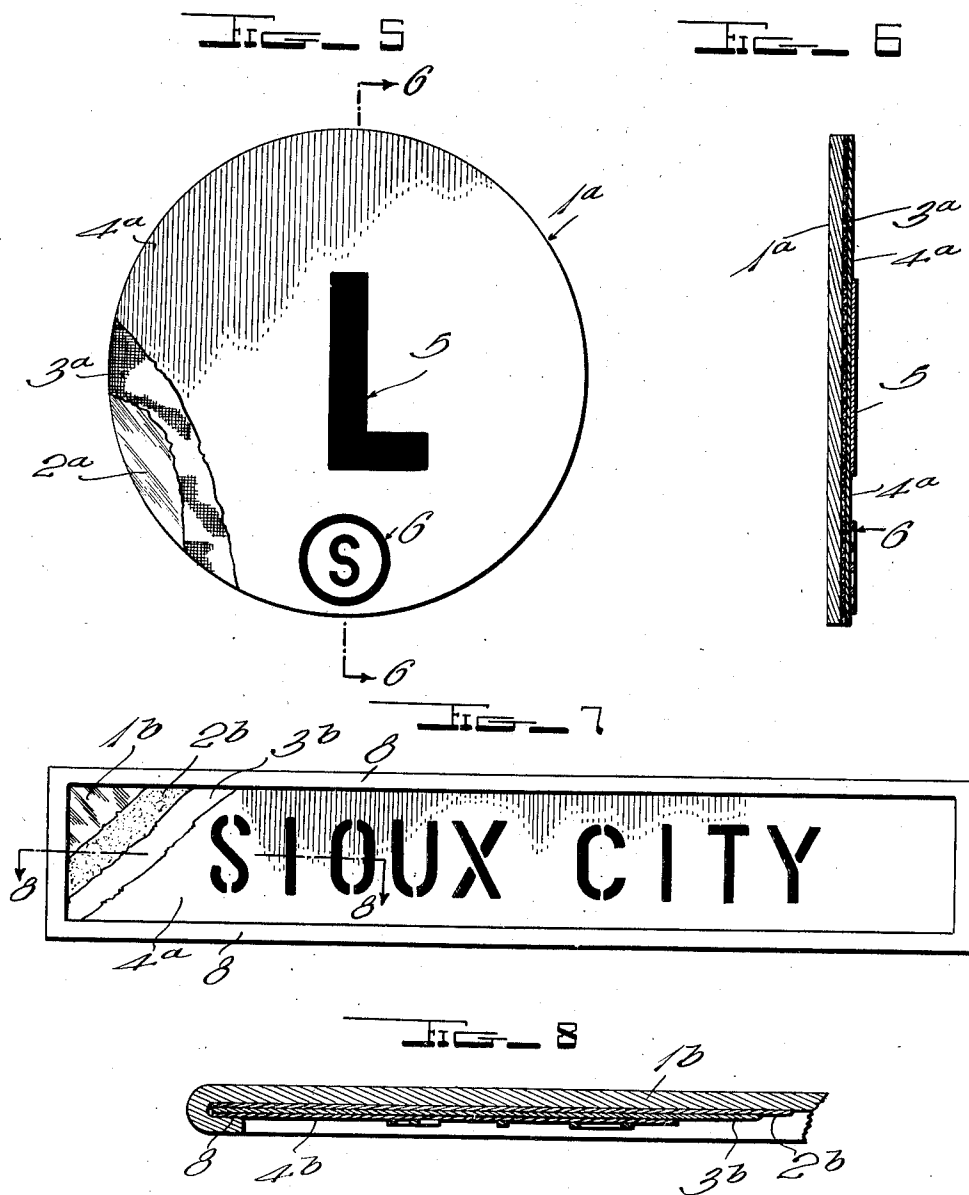


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UNITED STATES PATENT OFFICE.

ANDREW A. FAIR, OF SIOUX CITY, IOWA.

LUMINOUS SIGN.

Application filed January 15, 1923, Serial No. 612,735. Renewed February 25, 1924.

To all whom it may concern:

Be it known that I, ANDREW A. FAIR, a citizen of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented certain new and useful Improvements in Luminous Signs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in luminous signs and more particularly to those which are brought into operation by the rays of light projected from the headlights of approaching vehicles, the signs being intended primarily to be mounted stationarily at different points along highways, although pennants and like devices may be constructed in accordance therewith to be carried by automobiles and other vehicles.

The object of the invention is to provide a simple and inexpensive device of the character set forth including a reflector and provided with novel means for diffusing and coloring the rays of light projected from automobile and other vehicle headlights.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawings.

Figure 1 is a front elevation showing one form of the invention and one of the many supports which may be employed therefor.

Figure 2 is an edge elevation of the parts shown in Fig. 1.

Figure 3 is a front elevation of the sign detached from the support, portions of the two coatings of material on the reflector being broken away.

Figure 4 is an enlarged vertical section as indicated by line 4—4 of Fig. 3.

Figure 5 is a face view showing a different form of construction.

Figure 6 is an exaggerated sectional view as indicated by line 6—6 of Fig. 5.

Figure 7 is a face view partly broken away, showing a still further form of construction.

Figure 8 is an enlarged horizontal sectional view on line 8—8 of Fig. 7.

In the form of construction shown in Figs. 1, 2 and 3, the numeral 1 designates

a suitably shaped plate formed of any desired material and provided with a highly polished reflecting surface 2, a sheet of metal being preferably employed in the construction of this reflector. Applied directly to the reflecting surface 2, is a sheet of tissue paper 3 for diffusing the light rays from the reflecting surface 2. A coating 4 of flat varnish or gloss varnish rubbed to remove its lustre, is applied to the outer surface of the tissue paper sheet 3 and penetrates through the latter to cause it to adhere tightly to the reflecting surface. Either uncolored or colored tissue paper and colorless or colored varnish may be used. When the tissue paper is colored, the varnish will be uncolored, but when uncolored tissue paper is employed, the colored varnish may be used.

By the construction above described, it will be seen that when the device is placed to receive the rays of light projected from vehicle headlights, it will be conspicuously illuminated, and the rays of light are colored. These reflected rays however are also diffused so that there is no objectionable glare.

Any desired symbols or characters may be applied to the exterior of the device by using opaque paint. I have illustrated a well known symbol 5 indicating a left hand turn in a highway and at 6 I have disclosed a representation of a highway marking which may be painted in any desired colors. If the background 7 of this marking is to be of a different color from the color produced by the colored varnish or colored tissue paper, the portion of the latter at the background, may be cut out and replaced with a diffusing and coloring agent of a different hue.

In the construction shown in Figs. 5 and 6, 1^a designates a plate of suitable material and of any desired shape having a reflecting surface 2^a. This surface however instead of being covered with tissue paper, has a sheet of silk or other closely woven fabric applied thereto as indicated at 3^a. A coating of varnish 4^a is applied to the sheet and penetrates through the latter to cause adhering thereof to the reflecting surface 2^a and thus the reflected rays from this surface are diffused. Colored fabric 3^a may be used, in which case colorless varnish will be employed, or colorless fabric with colored varnish may be employed. In either case,

the rays of light reflected from the surface 2^a are both diffused and colored in the desired manner.

In Figs. 7 and 8, I have shown a further modification of my invention, in which a back plate 1^b preferably having a polished front face, is covered on its front side by a sheet of colored gelatine 2^b, producing a colored reflector. A sheet 3^b of colorless tissue paper, silk or other diffusing material, is applied to the front surface of the gelatine sheet 2^b and this diffusing agent is coated with varnish as indicated at 4^b so that this varnish permeates the pores of the tissue paper or fabric and causes the same to adhere to the colored reflector 2^b.

In connection with the form of construction just described, I have shown the sign of different shape and the edges of the backing plate 1^b have been bent around the layers applied to said plate, as indicated at 8. This general construction is preferable as a "home town tag" to be carried by automobiles.

In all forms of my invention, the light rays are effectively diffused and colored if desired and in most cases the coloring is practically essential. Obviously, I do not wish to be restricted to signs of any particular shape or to any diffusing or coloring agents, otherwise than as set forth in the appended claims. Furthermore, while in all instances, I intend to use the device in such a manner that it will be illuminated by the rays of light projected from vehicle headlights, the manner of mounting the signs, and the character of lettering, symbols or the like thereon, may be widely varied to meet a great number of requirements.

I claim:

1. A luminous highway sign operable by the projected rays of approaching vehicle headlights, comprising a reflector, and trans-

lucent light diffusing and coloring means applied to the reflecting surface of said reflector, the whole forming a single unitary article.

2. A luminous highway sign operable by the projected rays of approaching vehicle headlights, comprising a reflector, and translucent light diffusing and coloring means applied in sheet form to the reflecting surface of said reflector, the whole forming a single unitary article.

3. A luminous highway sign operable by the projected rays of approaching vehicle headlights, comprising a reflecting surface, and a sheet of light diffusing material applied to said reflecting surface.

4. A luminous highway sign operable by the projected rays of approaching vehicle headlights, comprising a reflecting surface, a sheet of translucent light diffusing material applied to said reflecting surface, and a coating of varnish applied to and penetrating through said sheet of light diffusing material to adhere it to said reflecting surface.

5. A luminous highway sign operable by the projected rays of approaching vehicle headlights, comprising a reflecting surface, a sheet of colorless light diffusing material applied to said reflecting surface, and a coating of colored varnish applied to said sheet of light diffusing material and penetrating through the same to adhere it to said reflecting surface and to color the diffused light rays from said surface.

6. A luminous highway sign comprising a reflecting surface, a light diffusing and coloring means applied directly thereto, and an opaque symbol applied to the outer surface of said diffusing and coloring means.

In testimony whereof I have hereunto affixed my signature.

ANDREW A. FAIR.