

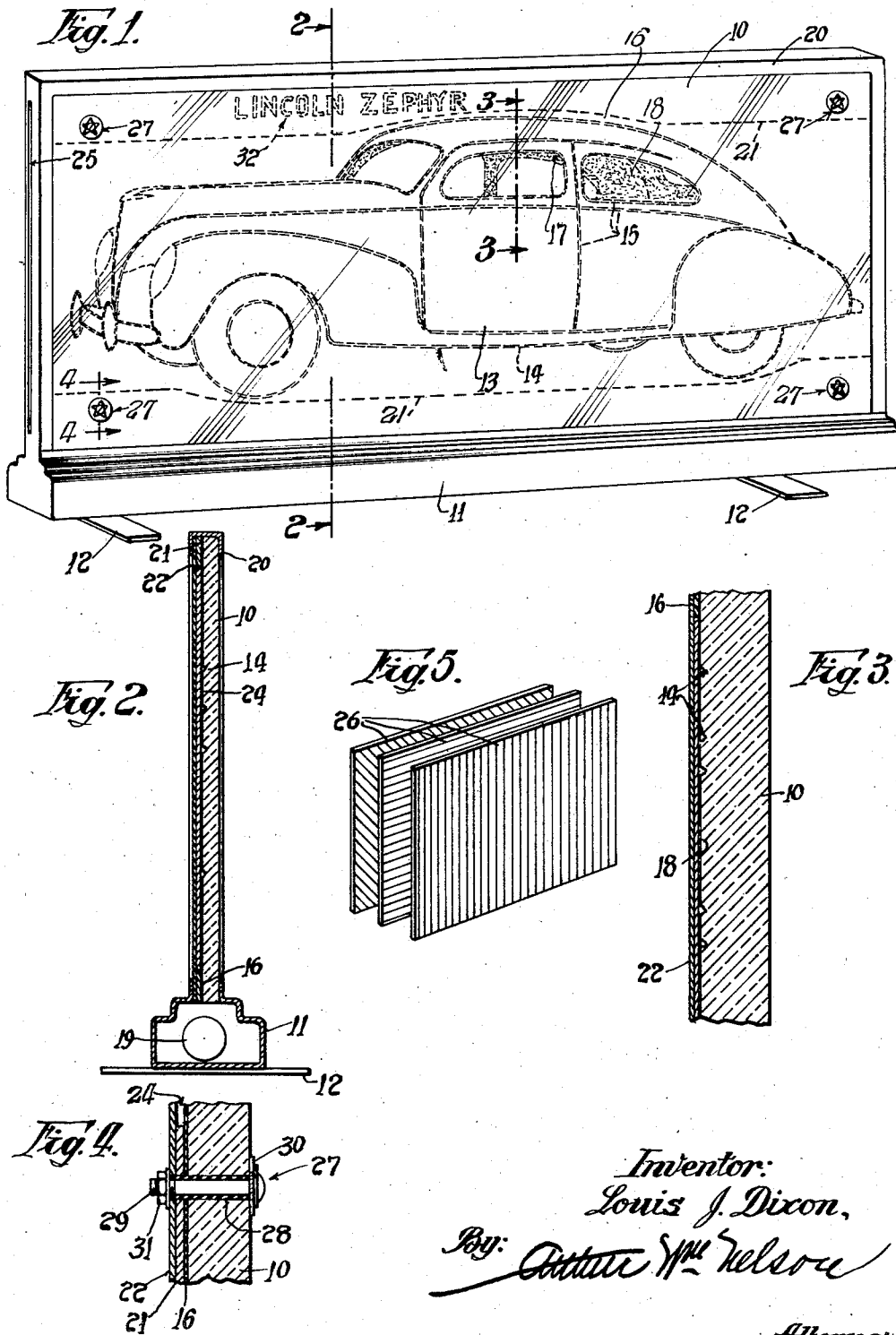
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EDGE LIGHTED SIGN

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EDGE LIGHTED SIGN

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8 Claims. (Cl. 40—130)

This invention relates to improvements in edge lighted signs and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The signs with which the present invention is especially concerned, usually include a transparent panel with a grooved depiction upon one face thereof and a source of light along one edge of the panel.

One of the objects of the present invention is to provide a sign of this kind wherein the matter depicted shows up to a better advantage, which in the presence of external light at the front of the sign presents one effect and which in the absence of such external light presents another effect, whereby the attractiveness of the sign is materially increased.

Another object of the invention is to provide a sign of this kind whereby the matter depicted may be made to appear in a more brilliantly lighted outline, and in any one of a number of colors.

Again, it is an object of the invention to provide a sign of this kind that is of a simple construction for low cost production, is easy to keep clean and bright and is economical in current consumption for lighting purposes.

The above mentioned object of the invention as well as others, together with the advantages thereof will more fully appear as the specification proceeds.

In the drawing:

Fig. 1 is a perspective view of an edge lighted sign embodying the preferred form of the invention.

Fig. 2 is a vertical sectional view through the sign on a somewhat enlarged scale as taken on the line 2—2 of Fig. 1.

Fig. 3 is a detail vertical sectional view on a further enlarged scale as taken on the line 3—3 of Fig. 1.

Fig. 4 is a detail vertical sectional view through a part of the sign as taken on the line 4—4 of Fig. 1.

Fig. 5 is a perspective view of a group of color boards that may be advantageously employed in the improved sign.

Referring now in detail to that embodiment of the invention illustrated in the drawing, the sign as shown therein includes a rectangular panel 10 of transparent material such as a piece of clear glass which well serves the purpose. Usually the panel stands in an upright position with its bottom marginal part secured in a hollow opaque housing 11 provided with transversely

extending feet 12 which make a good firm base for the sign as a whole.

On the rear face of the panel is an area 13 defined by a narrow groove 14 and which area, in this instance, is the outline of an automobile. Other narrow groove portions 15 are arranged in suitable relation within said area to cooperate in outlining certain sub-areas representing the various parts of the body, such as hood, fenders, doors and windows, as well as the wheels and bumpers as shown in Fig. 1. All of that area of the rear face of the panel outside of the outline groove 14 defining the area 13 is rendered opaque preferably by the application of a sheet of white cardboard 16. On certain portions 17 of certain of the sub-areas there are coatings 18, such for example as paint or material fused on, as in ceramics—see Fig. 3. In this way an intimate bond is provided and an effective light reflective surface is obtained. The portions 17 are disposed within the sub-areas to represent interior portions of the body which are visible from the outside of the automobile through the windows. This arrangement better brings out the detail of the article depicted and of the various parts thereof.

The grooves 14 and 15 are preferably unpolished and may be conveniently produced by sand-blasting as this leaves the walls of said grooves with innumerable minute prismatic surfaces of high light refractive or reflecting characteristics. This character of the wall surfaces of the grooves is best illustrated in Fig. 3 wherein said grooves appear in cross section on an enlarged scale.

In the housing 11 is located a source of light 19 for the bottom edge of the panel. Preferably said source of light is an elongated tube light. To protect the top and side margins of the panel against breakage, as well as to prevent the escape of light rays out through said margins, they are enclosed in a channel-like binding strip 20, preferably made of metal.

On the rear face of the panel, about its top and bottom margins, is an opaque spacing strip 21 and engaged against the rear face of said strip is an opaque backing board 22 conveniently of metal to give rigidity to the structure. Under certain circumstances, part of the backing board is visible from the front of the sign, through the transparent parts of the area 13 within the outline groove 14.

With the arrangement just described, there is provided a relatively narrow color board receiving chamber 24 between the panel and the backing board. A part of the binding strip 20 associ-

ated with one end of the panel has a slit 25 therein, see Fig. 1. This slit constitutes the entrance slit for the chamber 24 and whereby any desired one of a group of color background cards or boards 26, such as shown in Fig. 5, may be inserted into the chamber. When such a card or board has been inserted into the chamber 24, it is disposed to the front of the backing board and covers the same as well as the area 13 outlined by the groove 14 and therefore it is the color of the inserted card or board which appears to the observer from the front of the sign.

The parts to the rear of the panel, outside of the outline groove 14 are secured in operative relation to the panel at a number of points 27 (see Figs. 1 and 4) in the following manner. At said points 27, aligned holes are formed in the panel 10, the sheet 16, spacer 21 and backing board and in said holes is a rubber bushing 28. A bolt 29 passes through the said holes and a decorative washer effect 30 is arranged between the head of the bolt and the front face of the panel. A nut 31 is threaded on the bolt to engage the rear face of the backing board. When the nuts 31 at said points are drawn up, the panel, opaquesheet, spacer and backing board are drawn into relatively tight engagement so that there is no wavy appearance presented from the front of the sign.

It is to be noted that the housing 11 so shrouds or encloses the source of light 19 as to prevent lateral diffusion of the rays therefrom so that all of said rays pass upwardly in the plane of the bottom edge of the panel. As said rays meet the grooves 14 and groove portions 15, the minute surfaces thereof become brilliantly illuminated so as sharply to outline the various parts of the automobile depicted. When such rays meet the coating 18 of the sub-areas, these coatings become light-reflective but not to the extent of the grooves so that a two-tone effect appears.

It is pointed out that in the presence of a source of light at the front of the sign, such as daylight or a source of artificial light directed toward the front of the sign, the light rays therefrom penetrate the panel and will illuminate that background for the area 13 as provided either by the front surface of the backboard or the front surface of the color board or card, arranged in the chamber 24. Thus the appearance of the sign, to an observer at the front thereof, is one showing certain sub-areas in a color corresponding to the background color as provided by either the backboard or a color board. Therefore, by changing the color board or card, demonstrations of the automobile in different color effects may be readily made. If desired, matter 32 referring to the article depicted by the groove 14 and the groove portions 15 may be placed upon the front face of the cardboard 16 and which matter in this instance represents the name of the automobile shown, see Fig. 1.

When the sign is viewed from the front in the absence of daylight or the artificial light before mentioned and solely lighted by the edge lighting source of light, a very different appearance is presented to the observer. Under such conditions, the automobile appears as at night, i. e. the body and area outside the outline has an absence of color but has its outlines such as doors, fenders, etc., brilliantly defined by the edge lighted grooves. Certain areas 17 having the coating 18, however, are relatively bright as compared to other areas not having the coating 18 thereon. In the example given, the effect is substantially

that of a vehicle with a brightly lighted interior.

The matter 32 before referred to, carried by the cardboard 16 in Fig. 1, will appear or become visible in the presence of external light and will disappear or become invisible when the sign is edge lighted only.

Thus the sign is indeed effective not only as a daytime sign but also as a night time sign. The appearance presented by the sign is so unique and striking that it is difficult to convey a true word picture thereof. The matter depicted has a two-tone appearance that is very attractive and holds the attention of the passersby. The sign is simple in construction, and is easy to keep clean and is economical in current consumption.

While in describing the invention I have referred in detail to the form, arrangement and construction of the various parts thereof, the same is to be considered only in the illustrative sense so that I do not wish to be limited thereto except as may be specifically set forth in the appended claims.

I claim as my invention:

1. An edge lighted sign embodying therein a panel of transparent material having front and rear faces, there being relatively narrow groove portions in the rear face of the panel arranged in an outline of desired shape, means providing a source of light along at least one edge portion of the panel, and means providing a surface adjacent the rear face of the panel and including an area of desired color within the outline formed by said groove portions whereby one effect is presented to the observer when the sign is edge lighted only and another effect is presented to the observer when there is external light.

2. An edge lighted sign embodying therein a panel of transparent material having front and rear faces, there being relatively narrow groove portions in the rear face of the panel arranged in an outline of desired shape, means providing material bonded to certain areas of the rear face of the panel within said outline formed by said groove portions, and means providing a surface adjacent the rear face of the panel and including an area of desired color within said outline formed by said groove portion, whereby one effect is presented to the observer when the sign is edge lighted only and another effect is presented to the observer when there is external light.

3. An edge lighted sign embodying therein a panel of transparent material having front and rear faces, there being relatively narrow groove portions in the rear face of the panel arranged in an outline of desired shape, means providing a source of light along at least one edge portion of the panel, and a plurality of members each adapted for arrangement to the rear of the panel and each having a colored area on at least one face thereof adapted to be disclosed through certain portions of the panel within the outline as formed by said groove portions and whereby one effect is presented to the observer when the sign is edge lighted only and another effect is presented to the observer when there is external light.

4. An edge lighted sign embodying therein a panel of transparent material having front and rear faces, there being relatively narrow groove portions in the rear face of the panel arranged in an outline of desired shape, means providing a source of light along at least one edge of the panel, means providing an opaque backing mem-

ber arranged rearwardly of the rear face of the panel so as to provide a space therebetween, and means insertable into said space and providing a surface adjacent the rear face of the panel and including an area of desired color within the outline defined by said groove portions whereby one effect is presented to the observer when the sign is edge lighted only and another effect is presented to the observer when there is external light.

5. An edge lighted sign embodying therein a panel of transparent material having front and rear faces, there being relatively narrow groove portions in the rear face of the panel arranged in an outline of desired shape, means providing a source of light along at least one edge of the panel, means providing an opaque backing member arranged rearwardly of the panel so as to provide a space therebetween, means providing material bonded to certain areas of the rear face of the panel within said outline formed by said groove portions, and means insertable into said space and providing a surface adjacent the rear face of the panel and including an area of desired color within the outline defined by said groove portions whereby one effect is presented to the observer when the sign is edge lighted only and another effect is presented to the observer when there is external light.

6. An edge lighted sign embodying therein a panel of transparent material having front and rear faces, there being relatively narrow groove portions in the rear face of the panel arranged in an outline of the desired shape, means on the rear face of the panel for opaquing that part of said face outside of said outline, means providing a source of light along at least one edge portion of the panel, and means providing a surface to the rear of said opaquing means and

including an area of desired color within the outline formed by said groove portions whereby one effect is presented to the observer when the sign is edge lighted only and another effect is presented to the observer when there is external light.

7. An edge lighted sign embodying therein a panel of transparent material having front and rear faces, there being relatively narrow groove portions in the rear face of the panel arranged in an outline of the desired shape, means on the rear face of the panel for opaquing that part of said face outside of said outline, means providing material bonded to certain areas of the rear face of the panel within the outline formed by said groove portions, means providing a source of light along at least one edge portion of the panel, means providing a surface to the rear of said opaquing means and including an area of desired color within the outline formed by said groove portions and whereby one effect is presented to the observer when the sign is edge lighted only and another effect is presented to the observer when there is external light.

8. An edge lighted sign embodying therein a panel of transparent material having front and rear faces, there being relatively narrow groove portions in the rear face of the panel arranged in an outline of the desired shape, means on the rear face of the panel for opaquing that part of said face outside of said outline, means providing a source of light along at least one edge of the panel, a member arranged to the rear of said opaquing means and coacting therewith in forming a space therebetween, and means insertable into said space and including an area of desired color within the outline formed by said groove portion.

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