March 24, 1953 D. MOSS 2,632,270

CHARACTER BLOCKS FOR ILLUMINATED SIGNS

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Fig. 1.

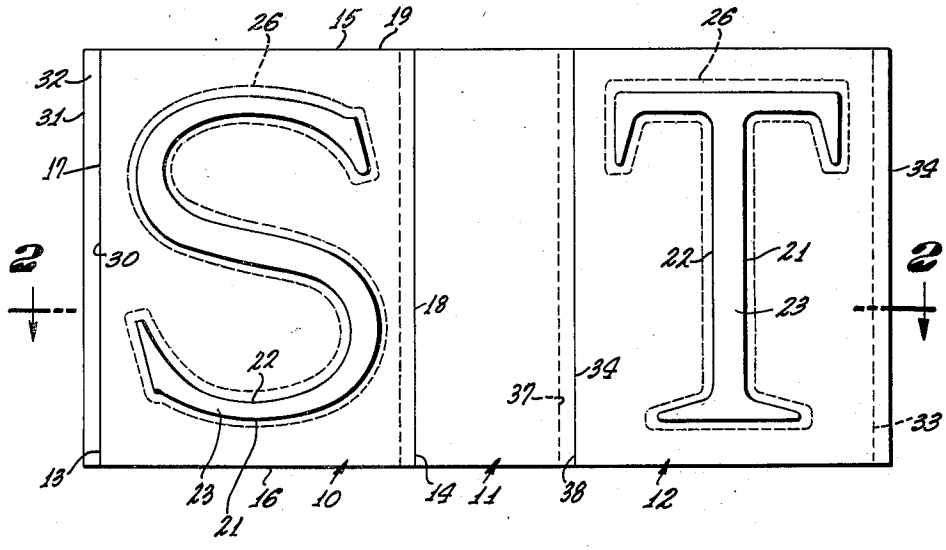
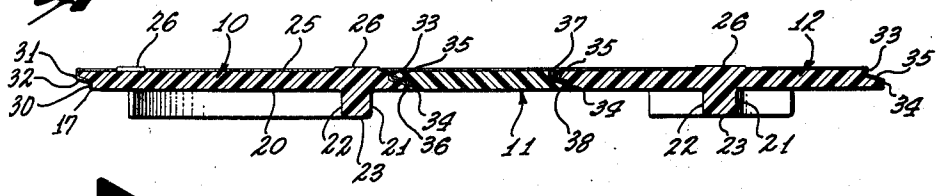


Fig. 2.



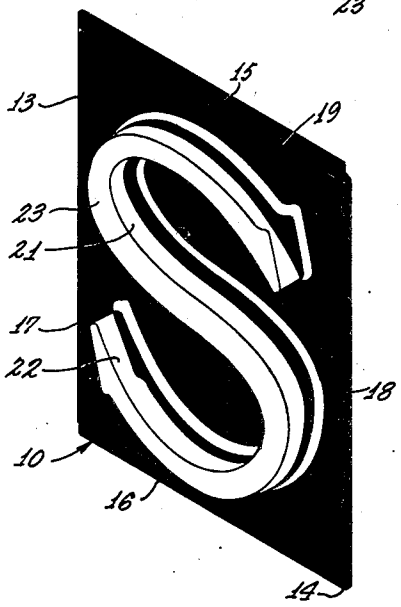


Fig. 3.

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CHARACTER BLOCKS FOR ILLUMINATED SIGNS

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3 Claims. (Cl. 40—136)

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The invention relates to illuminated signs and has particular reference to the construction of blocks or panels adapted to contain individual letters, characters, numerals, punctuation marks, etc., constructed in such fashion that the blocks or panels may be aligned side by side on a suitable support to spell out letters or numerals for illumination from the rear, the blocks or panels being so constructed as to eliminate a line of demarcation between adjacent panels.

In the construction of illuminated sign letters heretofore employed various structures have been resorted to in order to provide a character through which light may pass and in order to illuminate the character to the exclusion of a surrounding background. In making such illuminated characters insufficient attention has been given to the edges of the panels, plates, or blocks carrying the character which has resulted in there being presented to view an illuminated sign wherein light streaks between the panels have detracted to a considerable degree from the attractiveness of the sign and the ease of reading the lettering spelled out by the individual letters and characters when joined together.

Character blocks heretofore presented have to a large extent been relatively expensive to manufacture with the amount of attractiveness necessary and desirable. Structures heretofore employed have also been such that on many occasions the attractiveness has not been lasting which has resulted in there being needed frequent and expensive replacements. On some occasions also in using the constructions previously employed, special racks or moldings have been needed in order to properly set off the sign letters when in place.

It is therefore among the objects of the invention to provide a new and improved sign letter or character which is relatively inexpensive to manufacture, which is simple in its construction, and which when in place on a sign presents and maintains a particularly attractive appearance.

Another object of the invention is to provide a new and improved sign character on a panel background wherein the background is particularly opaque thereby focusing attention on the character itself, the background moreover being so constructed that the opaque character extends to and beyond the lateral edges sufficient that when panels are joined side by side to spell out words and expressions, the line of demarcation between adjacent separate panels is, so far as all visual appearances are concerned, eliminated when the sign is lighted from the rear.

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Still another object of the invention is to provide a new and improved sign character of relatively inexpensive manufacture which can readily be coated with an opaque surface on the rear face and also along abutting edges in such fashion that when the rear surface of the character delineation is cleaned of the opaque surfacing to render the character transparent, the remaining opaque surface continues uninterrupted and undisturbed.

Still further among the objects of the invention is to provide panels for sign characters, the edges of which where one panel is joined to another are specially constructed so as to provide a light-tight fit even under circumstances where a certain limited clearance may become necessary in order to have the panels fill out the entire breadth of a sign.

With these and other objects in view, the invention consists in the construction, arrangement and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter set forth, pointed out in the appended claims and illustrated in the accompanying drawings.

In the drawings:

Figure 1 is a front elevational view of two panels bearing sign characters and a spacer panel mounted in the manner in which they would appear in a sign.

Figure 2 is a cross-sectional view taken on the line 2—2 if Figure 1.

Figure 3 is a front perspective view of the panel on the left-hand side of Figure 1.

Translucent or transparent sign characters, whether they be letters, numerals, punctuation marks or other appropriate characters, have been found particularly satisfactory when constructed of one or another of the commercially available transparent plastics. On some occasions, even though not clearly transparent, translucent plastics which transmit a major portion of light are equally satisfactory. In constructing sign characters of such material, some means must be provided to render portions of the panel not occupied by the character effectively opaque. A commercially acceptable expedient is to paint or otherwise coat one surface of the panel with an opaque coating, this being preferable from an economic standpoint to molding or casting an opaque layer in the material itself. When the opaque coating is applied, however, considerable care must be taken in coating the line of junction between adjacent panels so that the line of junction will be light-tight. This means not only

that the surface of the junction need be coated to prevent stray rays from being reflected or refracted at the joint, but also necessitates that the joint be of such configuration that it will minimize the refraction or reflection of light therethrough under circumstances where the joint may be slightly loose providing a clearance as well as circumstances wherein the joint is abutted so that the edges are tight one against the other.

In an embodiment selected for the purpose of illustration there are shown three panels 10, 11 and 12, the panel 10 bearing the character S, the panel 11 being a spacer panel, and the panel 12 being one carrying the character T purely by way of illustration. The panels are in the form of plates usually rectangular with the long dimension vertically disposed. Moreover, the panels as, for example, the panel 10, may be described as defined by vertical side edges 13 and 14 parallel with respect to each other and top and bottom edges 15 and 16 likewise parallel to each other and at right angles to the vertical side edges. Corners may be broken as indicated at the corners 17, 18, 19 and the front corner of the bottom edge 16.

The panel 10 which is in the form of a rectangular plate is relatively thin and has on a front face 20 thereof the letter S, the outline of which is raised a substantial distance outwardly from the front face 20 of the panel. Preferably the front face 20 is uncoated with any material as are also the bevelled side walls 21 and 22 of the character and the front face 23 of the character.

A rear face 25 of the panel has traced thereon a delineation 26 of the letter S, the breadth of which is, however, greater than the breadth of the delineation on the front face 20.

The left-hand vertical side edge 17 has an opaque area 30 at right angles to the front face 20 extending rearwardly from the front face a distance less than half the thickness of the plate. A similar opaque area 31 extends from the rear face forwardly at right angles also a distance less than one-half the thickness of the plate. Joining the two opaque areas just described is an oblique opaque area 32.

The opposite vertical edge 14 is provided similarly with an opaque area 33 extending at right angles forwardly from the rear face 25, an opaque area 34 extending rearwardly from the front face 20 a distance less than half the thickness of the panel and an oblique opaque area 35 joining the areas 33 and 34.

The spacer panel or plate 11, for example, has its left-hand vertical side edge 36 constructed in the same manner as the left vertical side edge of the panel 10 so that it is complementary to the right-hand vertical side edge of the panel 10. Similarly a right-hand vertical side edge 37 of the spacer panel or plate 11 is complementary to a left-hand vertical side edge 38 of the panel or plate 12. This relationship is carried on through all of the plates or panels which may be used on one particular sign.

When the plate is initially constructed the configurations of the characters are customarily cast on each side of the plate. Thereafter the rear plate and edges may have applied thereto some suitable opaque surfacing.

After the coating has been applied, the rear face of the panel may be subjected to a sanding operation and thereafter, if desired, a polishing operation in order to remove the opaque surfacing material from the rear face of the delineation 26 of the character. Because of this delineation being raised very slightly above the rear face, the opaque surfacing throughout the remainder of the plate or panel and the edges remains intact and undisturbed. This sanding operation provides a path for light throughout the entire delineation of the character from the rear face to the front face. The same structure is also employed in the character T of the panel or plate 12 as well as others which may be included in a particular set of letters or characters.

When adjacent panels or plates are lined up side by side to form words in a sign as exemplified in Figure 1, the vertical side edges are pushed into contact with each other. Such contacts are shown in Figure 2. As they are brought into contact, the opaque edges, both the edges normal or perpendicular to the faces, and the oblique edges are moved into position one adjacent the other. Under circumstances where both are coated with an opaque coating, a substantially light-tight seal results. Because of the change in the direction of the line defining the vertical edge, the tendency to refract light at this point is minimized. Also because of the opaque surfaces being in a position facing each other, light from the rear which might tend to leak through the joint even though the faces are not brought tight against each other tends to be absorbed, thereby making an effective opaque line of demarcation between adjacent panels when the sign is lighted from the rear. Although the opaque coating of both complementary vertical side edges is preferable, it has been found that even when only one edge is coated there is substantially little transmission of light from the rear through a devious path through the joint to the end that there still remains a substantially opaque line of junction between adjacent plates or panels.

There has accordingly been shown and described a character bearing plate or panel for rear illumination which displays a particularly attractive appearance in which attention is necessarily focused upon the character itself because of the exclusion of all transmitted light from other portions of the surface of the panel and also more particularly from the line of junction or demarcation between any and all adjacent panels when the panels with suitable characters thereon are lined up side by side to form a sign.

While I have herein shown and described my invention in what I have conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope of my invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices.

Having described my invention herein, what I claim as new and desire to secure by Letters Patent is:

1. A sign letter adapted to illumination by light passing therethrough comprising a rectangular inherently translucent plate having opposite faces, parallel vertical side edges, a raised translucent character on one face of said plate, said other face having an opaque surface, and a raised translucent character on the other face substantially coinciding with the first identified raised character throughout the extent of its outline, said last identified character having opaque side walls and a translucent surface, one of said vertical side edges comprising an area substantially normal to each adjacent face and an oblique area

joining said first identified areas, said other vertical side edge having areas complementary to the areas on the first identified side edge, the areas on at least one of said vertical side edges being opaque.

2. A sign letter adapted to illumination by light passing therethrough comprising a rectangular inherently translucent plate having opposite faces, parallel vertical side edges, a raised character on one face of said plate having translucent side walls and a translucent surface, said other face having an opaque surface, a character on the other face raised therefrom to a lesser extent than and substantially coinciding with the first identified raised character throughout the extent of its outline, and having opaque side walls and a translucent surface, one of said vertical side edges comprising an opaque area at right angles to each adjacent face and an oblique opaqe area joining said first identified areas, said other vertical side edge having opaque areas complementary to the areas on the first identified side edge.

3. A sign letter adapted to illumination by light passing therethrough comprising a rectangular inherently translucent plate having opposite parallel faces, parallel vertical side edges and parallel top and bottom edges at right angles

thereto, a raised character on one face of said plate having translucent beveled side walls and a translucent surface, said other face having an opaque surface, a character on the other face raised therefrom to a lesser extent than and substantially coinciding with the first identified raised character throughout the extent of its outline, said second raised character being of greater breadth than the first identified character and having opaque beveled side walls and a translucent surface parallel to said other face, one of said vertical side edges comprising an opaque area at right angles to each adjacent face and having a breadth less than one-half the thickness of the plate and an oblique opaque area joining said first identified opaque areas, said other vertical side edge having opaque areas complementary to the areas on the first identified side edge.

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