

Aug. 1, 1939.

L. L. LAUVE, JR
ILLUMINATED SIGN

2,167,660

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Fig. 1.

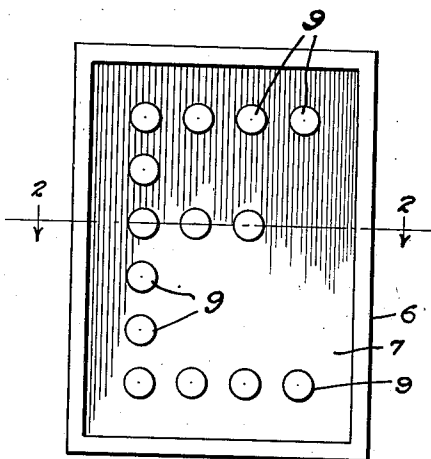


Fig. 2.

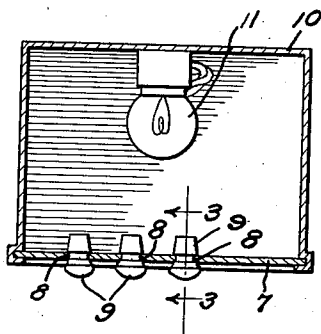


Fig. 3.

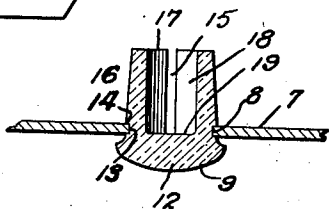


Fig. 4.

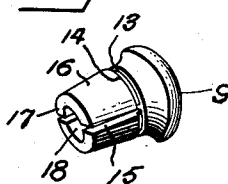
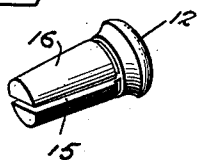


Fig. 5.



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UNITED STATES PATENT OFFICE

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ILLUMINATED SIGN

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7 Claims. (Cl. 40—133)

This invention relates to illuminating signs; and more particularly, to the light ray transmitting element adapted to fit in the front panel of the display box and adapted to transmit the light rays from a source behind the panel.

The usual illuminated sign of this type, is a box-like structure containing a source of light, and requires the light ray transmitting element be inserted from the front and secured to the rear of the sign panel. This is very objectionable in that access must be had to the box from the rear and is objectionable in that the quarters are cramped and the fastening of elements from the rear requires a great deal of time. Likewise, since a large number of the light elements are required for each sign, it is difficult to hold them in position from the front and secure them from the rear.

The principal object of my invention is to provide a light ray transmitting button that can be inserted from the front without additional securing means, and which will transmit the light rays in the most desirable manner. I have found that by making the transmitting element out of a yielding transparent or translucent composition, such as the phenolic or resinous compounds or plastics similar to those sold under the trade names "Catalin" and "Lucite", that I can eliminate any securing means on the inner surface of the light box panel, and in fact, do away with a separate fastening means altogether.

Still another object is to provide a light transmitting element of uniform size which can be inserted from the front of the sign quickly and without additional securing means which will not jar loose or be dislodged by vibration.

Other objects will be disclosed in the specification and claims forming a part of this application.

In the drawing:

Figure 1 is a front elevation of an illuminated sign box;

Figure 2 is a section taken on the line 2—2 of Figure 1;

Figure 3 is a section taken on the line 3—3 of Figure 2;

Figure 4 is a perspective of one of the light ray transmitting elements; and

Figure 5 is a modified form of one of the light ray transmitting elements.

Referring to the drawing, in which similar parts are designated by like numerals:

N numeral 6 designates a sign box having a face 7 containing openings 8 in a preconceived design to receive light ray transmitting elements or but-

tons 9. In the rear 10 of the box 6 is positioned an electric light 11, which provides a source of illumination.

The light transmitting button 9 is molded with a concavo-convexo head 12 with a groove 13 at the base of the head and a shoulder 14 adjacent said groove. A slit 15 extends through the stem 16 from the end 17 through the groove 13 to the base 19 of the head 12. Preferably the interior of the stem 16 is hollowed out to form a chamber 18 extending to the base 17 of the head 12. By forming the chamber 18, it is found that any dark spots or lines that result from forming the slit 15, is obviated.

As shown in Figure 5, the light transmitting button 9 is made the same as shown in Figure 4, except that the stem is not hollowed out to form the chamber 18. This presents a stronger construction, but under some conditions the line formed by the slit 15 appears through the head 12. This is only noticeable when viewed very closely, and under normal conditions of illumination, is not apparent. However, it has been found that by forming the chamber in the stem, this line is not visible.

As actually used, the design or lettering will be formed in the face 7 in the form of apertures, after which the box is completed with the source of illumination 11 behind the openings 8. The buttons 9 are then forced into place by extending the stems 16 into the openings 8, the stems giving sufficiently to permit the shoulders 14 to pass through the openings 8, after which the stems will expand, leaving the buttons 9 seated in the openings 8, the peripheries of the openings resting in the groove 13 of each button 9.

It has been found the light rays will be transmitted through the stems 16 of the buttons 9, and in turn illuminate the heads 12 giving the appearance of electric light bulbs. The slit 15 does not interfere with this transmission of light, except in the manner stated, and results in a great saving of time and expense through the elimination of any securing means other than the structure of the button 9.

Other and numerous variations may doubtless be devised by persons skilled in the art without departing from the principles of my invention. I, therefore, desire no limitations to be imposed on my invention, except such as are indicated in the appended claims.

What I claim is:

1. A light ray transmitting and diffusing element made of a flexible light transmitting material, comprising a convex head, a stem extend-

ing from said head having a slit extending from the outer end of said stem to a point adjacent the base of the head.

2. A light ray transmitting and diffusing element made of flexible light transmitting material comprising a convex head, a stem extending from said head having a shoulder adjacent to the base of the head, said stem having a slit extending from its outermost portion through the shoulder to the base of the head.

3. A light ray transmitting and diffusing element made of flexible light transmitting material comprising a convex head, a stem extending from said head, having a shoulder adjacent to the base of the head and a groove between said shoulder and the base of said head, said stem having a slit extending from its outermost portion through the shoulder to the groove at the base of the head.

4. A light ray transmitting and diffusing element made of a flexible light transmitting material, comprising a convex head, a stem extending from said head having a slit extending from the outer end of said stem to a point adjacent the base of the head, said stem having a chamber formed therein extending from the outer end thereof to a point adjacent the head.

5. A light ray transmitting and diffusing element made of flexible light transmitting mate-

rial comprising a head, a stem extending from said head having a shoulder adjacent to the base of the head, said stem having a slit extending from its outermost portion through the shoulder to the base of the head, said stem having a chamber formed therein extending from the outer end thereof to a point adjacent the head.

6. A light ray transmitting and diffusing element made of flexible light transmitting material comprising a convex head, a tapered stem extending from said head, having a shoulder adjacent to the base of the head and a groove between said shoulder and the base of said head, said stem having a slit extending from its outermost portion through the shoulder to the groove at the base of the head, said stem having a chamber formed therein extending from the outer end thereof to a point adjacent the head.

7. In combination with an illuminated sign panel provided with an aperture, a light ray transmitting and diffusing element made of a flexible light transmitting material comprising a head, a stem extending from said head and having a shoulder adjacent to the base of the head with a groove between said shoulder and said base, said stem having a slit extending from its outermost portion through the shoulder to the groove adjacent the base of said head.

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