Jan. 20, 1942. P. J. HOWE ET AL 2,270,301

ILLUMINATED SIGN

Filed April 26, 1938

FIG. 1

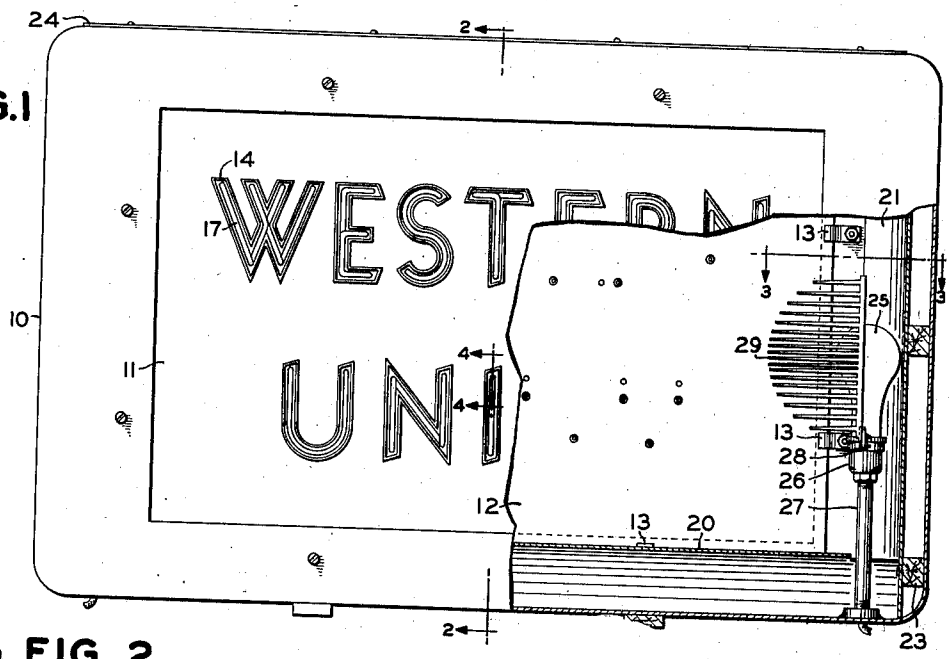


FIG. 2

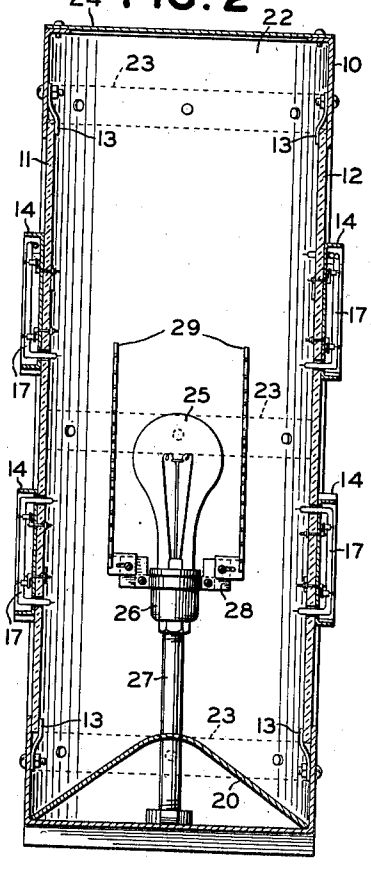


FIG. 3

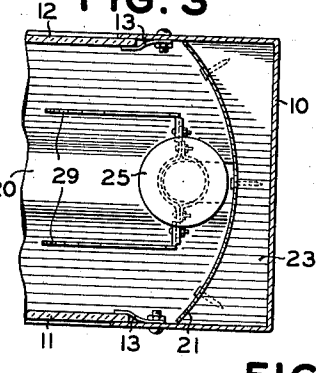


FIG. 4

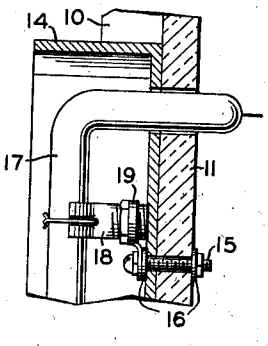
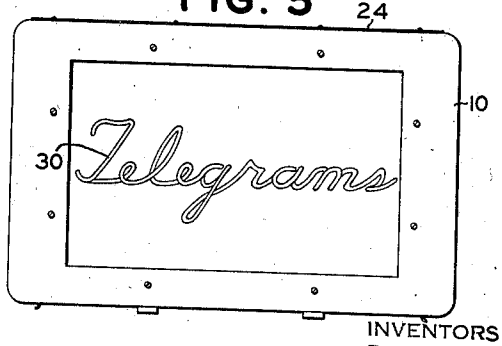


FIG. 5



INVENTORS
P. J. HOWE
C. H. WYSS JR

BY M. A. Sprague

ATTORNEY

Patented Jan. 20, 1942 2,270,301

UNITED STATES PATENT OFFICE

2,270,301

ILLUMINATED SIGN

Paul J. Howe, Ridgewood, N. J., and Clement H. Wyss, Jr., New York, N. Y., assignors to The Western Union Telegraph Company, New York, N. Y., a corporation of New York

Application April 26, 1938, Serial No. 204,280

3 Claims. (Cl. 40—132)

This invention relates to illuminated signs and particularly to signs of this class employing luminous tubes.

The major object of the present invention is to provide a sign in which the characters are delineated by luminous gaseous tubing, the background for which is uniformly illuminated.

Another object of the invention is to provide a sign in this class in which the characters and the background are of contrasting colors.

Still another object of the invention is to provide a sign in which the characters and background are displayed in blending or complementary colors and in which some degree of blending of the two colors is attained in the immediate vicinity of the sign characters.

The nature of the instant invention may be ascertained from the following description taken in conjunction with the drawing in which:

Fig. 1 is a side elevation of the sign partially cut away to illustrate some of the internal features thereof;

Fig. 2 is a transverse section of the sign taken on the line 2—2 of Fig. 1;

Fig. 3 is a partial sectional view taken on the line 3—3 of Fig. 1 and showing a portion of the interior of the sign in plan view;

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1 and illustrates the method of mounting the character forming elements on the sign panel; and

Fig. 5 is a side elevation of a second embodiment of the sign comprising the instant invention.

Having reference first to Figs. 1 to 4 inclusive, there is shown a sign having a housing 10, the sides of which are substantially open. Bounted in these openings are two translucent panels 11 and 12 which are preferably of colored glass, or of clear glass or other suitable material which has been given a coating of some nature to color it as desired. The panels are held in place by means of a plurality of clamps 13 which are secured to the housing 10 by means of bolts or any other suitable means. Mounted on the outward faces of the panels are channel members 14 which are arranged in the form of sign characters. The channels are attached to the panels by means of bolts 15 which are prevented from injuring the panels by means of rubber or other soft washers 16. Luminous tubes 17 are disposed within the recesses of the channel members 14 and are secured to saddle supports 18 which are threaded into lugs 19 clamped in position by the bolts 15. It will be noted that where this method of mounting sign characters on the panel is employed, the tubing comprising each character must have both ends disposed behind the panel. The electrodes of the various characters comprising the entire sign may be connected electrically in series or in multiple, or in any combination thereof as desired.

Extending along the lower edges of the panels is a reflecting member 20 which has a configuration such that its faces are disposed obliquely to the panels 11 and 12. At each end of the housing 10 is a unilaterally concave reflecting member 21 and 22 which are arranged in vertical positions extending along the two ends of the panels. These concave members are supported in the housing 10 by means of wooden blocks 23. The top of the sign structure is formed by a cover plate 24, the inside of which is conditioned so as to be light reflective.

Located at either end of the panels 11 and 12 are lamps 25 which constitute sources of light by which the panels may be illuminated. The lamp 25 is mounted in a socket 26 which is supported at the end of a hollow tube or pipe 27. Affixed to the socket 26 is a bracket 28 by means of which light distributing members 29 are supported in such positions that they are substantially interposed between the lamp 25 and the panels 11 and 12. These distributing members 29 are similar to those described in a copending application of Paul J. Howe and Clement H. Wyss, Jr., Serial No. 146,672, filed June 5, 1937, Patent No. 2,141,139, December 20, 1938.

The light reflecting surfaces are so characterized and disposed that light impinging upon them, either directly from the lamp 25 or as reflected light from one of the other reflecting surfaces, is redirected so that it eventually falls upon some portion of the panels 11 and 12. The function of the light distributing members 29 is to restrict the amount of direct light which otherwise would fall upon the adjacent portions of the panels in such a manner that, when used in conjunction with the aforesaid reflecting surfaces, it results in a substantially uniform illumination of the panels 11 and 12.

With the combination of elements described above, a number of effects may be obtained with the sign. For example, the panel may be illuminated in a light color while the characters delineated by means of luminous tubes are illuminated in a darker contrasting color. Because of the fact that the tubes are recessed within the channel members 14, there will be no inter-

mingling of the two colors with the result that the characters will stand out sharply defined against the illuminated background. Also, if desired, periodic switching facilities may be employed for controlling the two sources of light in order to attain other effective displays. For instance, the characters may be permanently lighted while the illumination of the background is intermittently switched on and off, or the reverse of this may be accomplished by maintaining a constantly illuminated background and having the characters intermittently illuminated. It will be seen that, with the latter arrangement, in the one case the sign will present an entirely illuminated effect and in the other case the sign characters will stand out in silhouette against an illuminated background.

Another modification of the instant invention is shown in Fig. 5. The facilities for uniformly illuminating the panels comprising the background of the sign are substantially similar to those described hereinbefore. However, in this embodiment the luminous tubes **30** comprising the sign characters are mounted directly upon the panels without utilizing channels. It will be apparent that, while deficient in some respects to the sign previously described, the present embodiment affords other effects not possible or obtainable with the above described modification. Where both the background and the characters are illuminated, there will be no sharp line of definition between the characters and the background. However, by suitably choosing the colors employed for lighting these two portions of the sign, very pleasing results may be obtained. For example, if the colors utilized are so-called complementary colors such as where blue characters are displayed on a yellow background, the portion of the sign immediately surrounding the sign characters will be illuminated in a third color. In the example just cited, this third color, or course will be green. Obviously, such an arrangement lends itself to a wide variety of combinations, all of which may be obtained without departing from the true spirit of the present invention. It is desired that all equivalent structures and obvious modifications of the above described invention be embraced therein and the invention be limited only by the prior art and by the specific limitations embodied in the appended claims.

What is claimed is:

1. An illuminated sign comprising two translucent panels arranged in spaced relation, a plurality of luminous tubes positioned on the outwardly facing surfaces of said panels and arranged to delineate sign characters, and means for uniformly illuminating said panels, said means comprising a plurality of reflecting surfaces disposed intermediate said panels and including a pair of inwardly facing unilaterally concave members disposed adjacent to a pair of opposite edges of said panels, a ridged member and a plane member disposed adjacent to another pair of opposite edges of said panels, a plurality of sources of light located intermediate said panels adjacent said concave members, and serrated light distributing members interposed between said light sources and said panels.

2. An illuminated sign comprising two translucent colored panels arranged in spaced relation, a plurality of channel members affixed to the outwardly facing surfaces of said panels and delineating sign characters, a plurality of luminous tubes arranged within the confines of said channel members, and means for uniformly illuminating said panels, said means comprising a plurality of reflecting surfaces disposed intermediate said panels adjacent the edges thereof, said reflecting surfaces including a plane member arranged perpendicularly to said panels, a two-faced member arranged obliquely to said panels and a pair of unilaterally concave members, a plurality of sources of light disposed adjacent said concave members and serrated light distributing members interposed between said sources of light and said panels.

3. An illuminated sign comprising a plurality of translucent panels arranged concentrically, a plurality of luminous tubes affixed to the outward surfaces of said panels and arranged to delineate sign characters, and means for uniformly illuminating said panels, said means comprising a plurality of reflecting surfaces including unilaterally concave members disposed adjacent intersecting edges of said panels, a multifaced oblique member disposed adjacent corresponding spaced edges of said panels, and a plane member disposed adjacent the opposite spaced edges of said panels, a plurality of sources of light located adjacent said concave reflecting members and serrated light distributing members interposed between said sources of light and said panels.

PAUL J. HOWE.
CLEMENT H. WYSS, JR.