Dec. 29, 1942. E. WAGNER 2,306,511

DISPLAY STRUCTURE

Filed May 3, 1941 2 Sheets-Sheet 1

Fig. 1.

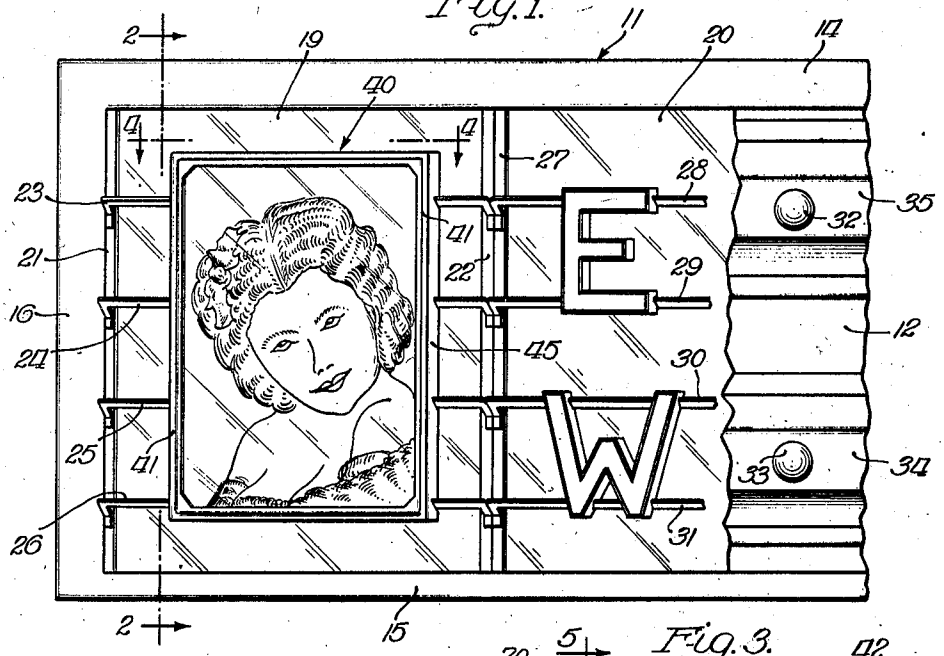


Fig. 2.

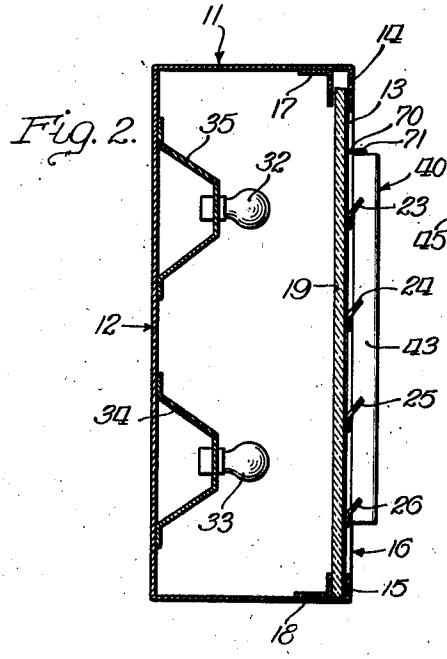
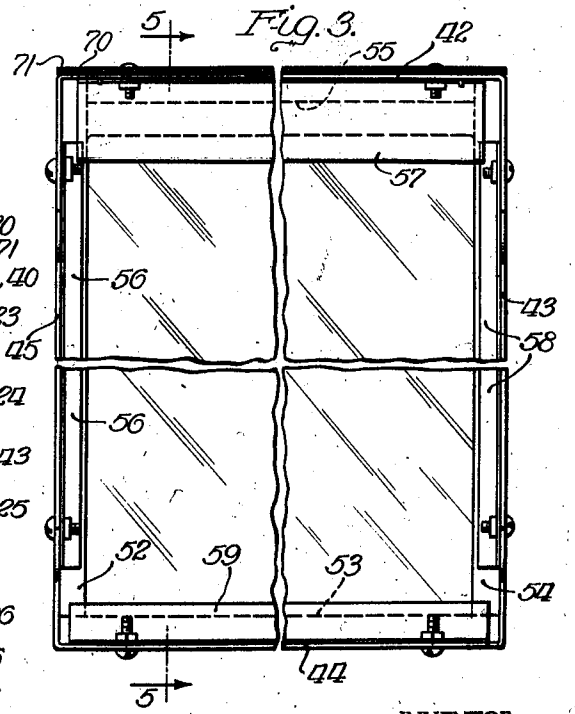


Fig. 3.



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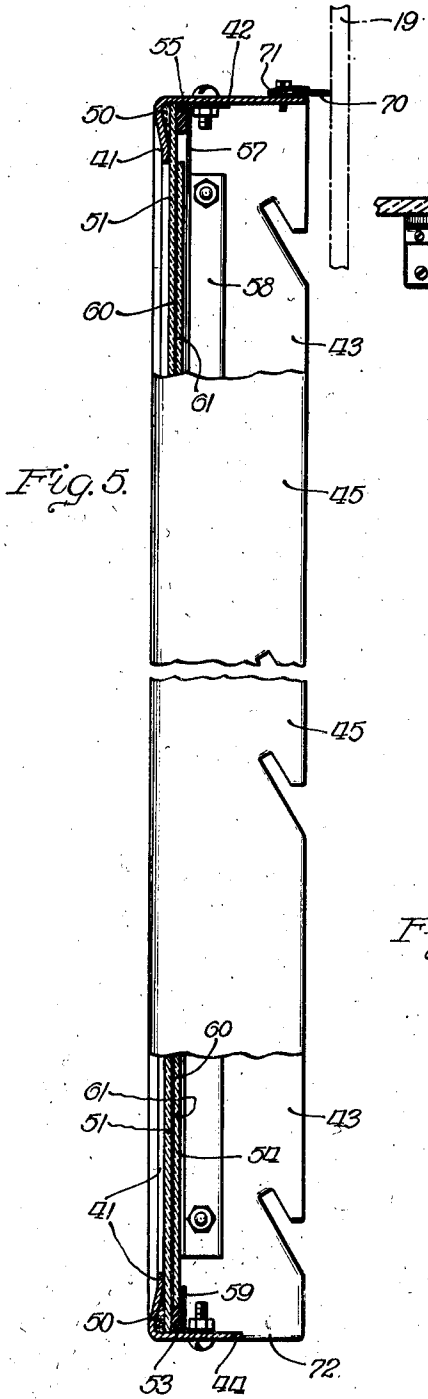


Fig. 5.

Fig. 4.

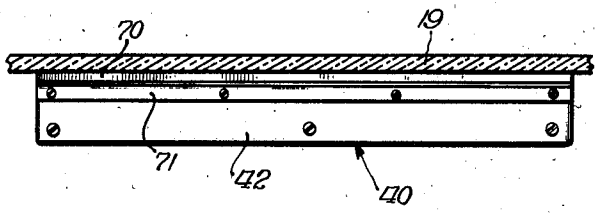


Fig. 6.

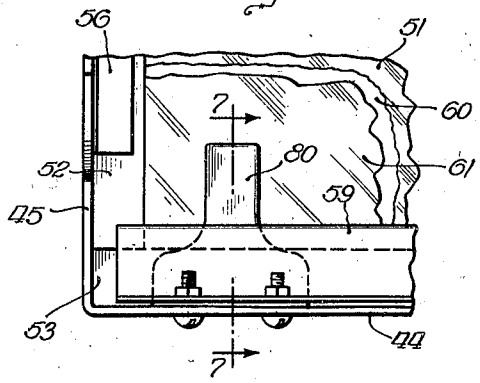
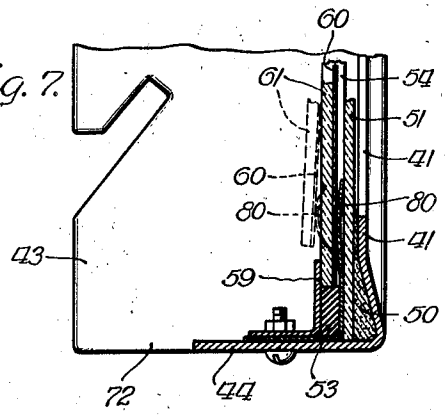


Fig. 7.



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UNITED STATES PATENT OFFICE

2,306,511

DISPLAY STRUCTURE

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Application May 3, 1941, Serial No. 391,768

11 Claims. (Cl. 40—132)

This invention relates to display signs and structures, and may be considered an improvement on the structure disclosed in the co-pending application, Ser. No. 375,938, filed January 25, 1941.

The sign in which the invention can be used may be of the general character shown, for example, in the U. S. Patents 2,038,978, 2,048,040 and 2,119,430. Such a sign comprises an interiorly illuminated box having a side opening which is closed by a translucent panel. The panel may be made of glass and may be in one piece or in several sections, depending on the over-all size of the sign. In front of the panel are provided horizontally extending supporting members for receiving sign letters or characters, or, generally stated, the objects for display which are then visible, forming the desired message in silhouette against the background of the display panel in daylight and also in the dark when the panel is illuminated.

The previously mentioned co-pending application is concerned with a device for supporting on such a sign a pictorial transparency and utilizing the illumination of the display panel for illuminating the transparency. The term "pictorial transparency" denotes a sign made of paper or other suitable material which is transparent or translucent, and is either pictorial or descriptive, conveying a certain message. Such transparencies are furnished, for example, by producers of motion pictures and illustrate certain actors of a play or certain scenes from a play. In the general use of the invention this particular phase does not play any material part; such transparencies may also be used in fields entirely different from the theater field, which is mentioned merely as an illustration because many such signs are used as marquee signs in front of motion picture houses. The co-pending application covers a device for displaying such transparencies on signs carrying a descriptive or informative message of which the transparency is made a novel part.

The structure of the copending application comprises a frame having a backwardly extending flange which is provided with means, for example, notches, for engagement with the supporting members on the sign. The transparency is put between two members, for example, glass panes, forming a unitary assemblage therewith. The frame is provided on its inside with holding members for inserting such assemblage. The copending application may be referred to for details of this previous structure.

The principal object of the present invention resides in furnishing an improved structure for mounting and displaying such a transparency or the like. Several distinct improvements are included in the new invention: 1st—the frame is provided with a translucent or transparent front panel made, for example, of glass, which forms a substantially permanent structure therewith; 2nd—marginal holding or retaining members are provided on the frame in back thereof, and therefore in back of the permanently mounted front pane; 3rd—the new structure carries improved means for preventing seepage of moisture into the interior of the frame, thus protecting the transparency mounted therein; 4th—the frame is so constructed as to provide means for draining moisture from the bottom thereof; 5th—the new structure is provided with means for facilitating the insertion and also the removal of the transparency.

The above intimated objects and features, and additional objects not yet mentioned, will appear from the detailed description rendered below with reference to the accompanying drawings. In these drawings:

Fig. 1 shows a partial front view of a sign with several parts broken away in order to illustrate details;

Fig. 2 represents a cross-section along lines 2—2 in Fig. 1;

Fig. 3 shows an embodiment of the present invention, namely, the device for mounting the transparency as seen from the rear;

Fig. 4 is a cross-section along lines 4—4 of the sign shown in Fig. 1, illustrating a top view of the new transparency mounting device;

Fig. 5 is a section, on an enlarged scale, of the structure shown in Fig. 3 along lines 5—5;

Fig. 6 shows one corner of the new frame for supporting the transparency; and

Fig. 7 is a section taken through the assemblage shown in Fig. 6 along lines 7—7.

Like parts are indicated by like reference numerals throughout the drawings. Structural elements and details which may be assumed to be well known will be described only to an extent required for supporting the understanding of the invention.

Referring now to the drawings, particularly to Figs. 1, 2 and 4, numeral 11 indicates a sign box having a back wall 12 and a frontal opening 13 (see Fig. 2) defined by marginal ledges of the box such as noted at 14, 15 and 16. Brackets such as noted in Fig. 2 at 17 and 18 form with the corresponding ledges channels in the forward por-

tion of the sign box for holding a translucent or transparent display panel 19. The sign may be provided with one or with several display panels, depending on the over-all size thereof. In the example shown in Fig. 1 there is indicated at 20 part of a second display panel. The first panel 19 is mounted in a frame comprising the upright members 21 and 22 which are interconnected by the horizontally extending supporting members or carriers indicated at 23, 24, 25 and 26. The second display panel 20 (and each additional display panel that may be provided on the sign) is equipped with similar uprights such as 27 at one end and a like upright at the other end, these uprights being interconnected by means of horizontally disposed supporting members such as 28, 29, 30 and 31. Letters such as shown in Fig. 1 at "E" and "W" may be disposed on the horizontal supporting members extending in alignment in front of the display panel or panels of the sign. The display panel or panels are illuminated from light sources such as indicated at 32 and 33, which are mounted on brackets 34 and 35. The structure so far described is known, and details thereof which are not specifically covered herein are disclosed in the previously mentioned U. S. patents.

The new device for supporting the transparency is generally indicated at 40. It comprises a frame having a frontal marginal ledge 41 provided with flanges 42, 43, 44 and 45 extending rearwardly therefrom. These flanges carry means, for example, notches, as shown, for engagement with the horizontally disposed supporting members on the sign. Different supporting means may be provided if desired or necessary, in accordance with the specific sign structure in which the new device is to be used. The frontal ledge 41 slopes downwardly and inwardly, as may be best seen in Figs. 5 and 7, forming a marginally extending interiorly disposed pocket. Adhesive 50 is disposed in this pocket for cementing to the back of the ledge 41 a transparent or translucent frontal pane 51 in relatively permanent engagement with the frame. This front pane 51 thus covers and closes the display opening of the device formed by the ledge 41 and constitutes one of the means for preventing seepage of moisture into the interior of the frame.

A strip of resilient material such as rubber is positioned within the frame near the inside edges thereof and in marginal contact with the rear surface of the front pane 51, forming in the frame, as it were, a shallow well. The four sides or sections of the strip are indicated in Fig. 3 at 52, 53, 54 and 55. This strip may be made of one piece or of several sections, as desired or necessary. The strip or strip sections 52–55, inclusive, are held in position against the rear surface of the display pane 51 by means of angular sheet members 56, 57, 58 and 59. These angular members are shown attached to the flange or flanges of the structure by means of screws and nuts; if desired, they may be welded or riveted to the inside of the frame; or they may be attached in any other convenient and approved manner.

The angular members 56 and 58 may be narrower than the resilient strip sections 52 and 54 as shown in Fig. 3. The angular strip 59 may be somewhat wider so as to project above the underlying resilient strip section 53 and to form a bottom channel with the frontal pane 51, as is particularly apparent from Figs. 5 and 7. The angular member 57 may be made still wider in order to form with the frontal pane 51 a deeper top channel, as shown in Fig. 5, for insertion of the transparency and the protective rear pane 61 in a manner to be presently explained. The top and bottom of the rear of the protective pane 61 are in mounted position of the pane immediately in back of the angular members 57 and 59, as is apparent from Fig. 5. These members do not necessarily bear against the protective pane; they form top and bottom channels in which the pane is removably held. The width of the channels formed by the angular members 57 and 59 may correspond approximately to the thickness of the protective panel 61 added to the thickness of the transparency. All these angular members may be secured in place before the transparency and the pane 61 are placed in the frame.

The transparency 60 and the protective rear panel 61 are inserted into the device as follows: They are held together and the upper edge of the assemblage is pushed into the upper channel formed by the frontal pane 51, the upper rubber strip 55, and the overlapping holder member 57. The lower end of the transparency and the protective pane is then pressed down against the front display pane or panel 51, and is allowed to drop into the bottom channel formed by the front display pane, the rubber strip or section 53 and the holder member 59. The inside edges of the rubber strip or strips forming the walls of the well are on all sides in close proximity to the edges of the protective rear panel 61 and the transparency 60, the assemblage of the transparency and the rear panel fitting snugly into this well. The resilient marginal strips (sections 52, 53, 54, 55) thus form additional means for preventing seepage of moisture in between the two transparent panels 51 and 61, the first panel 51 being stationary and the second panel 61 being removable with the transparency.

As an added protection against the seepage of moisture into the interior of the supporting device, I have provided a strip 70 made of resilient material, for example, rubber, secured to the top section 42 of the flange by means of a suitable holder 71 in such a manner that the edge of this strip 70 is in contact with the surface of the display panel or panels of the sign, for example, panel 19, in front of which the transparency is mounted. The bottom section 44 of the flange is cut away, leaving a space 72, particularly as shown in Figs. 5 and 7, so as to facilitate the drainage of moisture downwardly from the interior of the device.

The device has been subjected to exhaustive tests, simulating and even exceeding weather conditions that may be encountered in practice. Water was sprayed on the device from fire hose for a considerable time and from every conceivable angle of approach. It was found that moisture did not enter into the transparency and did not affect the transparency.

In order to facilitate the exchange and removal of a transparency, I have provided means, e. g., a thin leaf spring or springs such as indicated in Figs. 6 and 7 at 80, the spring consisting of a simple angular member which is inserted between the frontal display panel 51 and the resilient strip 53, and may be held in position by means of the bracket 59. When the transparency with its protective rear panel is inserted and is in display position, the leaf spring or springs 80 will be pressed down and will assume the position shown in full lines in Fig. 7. However, when the assemblage comprising the pro-

tective rear pane and the transparency is lifted from the lower mounting channel into the dotted position shown in Fig. 7, the spring or springs 80 exert an outward pressure and tend to force the protective rear pane and the transparency out into the dotted position shown in this figure. The transparency and the protective rear pane can now be easily removed from the device. The leaf spring or springs may be disposed and positioned so as to be completely in back of the frontal ledge of the device.

The drawings show certain parts somewhat distorted as to relative size and placement so as to emphasize new details. The structure shown in the drawings, therefore, should be considered merely in the nature of an example to be interpreted and used with such sensible latitude as appears from the scope and spirit of the entire disclosure.

The accompanying claims define what is believed to be new and desired to have protected by Letters Patent of the United States.

I claim:

1. A device for supporting a pictorial transparency and for protecting it against moisture, comprising a relatively rigid frame forming a marginal frontal ledge defining a display opening, a peripheral flange rearwardly projecting from said ledge forming mounting members for said frame, a transparent pane substantially permanently secured to said ledge within the frame in back of said opening, a strip-like resilient material disposed within said frame in marginal engagement with the rear surface of the pane secured therein and forming a shallow marginal well therewith, and holder means in said frame secured to said peripheral flange at the inside thereof and extending marginally in parallel with but spaced from said pane for holding said strip-like resilient material, said holding means forming with the rear surface of said pane a pair of oppositely disposed marginal channels for removably receiving said transparency for display in back of said pane in peripherally substantially moistureproof engagement with said resilient strip-like material.

2. The device and structure defined in claim 1, together with means secured to said flange at the top of said frame for preventing seepage of moisture thereinto.

3. The device and structure defined in claim 1, wherein said flange forms a cutout at the bottom of said frame to facilitate draining of moisture therefrom, together with means secured to the flange at the top of said frame for preventing seepage of moisture thereinto.

4. The device and structure defined in claim 1, together with means coacting with one of said holder means tending to lift said transparency from said frame.

5. The device and structure defined in claim 1, wherein said frontal ledge forms a marginally extending pocket, and an adhesive disposed in said pocket for securing said pane to said ledge in substantially permanent engagement therewith.

6. The device and structure defined in claim 1, together with a transparent pane disposed in back of said transparency and held therewith by said holder means.

7. The device and structure defined in claim 1, together with a transparent pane disposed in back of said transparency and held therewith by said holder means, said strip of resilient material being disposed around and in close proximity to the edges of said last noted pane and said transparency.

8. In an outdoor changeable letter sign comprising background elements in the nature of vertically disposed illuminated translucent panels and spaced-apart letter supporting members extending horizontally across and in front of such panels, a device for supporting in front of such panels a pictorial transparency and for protecting it against moisture comprising a frame, a marginal frontal ledge extending in a plane substantially in parallel with the plane of said panels and defining a frontal display opening, a flange extending around and projecting rearwardly from said frontal ledge for detachably and adjustably mounting said frame with the rear edges of said flange upon and in juxtaposition to said horizontally extending supporting members of said sign background, a transparent pane substantially permanently secured to said ledge within the frame in back of the display opening thereof to bar frontal ingress of moisture thereinto, a strip of resilient material disposed within said frame in marginal engagement with the pane secured therein and forming therewith a shallow well for receiving said transparency in edgewise substantially moistureproof engagement therewith, a protective pane disposed in said well in back of said transparency to bar ingress of moisture from the rear, the edges of said protective pane being disposed in close proximity to the strip of resilient material forming the walls of said well, and holder means overlapping said resilient strip for removably holding said protective pane and said transparency in said well.

9. The combination and structure defined in claim 8, together with means for protecting the interior of said frame against seepage of moisture thereinto, comprising a strip of resilient material extending from said flange at the top of the frame for resilient engagement with the surface of the display panel of said sign.

10. The combination and structure defined in claim 8, together with means for protecting the interior of said frame against seepage of moisture thereinto, comprising a strip of resilient material extending from said flange at the top of the frame for resilient engagement with the surface of the display panel of said sign, and a cutout formed in said flange at the bottom of said frame for facilitating drainage of moisture therefrom.

11. The combination and structure defined in claim 8, together with spring means disposed at the bottom of said well tending to lift said transparency and said protective panel therefrom.

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