June 21, 1960 K. G. McKIERNAN 2,941,323

DISPLAY SIGN

Filed Nov. 9, 1956 2 Sheets-Sheet 1

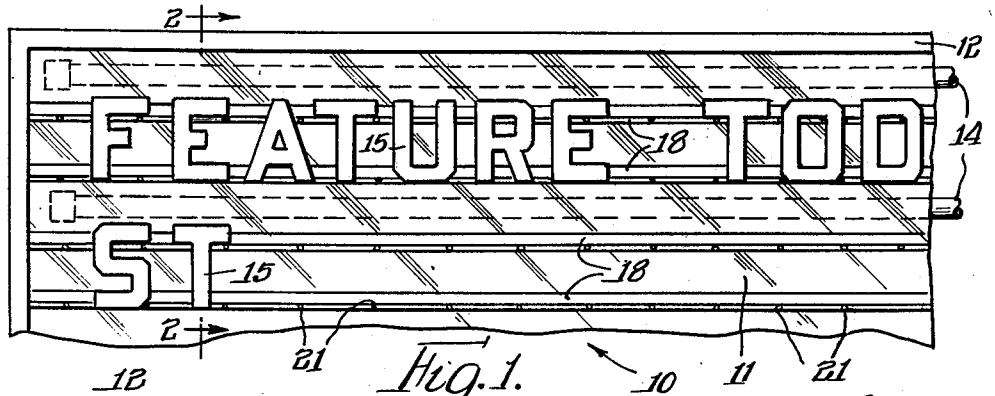


Fig. 1.

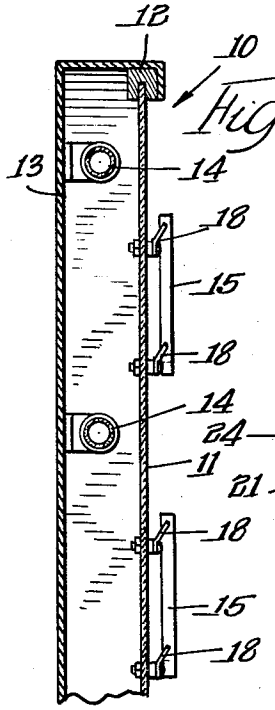


Fig. 2.

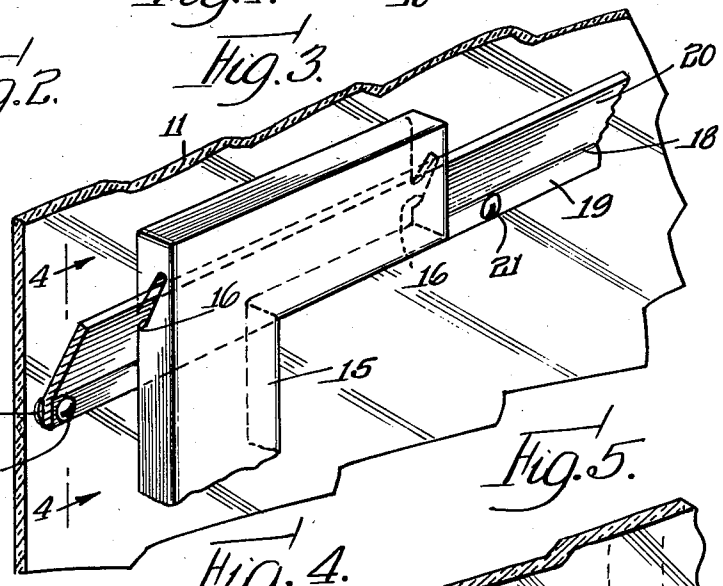
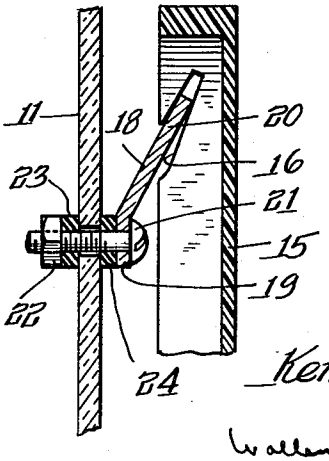


Fig. 3.

Fig. 4.



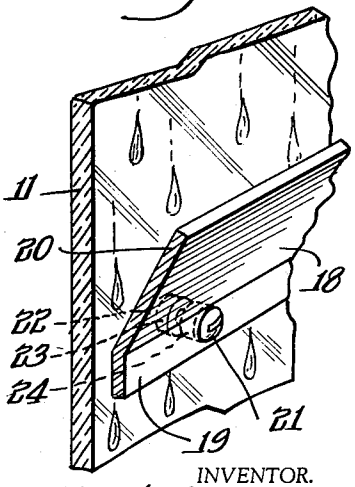


Fig. 5.

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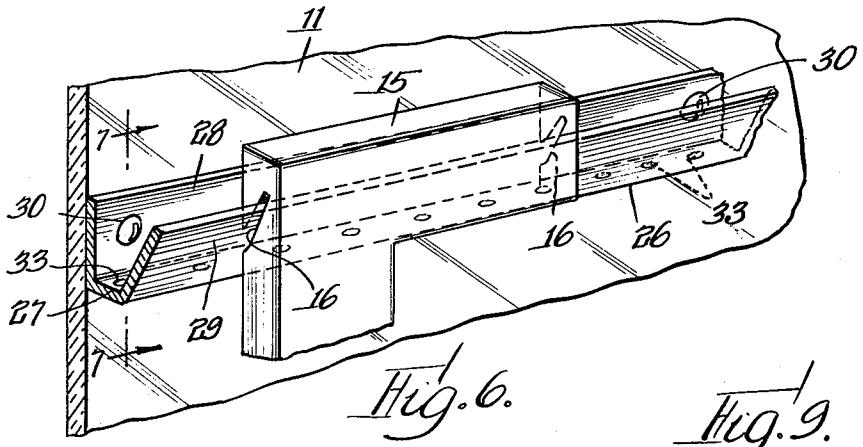


Fig. 6.

Fig. 9.

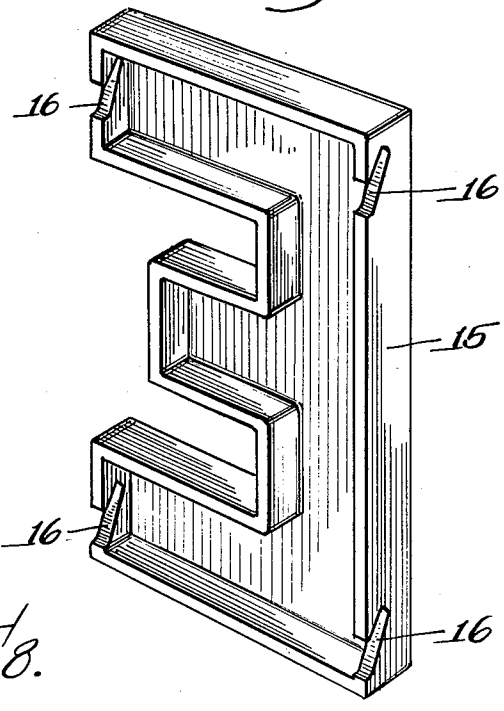


Fig. 7.

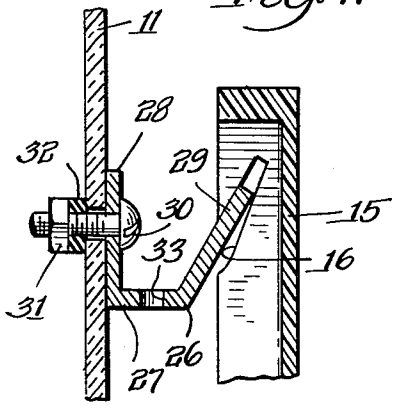
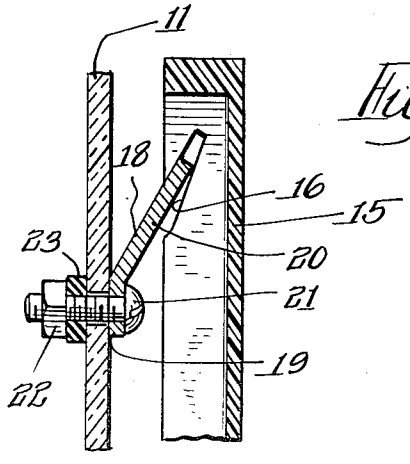


Fig. 8.



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DISPLAY SIGN

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3 Claims. (Cl. 40—132)

This invention is directed to a type of display sign having an upright translucent panel, illuminating means at the rear side of the translucent panel for illuminating the same, and a plurality of display characters having diagonally arranged slots in the rear faces thereof for removable mounting to the front side of the translucent panel.

In the past, the upright translucent panel of such a display sign has been made up from a series of translucent panel sections held in a frame and separated by vertically extending frame members so that the upright translucent panel is interrupted throughout its length and does not provide for uniform illumination throughout its length. Also, such display signs have mounting bars for supporting the display characters which extend only for the length of the panel sections and which are provided at their ends with mounting ears for securing the same to the vertically extending frame members. As a result, there is considerable flexing of the supporting bars so that the display characters are not firmly held and also the mounting ears often interfere with desired placement of the display characters along the display sign.

The principal object of this invention is to provide an improved display sign of the aforementioned type wherein the difficulties and deficiencies encountered in the past in such signs are eliminated, wherein the translucent panel is substantially uninterrupted throughout its length so as to be substantially uniformly illuminated therealong, wherein the display characters are firmly mounted on the front of the panel, and wherein the display characters may have any desired placement along the display sign.

Briefly, the display sign of this invention, in addition to having a translucent panel which is substantially uninterrupted throughout its length, also includes a plurality of mounting strips horizontally arranged in spaced apart relation along the front side of the translucent panel and extending substantially throughout the length thereof, each of said mounting strips being of uniform cross-sectional configuration throughout its length and having a vertically extending attaching flange and an upwardly and outwardly extending mounting flange for receiving throughout its entire length the diagonally arranged slots of the display characters for removably mounting the same thereon at any desired position along the length of the translucent panel. The vertically extending attaching flanges of the mounting strips, have a plurality of spaced apart holes throughout the lengths thereof which register with spaced apart holes in the translucent panel, and screws extending through the registering holes and associated nuts operate to attach directly the supporting strips to the translucent panel at a plurality of spaced apart points in a firm and solid manner and without flexing of the mounting strips.

Other objects of this invention reside in the details of construction of the display sign and in the co-operative relationships between the component parts thereof.

Further objects of this invention will become apparent

to those skilled in the art upon reference to the accompanying specification, claims and drawings in which:

Fig. 1 is a partial front view of the display sign of this invention;

Fig. 2 is a vertical sectional view through the display sign taken substantially along the line 2—2 of Fig. 1;

Fig. 3 is an enlarged perspective view of a portion of the display sign illustrated in Figs. 1 and 2;

Fig. 4 is an enlarged sectional view taken substantially along the line 4—4 of Fig. 3;

Fig. 5 is a perspective view similar to Fig. 3, but illustrating the manner in which water and the like is drained;

Fig. 6 is a perspective view similar to Fig. 3, but illustrating another form of the display sign of this invention;

Fig. 7 is an enlarged sectional view taken substantially along the line 7—7 of Fig. 6;

Fig. 8 is an enlarged sectional view similar to Figs. 4 and 7 but illustrating another form of the display sign of this invention;

Fig. 9 is a perspective view looking from the rear of a display character utilized in the display signs of this invention.

Referring first to Figs. 1 to 5, one form of the display sign of this invention is generally designated at **10**. It includes an upright translucent panel **11** formed of glass or light-transmitting synthetic plastic or the like. This panel **11** preferably extends throughout the length of the display sign and it is contained within a suitable marginal frame **12** carried by the sign housing **13**. Within the housing **13** are a plurality of illuminating means such as fluorescent lamps **14** or the like which are arranged at the rear side of the translucent panel **11** for illuminating the same. Because the translucent panel **11** is substantially uninterrupted throughout its length, it is substantially uniformly illuminated therealong by the illuminating means **14**. The display sign also includes a plurality of display characters **15** which may be formed from any suitable material such as a light-transmitting synthetic plastic or the like. The display characters are preferably molded and are provided with a front face and with a rear face having rearwardly extending flanges as illustrated more clearly in Fig. 9. The rearwardly extending flanges of the display characters **15** are provided with diagonally arranged slots **16** which extend upwardly and outwardly as illustrated. These diagonally arranged slots **16** are utilized for removably mounting the display characters **15** to the front side of the translucent panel **11**.

A plurality of mounting strips **18** are horizontally arranged in spaced apart relation along the front side of the translucent panel **11** and these mounting strips extend substantially throughout the length of the translucent panel. The mounting strips **18** are arranged in pairs and are spaced apart to correspond to the spacing between the diagonally arranged slots **16** in the display characters **15**. Each of these mounting strips **18** is of uniform cross-sectional configuration throughout its length and thus the mounting strips may be inexpensively manufactured by rolling, extrusion process or the like. They may be formed of suitable material such as aluminum, magnesium alloys or the like. They also may be formed from light-transmitting synthetic plastic materials so as to provide the least amount of light interruption along the translucent panel. Each mounting strip **18** has a vertically extending attaching flange **19**, extending downwardly as illustrated in Figs. 1 to 5 and an upwardly and outwardly extending mounting flange **20**, the upwardly and outwardly extending mounting flange being adapted to receive throughout its entire length the diagonally arranged slots **16** of the display characters **15** for removably

mounting the same thereon at any desired positions along the length of the translucent panel **11**.

The vertically downwardly extending attaching flanges **19** of the mounting strips **18** are provided with a plurality of spaced-apart holes throughout the lengths thereof which register with spaced-apart holes arranged in the translucent panel **11**. Screws **21** extend through these registering holes, and nuts **22** carried by the screws **21** operate to secure the mounting strips **18** firmly to the translucent panel **11**. Resilient fiber washers **23** are arranged between the nuts **22** and the rear side of the translucent panel **11** so as to distribute the securing forces and prevent breakage of the translucent panel **11**. For outdoor display work resilient fiber washers **24** are also preferably arranged between the front side of the translucent panel **11** and the flanges **19** of the mounting strips **18** for spacing the mounting strips **18** from the front of the translucent panel **11**. This provides for drainage of water and the like from behind the mounting strips **18**, as shown in Fig. 5. Since the mounting strips **18** are of uniform cross-sectional configuration throughout their lengths, and are secured at spaced-apart points to the translucent panel **11**, the mounting strips **18** are firmly held in place on the panel **11** and are not subject to vibration or bending or flexing. As a result, the display characters **15** may be firmly mounted on the mounting strips **18** and because there is no obstruction along the lengths of the mounting strips **18**, the display characters **15** may be placed at any desired position therealong.

The display sign illustrated in Fig. 8 is particularly adaptable for indoor display work, and is very much like the display sign of Figs. 1 to 5 and, therefore, like reference characters have been utilized for like parts. In Fig. 8, however, the washers **24** between the flanges **19** of the mounting strips **18** and the front face of the translucent panel **11** are eliminated inasmuch as there is no need for drainage of water and the like. Also, the cross-sectional dimensions of the mounting strips may be somewhat less for indoor use than for outdoor use since the requirements to be met are not as rugged in the former as in the latter. In Fig. 8 the vertically downwardly extending flanges **19** of the mounting strips **18** engage the front face of the translucent panel **11** throughout its entire length and, therefore, provide for more even distribution of any stress loads along the panel.

Referring now to Figs. 6 and 7, a different type of mounting strip is utilized. Here the mounting strips are designated at **26** and they are each of generally channel-shaped cross-sectional configuration throughout their entire length. These substantially channel-shaped mounting strips **26** may be formed of the same kind of materials described above in connection with the mounting strips **18**. The mounting strips **26** have a substantially horizontal web **27**, a vertically upwardly extending attaching flange **28** and an upwardly and outwardly extending mounting flange **29** which is adapted to receive the diagonally-arranged slots **16** of the display characters **15**. The upwardly vertically extending attaching flanges **28** are provided with a plurality of spaced-apart holes extending throughout the length thereof, which register with a plurality of spaced-apart holes arranged in the translucent panel **11**. Screws **30** extend through the registering holes and the attaching flange **28** is drawn against the front face of the translucent panel **11** by nuts **31** cooperating with the screws **30**. Here, also, resilient fiber washers **32** are preferably arranged between the nuts **31** and the rear side of the translucent panel **11** for distributing stress loads. The substantially horizontal web portions **27** of the mounting strips **26** are preferably provided with a plurality of spaced apart holes **33** for drainage of water and the like when the sign is utilized for outdoor display purposes. One advantage of the mounting strips **26** of Figs. 6 and 7 over the mounting strips **18** of Figs. 1 to 5, is that they are of lesser height, the attaching flange **28** extending upwardly rather than downwardly as the attaching flange **19** of the mounting strips **18**. Since the height may thus be less, the mounting strips **26** provide less interruption of light transmission through the translucent panel **11**.

While for purposes of illustration, several forms of the display sign of this invention have been disclosed, other forms thereof may become apparent to those skilled in the art upon reference to this disclosure and, therefore, this invention is to be limited only by the scope of the appended claims.

I claim as my invention:

1. In a display sign having an upright translucent panel, illuminating means at the rear side of the translucent panel for illuminating the same, and a plurality of display characters having diagonally arranged slots in the rear faces thereof for removable mounting to the front side of the translucent panel, the improvement comprising, said translucent panel being flat and substantially uninterrupted throughout its length so as to be substantially uniformly illuminated therealong, a plurality of mounting strips horizontally arranged in vertically spaced apart relation along the front side of the translucent panel and exposing the translucent panel therebetween and extending substantially throughout the length of the translucent panel, each of said mounting strips being of uniform cross-sectional configuration throughout its length and having a vertically extending attaching flange and an upwardly and outwardly extending mounting flange for receiving throughout its entire length the diagonally arranged slots of the display characters for removably mounting the same thereon at any desired positions along the length of the translucent panel, the vertically extending attaching flanges of the mounting strips having a plurality of spaced apart holes throughout the lengths thereof which register with spaced apart holes in the translucent panel, and screws extending through the registering holes in the attaching flanges of the mounting strips and the translucent panel and associated nuts attaching the mounting strips at a plurality of spaced apart points directly to the translucent panel without interfering with desired placement of display characters along the mounting strips.

2. In a display sign having an upright translucent panel, illuminating means at the rear side of the translucent panel for illuminating the same, and a plurality of display characters having diagonally arranged slots in the rear faces thereof for removable mounting to the front side of the translucent panel, the improvement comprising, said translucent panel being substantially flat and substantially uninterrupted throughout its length so as to be substantially uniformly illuminated therealong, a plurality of mounting strips horizontally arranged in spaced apart relation along the front side of the translucent panel and extending substantially throughout the length thereof, each of said mounting strips being of uniform substantially channel-shaped cross-sectional configuration throughout its length and having a substantially horizontal web, a vertically upwardly extending attaching flange and an upwardly and outwardly extending mounting flange for receiving throughout its entire length the diagonally arranged slots of the display characters for removably mounting the same thereon at any desired positions along the length of the translucent panel, the vertically extending attaching flanges of the mounting strips having a plurality of spaced apart holes throughout the lengths thereof which register with spaced apart holes in the translucent panel, and screws extending through the registering holes in the attaching flanges of the mounting strips and the translucent panel and associated nuts attaching the mounting strips at a plurality of spaced apart points directly to the translucent panel without interfering with desired placement of display characters along the mounting strips.

3. In a display sign having an upright translucent panel, illuminating means at the rear side of the translu-

cent panel for illuminating the same, and a plurality of display characters having diagonally arranged slots in the rear faces thereof for removable mounting to the front side of the translucent panel, the improvement comprising, said translucent panel being substantially flat and substantially uninterrupted throughout its length so as to be substantially uniformly illuminated therealong, a plurality of mounting strips horizontally arranged in spaced apart relation along the front side of the translucent panel and extending substantially throughout the length thereof, each of said mounting strips being of uniform substantially channel-shaped cross-sectional configuration throughout its length and having a substantially horizontal web, a vertically upwardly extending attaching flange and an upwardly and outwardly extending mounting flange for receiving throughout its entire length the diagonally arranged slots of the display characters for removably mounting the same thereon at any desired positions along the length of the translucent panel, the vertically extending attaching flanges of the mounting strips having a plurality of spaced apart holes throughout the lengths thereof which register with spaced apart holes

in the translucent panel, and screws extending through the registering holes in the attaching flanges of the mounting strips and the translucent panel and associated nuts attaching the mounting strips at a plurality of spaced apart points directly to the translucent panel without interfering with desired placement of display characters along the mounting strips, and a plurality of spaced apart holes in the substantially horizontal webs of the mounting strips to provide for drainage of water and the like.

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