

[54] **SIGN BOX WITH CLOSURE**

[76] Inventor: **Johann Stilling**, 1141 Royal York Rd., Apt. A1001, Islington, Ontario, Canada M9A 4A9

[22] Filed: **July 9, 1973**

[21] Appl. No.: **377,236**

**Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 285,206, Aug. 31, 1972, abandoned.

[52] U.S. Cl. .... **40/132 R**, 16/171, 16/191, 220/31 R

[51] Int. Cl. .... **G09f 13/04**

[58] Field of Search ..... 40/132 R, 130 R; 16/171, 16/172; 220/31 R, 31 S, 31 SR, 32

[56] **References Cited**

**UNITED STATES PATENTS**

|           |        |                    |          |
|-----------|--------|--------------------|----------|
| 2,990,571 | 7/1961 | Buchholtz .....    | 16/171   |
| 2,990,572 | 7/1961 | Schwartzberg ..... | 16/191   |
| 3,191,219 | 6/1965 | Vagi .....         | 16/171   |
| 3,235,989 | 2/1966 | Brooks .....       | 40/130 R |
| 3,255,541 | 6/1966 | Bettcher .....     | 16/171 X |

**FOREIGN PATENTS OR APPLICATIONS**

|         |        |              |          |
|---------|--------|--------------|----------|
| 750,111 | 1/1967 | Canada ..... | 40/132 R |
| 909,506 | 9/1972 | Canada ..... | 40/132 R |

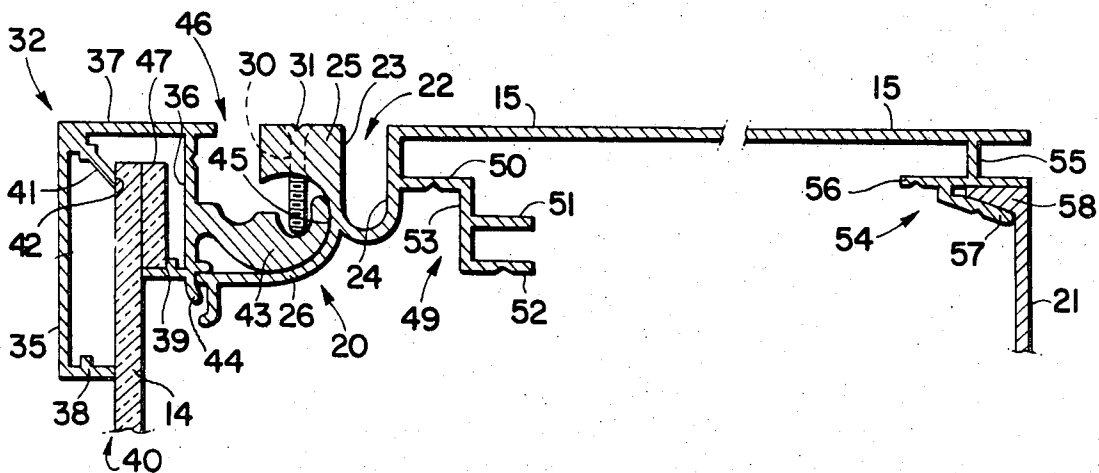
*Primary Examiner*—Robert W. Michell

*Assistant Examiner*—John F. Pitrelli

[57] **ABSTRACT**

A sign box for construction of an illuminated sign in which the box has a top and bottom and two sides all of which are formed out of extruded metallic material of identical cross section, and having a removable front panel also having a top and bottom and two sides of extruded metal of identical cross section, the box and the front panel having complimentary mating formations formed thereon extending around all four sides of the box and panel which interengage and locate the panel with respect to the box. The box and front panel also incorporate sealing means which contact one another and provide a good weathertight seal. Releasable securing means are provided for securing the front panel to the box.

**24 Claims, 5 Drawing Figures**



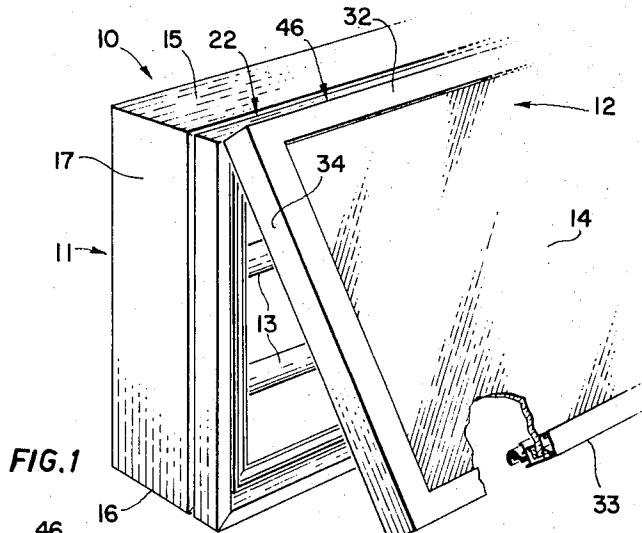


FIG. 1

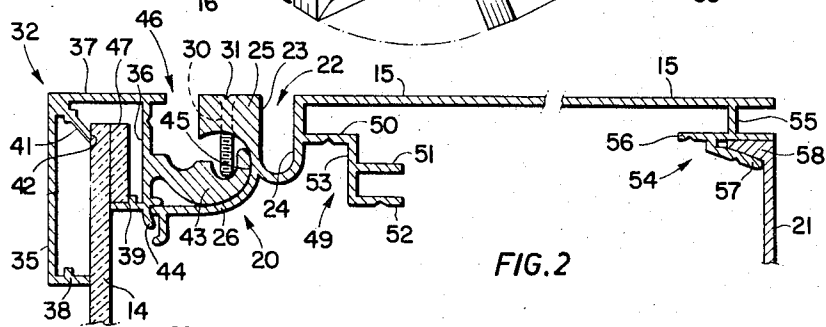


FIG. 2

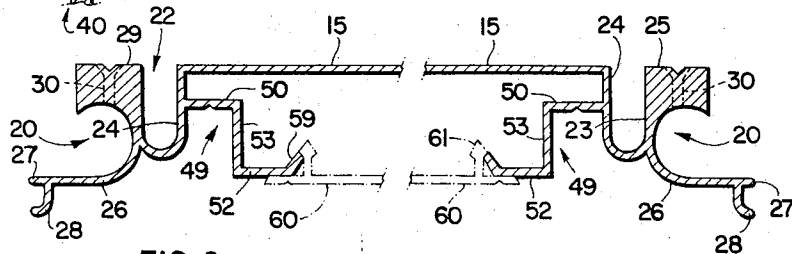


FIG. 3

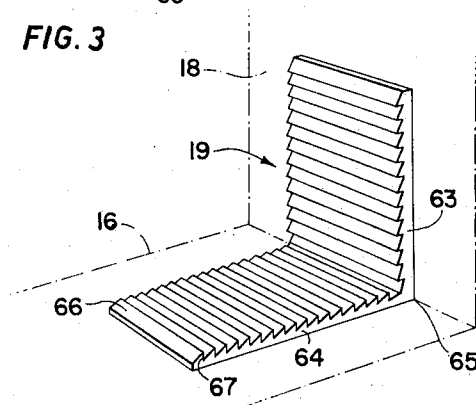
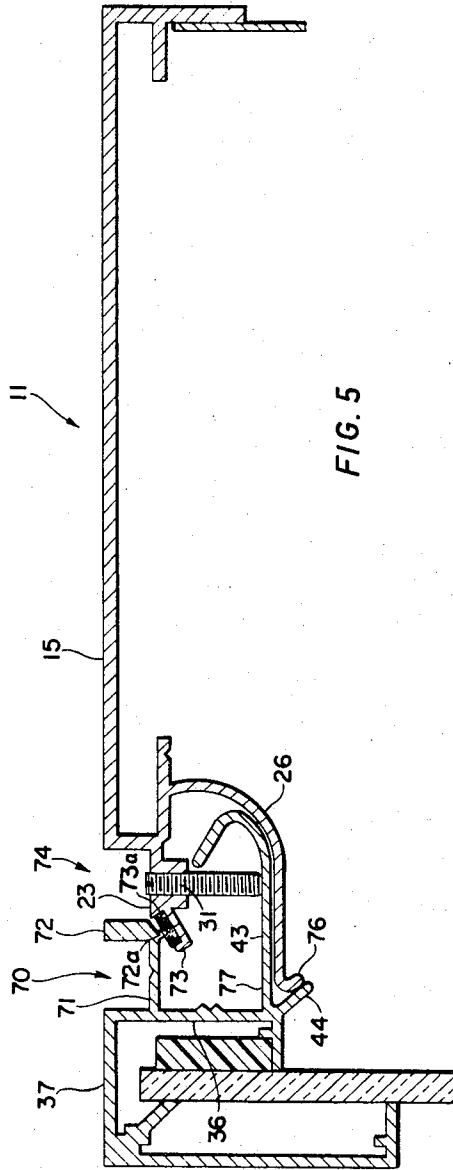


FIG. 4



**SIGN BOX WITH CLOSURE**

This invention relates to an illuminated sign and more particularly to a box for an illuminated sign of a type wherein a hinged front panel supports a translucent member having characters delineated by contrasting colours or by opaque areas which is back lighted by incandescent or fluorescent light. This application is a continuation-in-part of application Ser. No. 285,206, filed Aug. 31, 1972, now abandoned.

**BACKGROUND OF THE INVENTION**

As example of a known sign, is described in Canadian Pat. No. 750,111 entitled "Sign Casing" issued on Jan. 10, 1967 to Donald G. B. King. Such a sign may have one translucent element, or may have two translucent elements on opposite sides thereof which can be viewed from either side of the sign. The sign is often open to the elements and it is necessary to provide weather tight sealing for the sign. The front panel preferably holds the translucent member in such a manner that it is vibration free as the wind applies a force or pressure against this translucent member.

Usually, a one-sided sign is attached to a building and a two-sided sign is suspended from the top or supported from the bottom. With the one-sided sign, the front panel must be removed to gain access to the interior of the main frame, to attach the main frame to the building. When the main frame is secured, the front panel must be replaced on the main frame and secured properly to prevent the front panel from coming off the main frame, and possibly injuring someone beneath the sign. The front panel is supported in such a manner that the front panel does not have to be completely removed when some maintenance work has to be done on the sign at the site. Also, the sign is constructed in such a manner than if any repair work has to be done on the sign, it usually can be done without having to take the sign down and return it to the shop for repair. Preferably, the sign is so constructed, that it can easily be disassembled and the repair work done to it on the site. Preferably the translucent member is made of plastic or the like and has attached thereto character or symbol forming members which have transparent, translucent or even vacant area. The members also may be partially opaque. The plastic translucent member usually expands and contracts as it is outside, open to the elements.

The known sign mentioned above has a suspension or support means for the front panel on the top member of the main frame only which does not prevent the twisting of the front panel on the main frame under the effect of high winds. To remove the front panel from the main frame, it is necessary to move the bottom of the front panel upwards and outwards from the main frame until the front panel is approximately perpendicular to the main frame. The manoeuvre is very difficult when the operator is standing on a ladder approximately 10 feet above the ground. If, by some uncommon act, such as high winds, the suspension means are detached, the front panel is apt to come off the main frame and as there is no other securing means thereon, it will fall to the ground.

**BRIEF SUMMARY OF THE INVENTION**

According to this invention, a box for an illuminated sign is provided with a main frame having a top mem-

ber, side members and a bottom member for containing the illumination elements and having at least one open side defined by the side edges of said members, said top member, said side members and said bottom member all being formed of extruded metallic material of identical cross-section, a front panel for holding a translucent sign element in registration with said open side, said front panel having top member, side member and a bottom member for supporting said translucent element, said top member, side members and bottom member all being made of extruded metallic material of identical cross-section, complementary mating curved convex and concave formations formed on said main frame and said front panel around all four sides thereof, said complementary formations being extruded integrally with said main frame and said front panel, seal mounting means formed on said top member, said side members and said bottom members of one of said main frame and said front panel, extruded integrally therewith, and resilient sealing means mounted thereon, said resilient sealing means extending around all four sides thereof to form a complete rectangular shaped seal, seal contacting means formed around the other of said main frame and said front panel, on said top member, said side members and said bottom member, and being extruded integrally therewith, said resilient sealing means and said seal contacting member being oriented to make sealing contact with one another when said front panel is assembled on said main frame, thereby providing a good weather tight seal around all four sides thereof, releasable means for securing said front panel to said main frame.

Complementary formations on the front panel and the main frame co-operate in such a manner that when the front panel is hit by wind forces, the twisting force on the front panel is effectively distributed around the circumference of the main frame and displacement of the front panel is prevented.

It is an object of this invention to provide a box for an illuminated sign which is easy to assemble and disassemble.

It is another object of this invention to provide a box for an illuminated sign which has a front panel with a translucent element secured to a main frame when assembled.

It is still another object of this invention to provide an illuminated sign which is easily opened to permit an operator to work on the interior of the sign without disassembling the whole sign.

It is still another object of this invention to provide an illuminated sign having the mitred corners thereof joined together with gussets and screws to provide a water tight seal.

The foregoing and other advantages will become apparent from the following description of a preferred embodiment of the invention which is given here by way of example only with reference to the following drawings in which like reference devices refer to like parts thereof throughout the various views and diagrams and in which:

FIG. 1 is an upper perspective fragmentary view of an illuminated sign according to the invention;

FIG. 2 is an enlarged cross-sectional view of the upper portion of a one-sided sign illustrating the suspension or support means according to the invention;

FIG. 3 is a cross-sectional view of the top member of the main frame of a two-sided sign illustrating the sus-

pension or support means according to the invention; and

FIG. 4 is an enlarged upper perspective view showing a corner of the main frame with a gusset.

It should be noted that the term "outward" as used in the specification and claims means a direction from the illuminating elements toward the translucent element in either a one or two sided sign and the term "inward" means the opposite direction.

In the drawings is shown a sign 10 having a main frame 11 and a front panel 12 associated therewith. Incandescent or fluorescent illuminating elements 13 are arranged within the main frame 11 as will be described hereinafter. The illuminating elements 13 provide the back light for one translucent element 14 in a one-sided sign and two translucent elements 14 in a two-sided sign.

The main frame 11 is preferably rectangular in shape being formed of aluminum extrusions having a top and bottom members 15 and 16 respectively, joined together at the ends by side members 17 and 18 (shown in dotted lines in FIG. 4) respectively. The members 15 to 18 preferably have identical cross-sections. The corners of the members are mitred and a gusset 19 (shown in FIG. 4) and screws (not shown) are used at each of the corners to connect the top and bottom members 15 and 16 to the side members 17 and 18 as will be described hereinafter. The main frame 11 for a one-sided sign is shown in FIG. 2 with the front panel 12 associated with the main frame 11 on one side with a suspension or support means 20 and a wall support member 21 at the other end. A groove 22 extends around the circumference of the main frame 11 and is U-shaped, having parallel side walls 23 and 24. Extending outwards from the side wall 23 of the main frame 11 is the support means 20 comprising a shoulder 25, a concave supporting wall 26 extending downwards from the shoulder and outwards past the free end of the shoulder 25 having a free end 27. A J-shaped member 28 is connected to the supporting wall 26 adjacent the free end 27 thereof. The shoulder 25 has an upper surface 29 in the same plane as the outer surface of the top member 15. A plurality of threaded holes 30 are tapped through the shoulder 25. The holes 30 are spaced apart on the top member 15 and bottom member 16 only and are adapted to receive preferably a flat headed threaded screw 31 therein.

The front panel 12 is rectangular in shape and made from aluminum extrusions having spaced apart top and bottom members 32 and 33 respectively joined at their ends by side members 34 (only one is shown). The corners of the members are mitred and joined together by gussets and screws (not shown). The members of the front panel 12 are U-shaped channels with parallel side walls 35 and 36 joined at one end by a base 37. The side wall 35 has a length greater than the side wall 36 for reasons which will be explained hereinafter. At the free ends of the side walls 35 and 36 are inwardly extending flanges 38 and 39 respectively forming a slot 40 between them to receive the translucent element 14. Extending inwardly from the side wall 35 at the junction with the base 37 is a diagonal wall 41 being of such a length that a free end 42 makes contact with an outer surface of the translucent element 14.

A sickle-shaped member 43 is attached to the side wall 36 and extends perpendicularly therefrom to engage the concave wall 26 of the support means 20 when

the front panel 12 is placed on the main frame 10. A C-shaped engaging means 44 is positioned at the junction of the side wall 36 and retaining flange 39. The C-shaped member 44 rests on the free end 27 of the supporting wall 26 when the front panel 12 is placed on the main frame 11. The sickle-shaped member 43 has an outer surface 45 which makes contact with the supporting wall 26. The sickle-shaped member is of such a width, that without screws 31 passing through the holes 30, the sickle-shaped member 43 can be drawn out of contact with the supporting wall 26 without tilting the front panel 12. Also, the sickle-shaped member 43 has such a length that the outer surface 45 engages the supporting wall 26 when the C-shaped member 44 rests on the free end 27 of the wall 26. When the front panel 12 is placed in the position shown in FIG. 2, an opening 46 is left between the top member 32 of the panel 11 and the shoulder 25 on the main frame 11. The translucent element 14 supported in the front panel 12 is preferably rectangular in shape having strips 47 adhesively bonded to the top and bottom edges of the element 14 for assembly as will be described hereinafter.

As shown in FIG. 2, the members of the main frame 11 have an inwardly extending Z-shaped member 49 attached to the side wall 24 of the groove 22. The Z-shaped member 49 has parallel walls 50, 51 and 52 joined by a perpendicular wall 53. At the other side of the member of the main frame 11 is a T-shaped member 54 having a stem 55 attached to the underside of the top member 15 and a bar 56 attached on the stem 55. A diverging wall 57 is connected to the bar 56 to receive a clip means 58 attached to the wall support member 21. The stem 55 of the T-shaped member 54 is spaced apart from the side wall 24 of the groove 22 the width of the gusset member 19. The bar 56 of the T-shaped member and the wall 50 of the Z-shaped member 49 are spaced from the underside of the top member 15 a distance approximately equal to the thickness of the gusset 19. Also the wall 51 is spaced apart from the wall 52 of the Z-shaped member the thickness of the gusset member 19.

The structure of the top member 15 for the main frame 11 on a two-sided sign is shown in FIG. 3. The support means 20 extending outwards from both side edges of the top member 15 are identical to the support means 20 described in FIG. 2. Extending inwards from the side wall 24 on both sides of the main frame are Z-shaped members 49 having parallel walls 50 and 52 joined by the perpendicular wall 53. The wall 52 has a free end 59 diverging therefrom. Between the free ends 63 on opposite sides is clip-in bar 60 (shown in dotted lines). The clip-in bar 64 has arrow heads 61 adjacent its ends with the free ends 59 to provide a spacing between the bar 60 and the underside of the top member 15 to receive the wires and fixtures and fluorescent ballasts (not shown) required for the illuminating elements 13.

As shown in FIG. 4, the gusset 19 is a right-angle shaped member having two legs 63 and 64 of approximately equal lengths joined together at a junction 65. The inner surfaces of the legs 63 and 64 have a plurality of transverse teeth cut therein with diverging walls 66 joined at their ends by straight walls 67.

The use and assembly of the sign according to the invention is as follows:

The members 15 to 18 of the main frame 11 are cut to size and the corners mitred. The main frame 11 is

then assembled using the gussets 19 at each corner to secure the adjacent members together. Screws (not shown) are passed through threaded holes (not shown) in the wall 50 of the Z-shaped member 49 and the bar 56 of the inverted T-shaped member 54 to engage the inner surface of the legs 63 and 64 of the gusset 19. The screws are in contact with the straight wall 67 of the inner surface of the gusset 19 to prevent the members from coming apart at the corners, thus providing a weathertight seal at the corners of the main frame 11. With the one sided sign, the clip means 58 of the wall support member 21 is inserted between the bar 56 and the diverging wall 57. Screws (not shown) are inserted in threaded holes (not shown) in the diverging wall 57, clip means 58, and bar 56 to connect the wall support member 21 to the main frame 11.

The members 32 to 34 of the front panel 12 are cut to size and the corners mitred. The translucent element 14 with the strips 47 at the top and bottom edges is then assembled with the top and bottom members 32 and 33. Gussets (not shown) are then inserted in the ends of the side members 43 and the side members 34 are assembled with the top and bottom members 32 and 33 by passing the free ends of the gussets (not shown) into the ends of the top and bottom members 32 and 33. Screws (not shown) are then passed through side walls 35 and 36 of the members to make contact with the gussets to prevent the members from coming apart at the corners thus providing a weathertight seal at the corners of the front panel 12.

The front panel 12 is then assembled with the main frame 11 by placing the sickle-shaped member 43 in engagement with the concave supporting wall 26 of the support means 20. Also the C-shaped engaging means 44 on the front panel 12 engages the free end 27 of the concave supporting wall 26. Stop means on screws 31 are preferably secured to the shoulder 25 of the support means 20 of the top and bottom members 15 and 16 of the main frame 11 in such a manner that the screws 31 are not in engagement with the sickle-shaped member 43 but prevent the sickle-shaped member 43 from coming out of engagement with said concave supporting wall 26.

To tilt the front panel 12 upwards and outwards relative to the main frame 12, the screws 31 on the bottom member 16 of the main frame 11 are removed to permit the bottom member 33 of the front panel 12 to be drawn out of engagement with the bottom member 16 of the main frame 11. As the front panel 12 is moved upwards and outwards the sickle-shaped member 43 engaging the concave supporting wall 26 on the top member 15 of the main frame 11 is rotated. The screws 31 prevent the front panel 12 from coming away from the main frame 11. A standard (not shown) may be inserted between the bottom member 33 of the front panel 12 and the bottom member 16 of the main frame 11 to hold the front panel 12 at the desired position relative to the main frame 11. This permits a worker to work on the interior of the sign 10 without having to remove the front panel 12 from the main frame 11.

It should be noted that if a one-sided sign 10 is constructed which has a much greater length than height, supports or stiffeners (not shown) are necessary between the top and bottom members 15 and 16 of the main frame 11 at different locations along the length of the main frame. The stiffener is placed against the wall supporting member 21 and is attached to the top and

bottom members 15 and 16 by gussets 19. The free end of the gussets 19 is inserted between the walls 51 and 52 of the Z-shaped member 49 and screws (not shown) are passed through the wall 52 to secure the gusset 19 therein.

In the front panel 12, the translucent member 14 is held securely between the retaining flanges 38 and 39 of all the members 32 to 34. The slot 40 between the retaining flanges 38 and 39 preferably has a width equal to the thickness of the translucent member 14 so that the free end 42 of the diverging wall 41 and the free end of the flange 38 engage the outer surface 43 when the strips 47 engage the flange 39 of the top and bottom members 32 and 33.

With further reference to the drawings, FIG. 5 is a sectional view of an alternate embodiment of the invention showing in section a sign frame with a front detachable panel attached thereto similar to the frame and panel of FIG. 4. According to this further embodiment of the invention, the groove 46 can be replaced by a pair of grooves shown on the new FIG. 5 as 70 and 74 with a flange 72 therebetween. When the panel of the frame of FIG. 4 is positioned in the open, dirt, snow, ice, and water may fall into the groove sections at the top and run down to lodge between the movable sickle section and its curved mating part causing the parts to bind when an attempt is made to open the front panel for service. In order to seal the hinge an angled channel 73 is provided with a plastic sealing strip 73a, and a sealing rib 72a is formed on flange 72 to engage the strip 73a. In this way the groove 74 is completely sealed all around the frame on all four sides thereby ensuring that the interior of the device is kept clean and dry at all times and in addition the moving parts are thereby more easily hinged one with another when the sign is lifted for service.

In the embodiment shown in FIG. 5, 11 designates the main frame. Numeral 15 is a top section of the main frame having the curved section 26 attached to it and having the attachment means 31 positioned in a recessed support 23. Along the edge of support 23, channel 73 is attached for carrying the sealing strip 73a. The bolt support 23 at the bottom of groove 74 is drilled and threaded to receive bolts 31 therethrough. An additional groove 70 is formed by an upwardly turned support member 71 having flange 72, forming a groove 70 between the flange 72 and the front panel frame 37. Sealing rib 72a extends below flange 72 and registers with channel 73 positioned below the groove formed by the channel section 71 and 72. In this way, the panel may swing and hinge freely about the main frame and yet in a resting position, rib 72 seals with seal strip 73a in channel 73 and will not permit rain and the like from entering into the area above the mating hinge and sickle members and similarly will seal the other three sides of the flange.

The supporting wall 26 with its free end and J-shaped member 28 has been re-designed in the embodiment shown in FIG. 5 by having the curved wall 26 project in a horizontal direction, then inwardly curved as at 76 to form a lip member which contacts the movable projection means 44 of the front panel to provide a surface contacting pair of curved members 44 and 76 which replace the point contacting members formerly shown as 44 and 28 in FIG. 4 allowing for a greater load bearing contact of the front panel against the main frame when the front panel is in the vertical rest position.

As indicated previously, the front support 26 bears the weight of the front panel 37 through the surface contact of the front support 26 which the sickle-shaped hingeable member 43, such that the screw member 31 does not bear against the surface of the sickle member or against its edge unless a force is applied, such as the force of a wind or a jarring movement against the front panel designed to push it out of contact with the main frame. Then the screw 31 will hold the panel in its rest position against the curved support 26. The sickle-shaped hinge member 43 has a flat surface shank portion 77 attached and integrally formed with the side wall 36 of the front panel allowing for greater surface contact with the support wall of the main frame. Since rain and weather is prevented from entering into the area above the sickle-shaped member and from interfering with the free smooth operation of the hinging of the sickle-shaped member 43 on the curved surface 26 it is found that a greater surface contact between the parts can be permitted thereby allowing for a more stable position of rest for the front panel section on the main frame and allowing for a greater weight to be transferred to the main frame and thereby allowing the main frame at the curved support to carry a greater weight.

In operation the assembly of the sign box is essentially the same as in the case of the embodiments of the FIGS. 1 to 4. The hinge is formed by merely placing the front panel in position against the main frame, with the sickle-shaped member 43 lying on the curved surface 26 around all four sides of the frame. The screws 31 are then inserted into the threaded holes in the shoulder 23, along the top portion of the frame 15, and are screwed down into position until they bid against the sickle-shaped member 43.

Similar screws 31 are then inserted in similar holes in the bottom portion 16 of the frame.

The front panel of the sign box is in this manner secured to the main frame, and the contact between the sickle-shaped member 43 and the curved portion 26 of the support member effectively seals and secures the front panel against any tendency to shake or rattle or become loosened by wind action. In addition, any possibility for driving rain or moisture to enter the interior of the sign is prevented by the effective seal provided by the plastic sealing strip 73a, and the ribs 72a bedding into the plastic strip all around all four sides of the sign.

When it is desired to service the interior of the sign then the bottom screws 31 are removed and the top screws 31 are backed off two or three turns, at which point the front panel may then be swung upwardly.

By re-designing the contacting surfaces of the front panel and the main frame support, there is less liability of breakage and rupture of the parts when in rest contact position when high winds batter against the sign and jar the contacting surfaces together. In the result, the contacting surfaces can be made of less rugged construction giving a saving in material and manufacturing costs.

The foregoing is a description of a preferred embodiment of the invention only. The invention is not to be taken as limited to any of the specific features described, but comprehends all such variations as come within the spirit and scope of the claims.

What I claim is:

1. A sign box for the construction of an illuminated

- sign having illumination elements said box comprising;
- a main frame having a top member, side members and a bottom member for containing the illumination elements and having at least one open side defined by the side edges of said members, said top member, said side members and said bottom member all being formed of extruded metallic material of identical cross-section;
  - a front panel removably attachable to said main frame for holding a translucent sign element in registration with said open side, said front panel having a top member, side members and a bottom member for supporting said translucent element, said top member, side members and bottom member all being made of extruded metallic material of identical cross-section;
  - a curved concave wall formation formed on said main frame around all four sides thereof, said concave wall formation being extruded integrally therewith and being directed outwardly with respect to said main frame; said wall formation terminating in a free end directed forwardly, said free ends on said top and bottom members lying in parallel horizontal planes, and said free ends on said side members lying in parallel vertical planes, when said main frame is standing upright;
  - a curved convex formation extending around all four said members of said front panel and shaped to mate with said concave wall formation on respective sides of said main frame when said front panel is in position on said main frame, said convex formation being directed inwardly with respect to said main frame for movement into and out of engagement with said concave wall formation on said main frame;
  - and releasable means for securing said front panel to said main frame.
2. A sign box as claimed in claim 1 including engaging members formed on said front panel and said main frame in addition to said convex and concave complementary formations for further locating said front panel with respect to said main frame.
3. A sign box as claimed in claim 1 including cover means formed on said main frame and on said front panel, being extruded integrally therewith, and dimensioned to overlap one another when said front panel is assembled on said main frame.
4. A sign box as claimed in claim 3 wherein said cover means on said main frame top member, side members, and bottom member incorporates a continuous shoulder extending therealong, and including screw holes drilled in said shoulder in said top member and said bottom member at spaced intervals therealong for reception of said releasable securing means therein.
5. A sign box as claimed in claim 4 including electrical receptacle means for mounting said illumination elements in said box, and including a translucent element mounted in said front panel for illumination thereby.
6. A sign box as claimed in claim 1 wherein said front panel top member, side members and bottom member are all formed in a generally channel shaped cross section with parallel side walls and a web joining the same, and including inwardly extending flanges from opposite sides of said channel extending into the middle of said

channel defining a slot within said channel for reception of a said translucent element therein.

7. A sign box as claimed in claim 1 wherein said top member, side members and bottom member of said main frame and said front panel are cut at 45° angles at their ends, to form a mitre corner joint, and including generally L-shaped corner fastening means inserted into said members at each corner securing the same to one another.

8. A sign box as claimed in claim 1 including seal mounting means formed on said top member, said side members and said bottom member of one of said main frame and said front panel, extruded integrally therewith, extending around all four sides thereof to form a complete rectangular shaped seal mounting, and seal contacting means formed around the other of said main frame and said front panel, on said top member, said side members and said bottom member, and being extruded integrally therewith, said seal contacting member being oriented to register with said seal mounting means.

9. A sign box for use with illumination elements comprising;

a main frame in the form of an open sided box having a top member and sides and a bottom, said box adapted to contain illumination elements;  
hinge means integrally formed with said top member;  
a front panel having a top member, sides and a bottom for holding a translucent sign element;  
hinge means extending from said top member of said front panel engageable with said hinge means of said top member of said main frame;  
first cover means attached to said top member of said front panel extending over a portion of said hinge means;  
second cover means extending outwardly from the top member of said main frame over said hinge means thereon and adjacent said first cover means;  
seal supporting means carried by one of said first and second cover means, and,  
sealing rib means carried by the other of said first and second cover means to prevent rain and dirt from falling upon said hinge means.

10. A sign box as claimed in claim 9 wherein said first cover means has said sealing rib formed therewith, and said seal supporting means is carried by said second cover means.

11. A sign box as claimed in claim 9 wherein said seal supporting means is formed on said second cover means and comprises a channel.

12. A sign box as claimed in claim 9 wherein said hinge means on said top member and said front panel comprise complementary mating concave and convex formations, and wherein said formations extend around all four sides of said main frame and said front panel, and wherein said first and second cover means extend similarly around all four sides thereof whereby to make a good weather tight cover between said front panel and said main frame.

13. A sign box as claimed in claim 12 including removable stop members mounted along said second cover means, extending from said top member of said main frame, whereby to secure said complementary concave and convex formations therealong.

14. A sign box as claimed in claim 13 including further removable stop means mounted along said second

cover means at the bottom of said main frame, for locking said front panel in position.

15. A sign box as claimed in claim 9 including a plurality of electrical receptable means mounted in said main frame for reception of said illumination elements, and translucent panel means mounted in said front panel for illumination thereby.

16. A sign box as claimed in claim 9 wherein said main frame is open on both sides, and wherein said hinge means and said cover means are arranged on both sides, and including rear panel means for holding a second translucent sign element over said second open side of said main frame whereby to comprise a double faced sign.

17. A sign box for the construction of an illuminated sign having illumination elements, said box comprising: a main frame having a top member, side members and a bottom member for containing the illumination elements and having at least one open side defined by the side edges of said members;

support means on at least one side edge of said top member of said frame;

a front panel for holding a translucent sign element; a concave supporting wall on said support means extending outwardly and downwardly therefrom, said wall being open towards said front panel for free access thereto;

a curved hinge member on said front panel defining a convex hinge surface directed inwardly towards said main frame and extending rearwardly of said front panel and oriented to register with said concave supporting wall for movement into and out of contact therewith without rotational movement of said front panel relative thereto, and providing, with said concave supporting wall, mating hinging surfaces for rotational movement of said front panel between open and closed positions, and, removable stop means associated with said support means and interengaging with said curved hinge member in such a manner that said curved hinge member is normally prevented from disengaging from said concave supporting wall.

18. A sign box as claimed in claim 17, including a free end on said concave supporting wall; and engaging means secured to said free end when said curved hinge member is in engagement with said concave supporting wall.

19. A sign box as claimed in claim 17, wherein said main frame comprises spaced apart top and bottom members joined together by side members, each member having an identical cross-section and side edges; and said support means being on at least one side edge of each member.

20. A sign box as claimed in claim 19 wherein said front panel comprises spaced apart top and bottom members and side members, each said member having an identical cross section, and being provided with said upwardly curved hinge member on all four sides thereof for engagement with said concave supporting wall on all four sides of said main frame, and including further removable stop means mounted in said bottom member of said front panel for fastening the same securely in position.

21. A sign box as claimed in claim 17 including cover means formed on said main frame, and complementary cover means formed on said front panel around all four



11

sides thereof covering said concave supporting wall and said curved hinge member respectively.

22. A sign box as claimed in claim 21 including resilient sealing means mounted on one said cover means, and a seal engaging rib member formed on the other of said cover means, said resilient sealing means and said rib member contacting one another when said front panel is fastened in position on said main frame, and providing a good weather tight seal around all four sides thereof.

23. A sign box as claimed in claim 22 wherein said main frame is open on both sides, and wherein said

12

concave supporting wall is formed on both said open sides of said main frame, and including second panel means for said second open side,

said second panel means being identical to said front panel means, whereby to provide a double faced sign.

24. A sign box as claimed in claim 17 including electrical receptable means mounted in said main frame for reception of said illumination elements, and including translucent sign elements means mounted in said front panel for illumination thereby.

\* \* \* \* \*

15

20

25

30

35

40

45

50

55

60

65