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M. ROSEMAN

2,970,397

FRAME

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FIG. 1

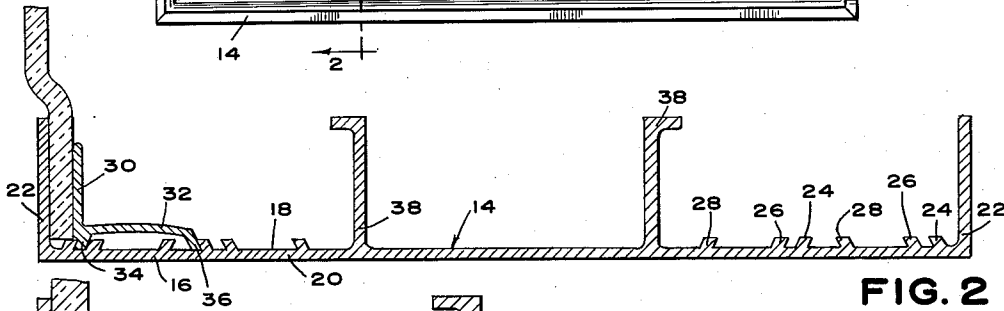
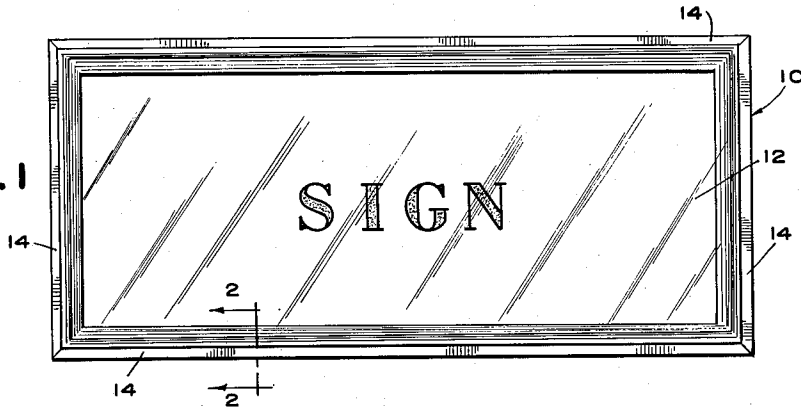


FIG. 2

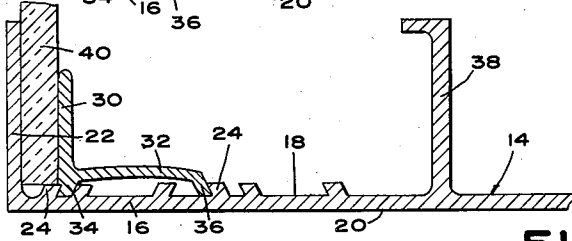


FIG. 3

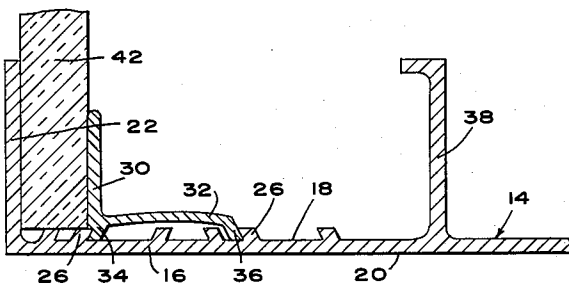


FIG. 4

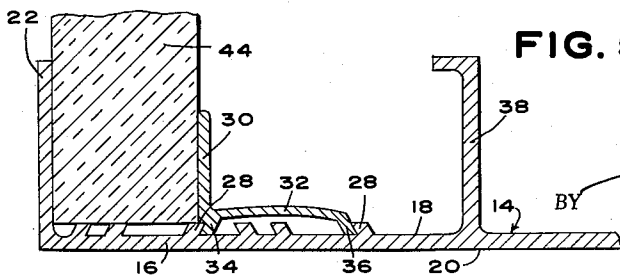


FIG. 5

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2,970,397

FRAME

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17 Claims. (Cl. 40—156)

This invention relates to a frame eminently suited for the construction of advertising signs, but also applicable to a wide variety of uses involving the supporting of panels.

Sign faces and panels of other types vary in thickness. Heretofore, it has been necessary to stock a large number of sizes of extrusions to accommodate the various thicknesses, or alternatively, custom build each frame to suit the thickness of the sign face or panel required by a particular installation.

By way of solution of these problems, it is among the objects of the present invention to provide a frame comprising a channel member having a web, an outer flange extending from a surface of the web, a plurality of pairs of anchoring flanges extending from the surface, and an adjustable inner flange having a base selectively engageable with the pairs of anchoring flanges to adapt the frame to panels of different thicknesses. The outer flange is preferably integral with the web and the anchoring flanges are likewise preferably integral therewith. The anchoring flanges of each pair are preferably mutually inclined and preferably diverge towards the surface. The base of the adjustable inner flange preferably comprises a pair of legs engageable with the flanges and these legs are preferably mutually inclined at substantially the angles of inclination of the anchoring flanges so as to assure maintenance of the parts in their relative positions once the assembly has been completed. The base preferably resiliently engages the anchoring flanges so as to prevent relative movement of the assembled parts and compensate for manufacturing tolerances. The base preferably has a width slightly exceeding the distance between the anchoring flanges of each pair so that when the assembly has been effected, the base will be under sufficient stress to assure proper association of the parts.

A more complete understanding of the invention will follow a description of the accompanying drawings wherein:

Fig. 1 is a front elevation of a sign incorporating the present invention;

Fig. 2 is a sectional elevation taken along line 2—2 of Fig. 1 on an enlarged scale;

Fig. 3 is a fragmentary sectional elevation on a further enlarged scale depicting the flanges in one relative spacing;

Fig. 4 is a fragmentary sectional elevation similar to that of Fig. 3 showing another relative arrangement of the flanges; and

Fig. 5 is a fragmentary sectional elevation similar to those of Figs. 3 and 4 showing a further relative arrangement of the flanges.

The sign 10 depicted in Fig. 1 comprises a transparent or translucent panel 12 mounted in a frame composed of channel members 14 mitered at their ends in a manner which is conventional in the art.

As depicted in Figs. 2, 3, 4 and 5, each channel member 14 comprises a web 16 having an upper surface 18 and a lower surface 20. The channel member 14 terminates

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in outer flanges 22 extending from the upper surface 18 of the web 16 and these flanges are shown as integral with the web. Also projecting from the upper surface 18 of the web 16, there are a plurality of pairs of anchoring flanges 24, 26 and 28, the flanges constituting a pair being similarly designated. As will be evident from Fig. 2, the flanges constituting each pair are mutually inclined, diverging towards the upper surface 18 of the web 16.

An adjustable inner flange 30 is provided with a relatively flexible resilient base 32 having a pair of legs 34 and 36 which are mutually inclined at an angle substantially equal to the angle of inclination of the anchoring flanges so that when the legs are introduced between a pair of anchoring flanges constituting a pair, they will complement the surfaces of the anchoring flanges to maintain a good fit so as to avoid undesired relative movement of the parts and prevent damage or noise due to vibration. The distance between the legs 34 and 36 of the base 32 carried by the adjustable inner flange 30 is initially somewhat greater than the spacing between the flanges constituting a pair so that it is necessary to flex the base slightly as it is introduced between the flanges of one of the pairs. In this way, due to the resiliency of the base 32, the adjustable flange will always maintain a snug engagement with the anchoring flanges provided on the web 16. As will be evident from the showing of Fig. 2, the channel construction adapts itself to double faced signs or comparable panels of other types. The intermediate flanges 38 are provided for reinforcement and for the attachment of accessories frequently used in the illumination of signs.

It will be noted that the base 32 of the adjustable inner flange 30 is slightly bowed to facilitate deflection of the legs 34 and 36 towards one another when they are introduced between the anchoring flanges constituting a pair.

In Fig. 3 the adjustable flange 30 assumes its most proximate position with respect to the outer flange 22 to support a relatively thin sign face or panel 40. In this case, the legs 34 and 36 of the base 32 are introduced between a pair of anchoring flanges 24.

In Fig. 4 the adjustable flange 30 assumes its intermediate position wherein the legs 34 and 36 of its base 32 are received between a pair of anchoring flanges 26 to support a sign face or panel 42 of intermediate thickness.

In Fig. 5, the adjustable flange 30 has been adjusted to its remote position relative to the outer flange 22, the legs 34 and 36 occupying a position between the remote pair of anchoring flanges 28 to accommodate a relatively thick sign face or panel 44.

It will be clear that an arrangement of this type could be used in the construction of windows or frames for supporting a wide variety of panels where the thicknesses are such as to require multiple adjustments. The web 16 and the flanges integral with it are preferably formed as an aluminum extrusion and the adjustable flange 30 together with its base 32 and legs 34 and 36 is also preferably formed by the extrusion of an aluminum alloy which will impart the desired degree of flexibility and resilience to achieve the results described.

Whereas only one specific form of the invention has been described with reference to the accompanying drawings, those variations as will be suggested to those skilled in the art are contemplated by the appended claims.

I claim:

1. A frame having interconnected opposed peripheral elements, each of said elements comprising a channel member having a web, an outer flange extending from a surface of said web, a plurality of pairs of anchoring

flanges extending from said surface, and an adjustable inner flange having a base selectively engageable with said pairs of anchoring flanges to adapt said frame to panels of different thicknesses.

2. A frame as set forth in claim 1 wherein said outer flange is integral with said web.

3. A frame as set forth in claim 1 wherein said anchoring flanges are integral with said web.

4. A frame as set forth in claim 1 wherein the anchoring flanges of each pair are mutually inclined.

5. A frame as set forth in claim 1 wherein the anchoring flanges of each pair diverge towards said surface.

6. A frame as set forth in claim 1 wherein said base comprises a pair of legs engageable with said flanges.

7. A frame as set forth in claim 1 wherein the anchoring flanges of each pair are mutually inclined and said base comprises a pair of legs which are mutually inclined at substantially the angles of inclination of said anchoring flanges.

8. A frame as set forth in claim 1 wherein said base resiliently engages said anchoring flanges.

9. A frame as set forth in claim 1 wherein said base has a width slightly exceeding the distance between the anchoring flanges of each pair.

10. A frame having interconnected opposed peripheral elements, each of said elements comprising a first member having a web and an outer flange extending from a surface of said web, a plurality of anchoring flanges extending from said surface defining a plurality of pairs of convergent bearing surfaces, and an adjustable inner flange having a base engageable with said pairs of bearing surfaces selectively to adapt said frame to panels of different thicknesses.

11. A frame as set forth in claim 10 wherein said

base provides mutually inclined surfaces engaging said bearing surfaces respectively.

12. A frame as set forth in claim 10 wherein said base provides mutually inclined surfaces whose maximum distance apart exceeds the minimum distance between the bearing surfaces of each of said pairs.

13. A frame as set forth in claim 10 wherein said base provides surfaces which are mutually inclined at substantially the angles of inclination of the bearing surfaces of each said pair respectively.

14. A frame as set forth in claim 10 wherein said outer flange and anchoring flanges are integral with said web.

15. A frame molding comprising a first member having a web and an outer flange extending from a surface of said web, a plurality of anchoring flanges extending from said surface defining a plurality of pairs of convergent bearing surfaces, and an adjustable inner flange having a base engageable with said pairs of bearing surfaces selectively to adapt said frame molding to panels of different thicknesses.

16. A frame molding as set forth in claim 15 wherein said base provides mutually inclined surfaces engaging said bearing surfaces respectively.

17. A frame molding as set forth in claim 15 wherein said outer flange and anchoring flanges are integral with said web.

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