This invention relates to display signs and more specifically to an arrangement of structural members formed to interlock with each other into a rigid structure and is an improvement in certain aspects of the structure shown in U.S. Patent 2,633,652 and in its broadest aspect relates to mounting of panels on an associated support.

In the types of signs under consideration it is expedient to provide parts which are easily assembled and which will withstand severe buffeting by the weather and which have exceptional durability in addition to providing aesthetic appeal.

A general object of the invention is to provide a sign possessing the characteristics hereinafore enumerated.

Another object of the invention is to provide a novel sign construction wherein the parts are formed to interlock with each other into a unitary structure.

A further object is to provide a novel display sign comprising a plurality of structural members which are readily adapted to be cut up into signs of different sizes without destroying the interlocking characteristics of these members and which may be assembled in a facile manner.

Another object of the invention is to provide a novel sign construction wherein the parts once assembled cannot normally be taken apart in the same manner as they were put together but, if desired, may be separated without destroying the parts.

A more specific object of the invention is to provide a sign structure comprising uprights which are formed with sets of locking lugs which have clamping engagement with complementary locking ribs on the back side of horizontally extending background members which span across the uprights.

The invention comprehends the provision on the uprights of pairs of vertically spaced opposing locking lugs which project forwardly from the front wall of the uprights, the lower of the lugs of each pair developing a V-shaped slot with the plane of the front wall of the upright and providing a downwardly and inwardly sloping wedge surface engageable with a complementary surface on the front web of a V-shaped rib which is formed on the back side of a background panel member mounted thereon, said lower lug being adapted to be sprung forwardly from the front wall of the upright to permit entry of the upper edge of a rear web of the V-shaped rib under the lower edge of the upper lug.

The invention also comprehends providing an upstanding shoulder or ledge along the upper edge of the rear web of the V-shaped rib of the background panel for abutment with the forward side of the upper lug while the front web of the V-shaped rib engages the rear side of the lower lug which urges the panel upwardly whereby the ledge prevents the panel from displacing rearwardly and the lower lug, through abutment with the front web of the rib, prevents the panel from moving forwardly while at the same time, since the engagement between respective parts is along generally flat parallel surfaces, the panels, by endwise withdrawal from the lugs, may be disassembled from the uprights.

Another object of the invention is to provide a background panel structure incorporating wedge-locking ribs which function not only to lock the panels to the uprights but also serve to rigidify the panels and further in being formed in V-shape provide rain gutters which cannel the rain water to opposite sides of sign to minimize dripping on pedestrians when the sign is used on marquees and the like.

Another object of the invention is to develop a sign with a plurality of horizontally elongated panel structures arranged shingle fashion vertically, each panel structure having integral interlocking ribs which extend lengthwise of the panel structure intermediate its upper and lower edges in vertically spaced relation to the upper and lower panel structures, the upper portions of the panel structures being angled forwardly and upwarply and changing upwarping the lower portions of the panel structure thereabove to provide a continuous background surface, the upper edges of each upper portion having a wedge shaped bead for removably mounting thereon symbols to form a desired message, the term "symbols" designating letters and characters such, for example, as disclosed in U.S. Patent 2,048,040.

These and other objects and advantages inherent in and encompassed by the invention will become more readily apparent to those skilled in the art from the following specifications and drawings wherein:

FIGURE 1 is a front view of the novel sign structure partly in vertical section on line 1—1 of FIGURE 2;

FIGURE 2 is a vertical cross-sectional view of the sign structure taken essentially on line 2—2 of FIGURE 1;

FIGURE 3 is a fragmentary enlarged vertical section comparable to FIGURE 2;

FIGURE 4 is a fragmentary rear view of a panel; and

FIGURE 5 is a fragmentary top edge view of a panel.

Describing the invention in detail there is shown in the drawings a display sign generally designated 2 which is adapted for mounting on any suitable wall structure 3, the sign comprising at least two channel shaped upright members 4, which are spaced apart slightly less than the intended overall width of the sign.

Each upright channel member is preferably of galvanized sheet steel and comprises a forward upright intermediate wall 5 and a pair of rearwardly directed upright walls 6, 6 with rear edge outturned flanges 7, 7 which may be suitably apertured at spaced points 8, 8 for admitting screws or bolts therethrough which are secured to the base or wall 3.

The front wall 5 has punched out at regularly spaced vertical intervals a plurality of locating tabs or jaw elements or lugs 9, 9 which have generally horizontal parallel upper edges 10, 10. The lugs 9 slope downwardly and rearwardly, (it being understood that these terms "downwardly," "rearwardly," upwardly," etc., are relative since the structure can be inverted and still come within the purview of this invention) and provide a downwardly and rearwardly sloping internal wedge surface 12.

Simultaneously, with the punching out of the lower lugs 9, there are punched out from the wall 5 upper lugs 13 which project downwardly and forwardly from the wall 5 and are relatively short in extent transversely of the wall 5 so that the lower edges 14 of lugs 13 project only a slight distance beyond the forward face 15 of front wall 5. The horizontal edges 14 are parallel with edges 10 and are spaced rearwardly therefrom and develop a space 16 therebetween for admitting therein a V-shaped locking rib 17 which is formed on the back side 19 of a horizontally elongated background panel structure 20.

Each panel structure 20 is preferably an aluminum extrusion rectangular in side elevation and comprises a generally flat relatively thin body portion 21 on which a pair of the aforesaid locking ribs 17 are formed, said ribs being vertically spaced apart on the order of the locking means on the uprights and being generally parallel with each other and with the top and bottom generally horizontal edges 23, 24 of the panel.

Each rib 17 has a rearwardly projecting junction flange.
25 which extends substantially normal to the body portion 21 of the panel, the rear edge of the junction flange 25 merging into the upper edge of a downwardly and rearwardly extending front web 26 of the locking rib which is V-shaped in vertical cross-section. The front side 27 of the web 26 which wedges against the rear side 12 of lug is spaced rearwardly from the rear side 19 of the panel and develops a longitudinally elongated downwardly widening and opening pocket for admitting the upper edge portion of the associated lower lug 9 which has its upper edge 10 opposing the underside surface 28 of the junction flange 25. The lower edge of flange 25 merges in a downwardly directed apex 29 into the lower edge of the panel through the wooden block or the like so as not to deform the panel. To prevent the edge 30 from slipping behind the lug 13, there is provided an upright ledge 31 along the forward margin of lug 13 which overlaps the lug 13. Therefore it will be realized that the panels, as best seen in FIGURES 2 and 3 are individually located in place by forcing downwardly, but once they are interlocked, they cannot be normally withdrawn by lifting them off without deforming or destroying the sections. However, if the need should ever arise, the sign can be dismantled by withdrawing the panels endwise from the uprights.

A flat rear vertical surface 33 is developed on the upper edge of flange 30 which seats against the vertical flat front face 15 of each upright. The instant interlocking mechanism develops a strong and exceptionally rigid sign structure with good aesthetic appeal.

In addition to the locking lugs 9, 13, each upright has punched out from its front wall between the pairs of locking lugs a pair of laterally spaced slots or abutments 35, 35 which project forwardly from wall 5. These slots are aligned vertically with the lateral edges 36, 36 of the lugs 9 and provide lateral abutment for vertical flanges 37 of the finish trim channels 39, said flanges 37 having a plurality of downwardly and rearwardly sloping slots 40 vertically spaced on the order of vertical spacing of lugs 9 and admitting the same therein, it being noted that the panels are cut slightly short of the span between the outer lateral edges 36 of the outermost uprights. Thus, for the panels are assembled to the uprights, the side trim channels are mounted at opposite sides of the sign as seen in FIGURES 1 and 2 and the inner flanges or walls 37 are drawn up against opposite ends 42, 42 of the panels whilst the front walls 43, 43 of the trim channels cover the end uprights which at their sides are covered by the outer walls 44 of the trim channels. The trim channels may be secured to the respective outer side walls 6, 6 by means of screws 45, 45 threaded through appropriate openings 46, 47 in adjacent walls 44, 44, it being noted that the walls 44 are of greater width than the walls 37. The slotted interlock between walls 37 and lugs 9 prevents the trim channels from canting forwardly even though the walls 44 of these channels do not seat against the respective outer walls 6 of the uprights.

Each panel 20 has an upper ledge portion 47 which projects diagonally forwardly from the background and along its upper edge is formed a downwardly widening wedge head 48 which intrudes into the space 49 between the portion 47 and the lower portion of the panel thereafter. For purposes of illustration there is shown symbol "M" mounted on the panels, said symbol being a hollow member in its end flanges 50, 50 being provided with downwardly and rearwardly ex-

4. tending slots 51, 51 which are open through the rear edges 52 of the flanges 50. The slots 51 may be inverted V-shape of slightly less angularity than the engaging surfaces of the respective heads.

Top and bottom frame elements 54, 55 may be secured to the top and bottom ends of the members 4 to present a finished appearance.

It will be apparent that a preferred embodiment of the invention is illustrated, however, various other forms of the invention will become readily apparent within the scope of the appended claims.

What is claimed is:

1. A display sign structure comprising a plurality of upwardly and rearwardly spaced pair of vertically spaced locking lugs projecting outwardly therefrom and defining an angular space therebetween, background panel elements adapted for vertical mounting on said uprights and each having wedge locking means, said elements having a rear surface on which is mounted a generally "V" shaped rib having diverging side portions, the lower of the lugs of said pair developing a generally "V" shaped slot with the plane of the front wall of the upright and providing a downwardly and inwardly sloping wedge surface engageable with a complementary surface on one of said rib side portions, said lower lug being adapted into the front end of said upright to permit entry of the upper edge of said other side portion of the "V" shaped rib under the lower edge of the upper lug, and said panel elements having upper sign indicia mounting means.

2. The invention according to claim 1 wherein said upper sign indicia mounting means comprises an upper edge portion on each panel element, said edge portion projecting forwardly from the background and which along its upper edge is formed with a downwardly widening lip means which extends upwardly and forwardly for mounting on associated slotted member.

3. A display sign structure comprising a pair of uprights, each of said pair of uprights having a front wall and being provided with a pair of vertically spaced opposed upper and lower locking lugs which project forwardly from the front wall of the uprights, a background panel member, said panel member having a back side on which is mounted a generally "V" shaped rib having a front side portion and a rear side portion with an upper edge, the lower of the lugs of each pair developing a generally "V" shaped slot with the plane of the front wall of the upright and providing a downwardly and inwardly sloping wedge surface engageable with a complementary surface at the front side portion of the generally "V" shaped rib, said lower lug being adapted into the front end of said upright to permit entry of the upper edge of the rear side portion of the "V" shaped rib under the lower edge of the upper lug.

4. The invention according to claim 3 and said rear web of the "V" shaped rib being provided with an upstanding ledge along the upper edge thereof, said upper lug having a forward side for abutment with upstanding ledge, said front side portion of the "V" shaped rib engaging the rear side of the lower lug, said lower lug urging the panel upwardly, said "V" shaped rib having an upright ledge preventing the panel from being displaced rearwardly and the lower lug through abutment with the front side portion of the rib preventing the panel from moving forwardly, the engagement between respective parts being along generally flat parallel surfaces, the panels, by endwise withdrawal of the lugs being disassembled from the upper downwardly widening wedge head 48 which intrudes into the space 49 be-

5. The invention according to claim 3 and said rear side portion of the "V" shaped rib being provided with upstanding shoulder means along the upper edge thereof, said upper lug having a forward side for abutment with upstanding shoulder means, the front side portion engaging the rear side of the lower lug, said lower lug urging
the panel upwardly whereby the shoulder means prevents the panel from being displaced rearwardly and the lower lug through abutment with the front side portion of the rib prevents the panel from moving forwardly, the engagement between respective parts being along generally flat parallel surfaces, the ends, by endwise withdrawal of the lugs may be disassembled from the uprights.

6. The invention according to claim 3 and said rear side portion of the "V" shaped rib being provided with upstanding shoulder means along the upper edge thereof, said upper lug having a forward side for abutment with the upstanding shoulder means the front side portion of the "V" shaped rib engaging the rear side of the lower lug, said lower lug urging the panel upwardly whereby the shoulder means prevents the panel from being displaced rearwardly and the lower lug through abutment with the front side portion of the rib prevents the panel from moving forwardly.

7. A display sign structure comprising a plurality of uprights each having generally horizontally spaced sets of locking lugs, background panel structure provided with generally horizontally spaced wedge-locking ribs interlocking with the respective lugs of the uprights rigidifying said panels, said locking ribs providing upper upright gutter means adapted to cannal a liquid to opposite sides of the panel structure the lugs of each set comprising an upper lug and a lower lug and the lower lug being angled upwardly and forwardly and springable away from the respective upright, and the ribs each comprising downwardly converging portions adapted to respectively engage the lower lug and the opposing side of the respective upright, at least one of said portions having an upwardly facing edge surface adapted to be underposed with respect to the upper lug, said upper lug extending from the plane of the related upright toward the lower lug, and said background panel structure further having a significance support means.

8. A display sign structure comprising a plurality of horizontally elongated panel structures arranged single fashion vertically, each panel structure having integral interlocking ribs which extend lengthwise of the panel structure intermediate its upper and lower edges in vertically spaced relation to the upper and lower panel structures, said panel structures having upper portions angled forwardly and upwardly and overlapping the lower portions of the panel structure thereabove to provide a continuous background surface, each upper portion having upper edges having a wedge shape beak for removingly mounting thereon associated symbols to form a message support means for the panel structures comprising horizontally spaced uprights, said uprights having respective sets of vertically spaced locking lugs, the lugs of each set comprising an upper lug and a lower lug and the lower lug being angled upwardly and forwardly and springable away from the respective upright, and the ribs each comprising downwardly converging portions adapted to respectively engage the lower lug and the opposing side of the respective upright, at least one of said portions having an upwardly facing edge surface adapted to be underposed with respect to the upper lug, said upper lug extending from the plane of the related upright toward the lower lug, and said background panel member having an upper edge for supporting sign indicia.

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