Aug. 5, 1969 L. N. EDWARDS 3,458,945

DISPLAY SIGN

Filed May 11, 1967

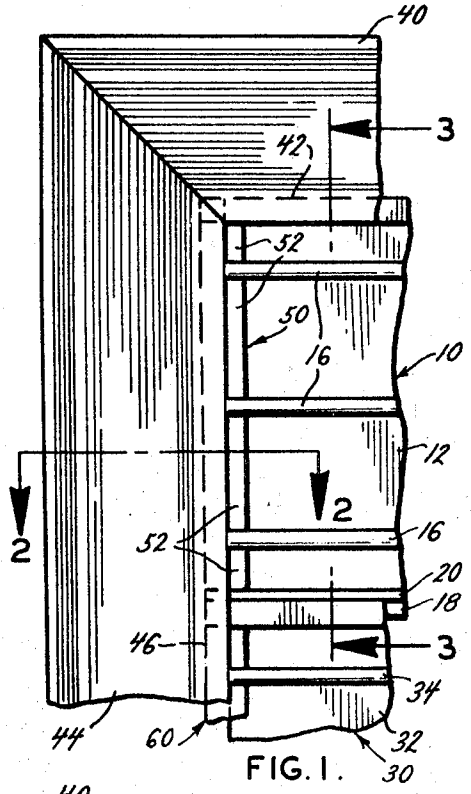



FIG. 1.

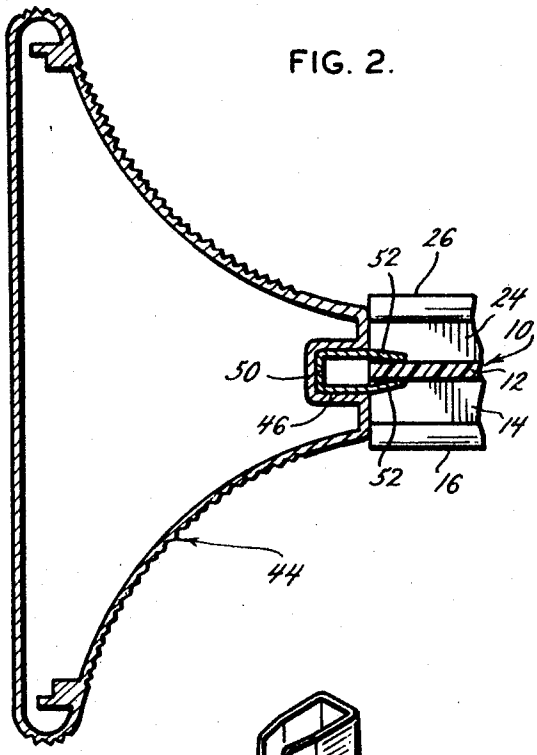



FIG. 2.

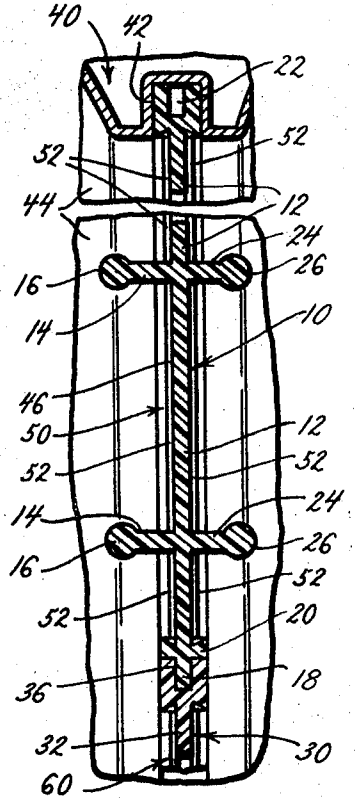



FIG. 3.

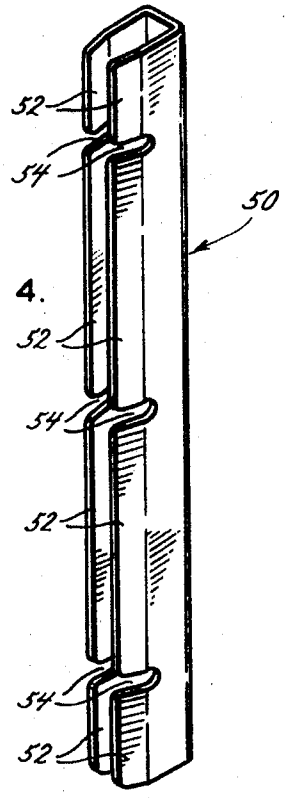



FIG. 4.

United States Patent Office 3,458,945 Patented Aug. 5, 1969



3,458,945

# DISPLAY SIGN

Lindell N. Edwards, St. Louis, Mo., assignor to Commander Board International, Inc., St. Louis, Mo., a corporation of Missouri

Filed May 11, 1967, Ser. No. 637,825
Int. Cl. G09f 7/02
U.S. Cl. 40—140 8 Claims

## ABSTRACT OF THE DISCLOSURE

A panel has formed on its surface a series of longitudinal beaded protuberances to form channels into which indicia bearing elements may be inserted. The upper and lower edges of the panel are formed channels into which indicia bearing elements may be inserted. The upper and lower edges of the panel are formed with cooperating interlocking means engaging the edge of a similar next adjacent panel whereby a plurality of such panels may be secured together to form an extended indicia holding member.

This invention relates to improvements in display signs. More particularly, this invention relates to improvements in display signs which have longitudinally-directed, indicia-supporting protuberances extending outwardly from the opposite faces thereof.

It is, therefore, an object of the present invention to provide an improved display sign which has longitudinally-directed, indicia-supporting protuberances extending outwardly from the opposite faces thereof.

It is frequently desirable to provide display signs which have longitudinally-directed, indicia-supporting protuberances extending outwardly from the opposite faces thereof, because such display signs can provide a desirable three-dimensional effect for interchangeable indicia at the opposite faces thereof. The deeper the longitudinally-directed, outwardly-extending, indicia-supporting protuberances at the opposite faces of a display sign are the more striking the three-dimensional effect afforded by that display sign will be. However, when deep, longitudinally-directed outwardly-extending, indicia-supporting protuberances are formed at the opposite faces of a display sign, it is difficult to fit the opposite ends of that display sign into the holding groove in the supporting frame for that display sign. The present invention makes it possible to provide a display sign with deep, longitudinally-directed, outwardly-extending, indicia-supporting protuberances at the opposite faces thereof, and yet enables the opposite ends of that display sign to be supported by the holding groove in the supporting frame for that display sign. The present invention makes this possible by providing adapters which engage the opposite ends of the display sign and which fit into the holding groove in the supporting frame for that display sign. Those adapters are generally U-shaped in cross section, to enable them to telescope over the opposite ends of the display sign; and they have spaced apart notches in the free ends of the flanges thereof to accommodate the longitudinally-directed, outwardly-extending, indicia-supporting protuberances at the opposite faces of that display sign. It is, therefore, an object of the present invention to provide a display sign that has deep, longitudinally-directed, outwardly-extending, indicia-supporting protuberances at the opposite faces thereof, and that has generally U-shaped, notched adapters which can engage the opposite ends of that display sign and which also can extend into the holding groove in the supporting frame for that display sign.



Other and further objects and advantages of the present invention should become apparent from an examination of the drawing and accompanying description.

It the drawing and accompanying description a preferred embodiment of the present invention is shown and described but it is to be understood that the drawing and accompanying description are for the purpose of illustration only and do not limit the invention and that the invention will be defined by the appended claims.

In the drawing, FIG. 1 is a broken, front elevational view of one preferred embodiment of display sign that is made in accordance with the principles and teachings of the present invention,

FIG. 2. is a sectional view, on a larger scale, through the display sign of FIG. 1, and it is taken along the plane indicated by the line 2—2 in FIG. 1,

FIG. 3 is a broken, sectional view through the display sign of FIG. 1, it is taken on the scale of FIG. 2, and it is taken along the plane indicated by the line 3—3 in FIG. 1, and

FIG. 4 is a perspective view of one preferred embodiment of adapter that is used in the display sign of FIG. 1.

Referring to the drawing in detail, the numeral **10** generally denotes a section of a display sign that is made in accordance with the principles and teachings of the present invention, That section has a wall **12** which is generally rectangular in front elevation; and that section has longitudinally-directed protuberances **14**, in the form of elongated ribs, extending outwardly from the left-hand face of that wall, as that wall is viewed in FIG. 3. Each of those elongated ribs has a generally-cylindrical, indicia-receiving outer edge **16**, as shown particularly by FIG. 3; and those generally-cylindrical, indicia-receiving, outer edges can support the bifurcated ends of clips of the type shown in my Patent No. 3,315,392 for Display Signs which was granted Apr. 25, 1967. A portion of the wall **12** projects downwardly below a flange-like abutment **20** which extends outwardly from both faces of that wall; and that downwardly-projecting portion is denoted by the numeral **18**, and it constitutes a tongue. The upper edge of the wall **12** is as thick as the flange-like abutment **20**; and it has a groove **22** therein. That groove is dimensioned to accommodate the tongue **18** of an abutting, upper section of the display sign; and that groove and that tongue can coact to hold the confronting edges of those abutting sections in register with each other. The numeral **24** denotes further longitudinally-directed protuberances, in the form of elongated ribs, which extend outwardly from the right-hand face of the wall **12**, as that wall is viewed in FIG. 3. Each of the protuberances **24** has a generally-cylindrical, indicia-receiving outer edge **26**, as shown particularly by FIG. 3. The longitudinally-directed protuberances **24** and the generally-cylindrical indicia-receiving outer edges **26** thereof can be identical to the longitudinally-directed protuberances **14** and to the generally-cylindrical, indicia-receiving, outer edges **16** at the left-hand face of the wall **12**.

The numeral **30** generally denotes a further section of the display sign; and that section has a wall **32** and

has longitudinally-directed, outwardly-extending protuberances, not shown, at the opposite faces thereof, and those longitudinally-directed, outwardly-extending protuberances have generally-cylindrical, indicia-receiving outer edges. The generally-cylindrical, indicia-receiving outer edge of one of the longitudinally-directed protuberances of the section **30** is shown in FIG. 1 and is denoted by the numeral **34**. The upper edge of the wall **32** of the section **30** is thick, and a groove **36** is formed therein; and that groove is dimensioned to accommodate the tongue **18** of an abutting, upper section, such as the section **10**.

The numeral **40** generally denotes the top section of the supporting frame for the display sign; and that section has a U-shaped holding groove **42** therein, as shown particularly by FIG. 3. That groove is dimensioned to accommodate and hold the groove-containing thick portion at the upper edge of the uppermost section **10** of the display sign. The bottom section, not shown, of the supporting frame for the display sign will be similar to the section **30**, but it will be inverted. The holding groove in that bottom section will accommodate and hold the abutment **20** and tongue **18** of the lowermost section of that display sign. The numeral **44** generally denotes an end section of the supporting frame; and that section can be similar to the section **40**. The holding groove **46** in the section **44** can be similar to the holding groove **42** in the section **40**; and those holding grooves will be in alignment with each other whenever the sections **44** and **40** are held in assembled relation. The completed supporting frame of the display sign will have a second end section, not shown, corresponding to the section **44**; and that second end section will complete the full rectangular configuration for that supporting frame. The top and bottom sections of the supporting frame will receive and support the top and bottom edges of the assembled sections of the display sign—the thick, grooved portion of the top edge of those assembled sections extending into the holding groove **42** of the top section **40** of the supporting frame, and the flange-like abutment **20** and tongue **18** of the bottom edge of those assembled sections extending into the holding groove of the bottom section of that supporting frame.

The numeral **50** generally denotes an adapter which is U-shaped in cross section, as shown particularly by FIG. 2. The free edges **52** of the flanges of that adapter converge toward each other, as shown particularly by FIGS. 2 and 4; but those free edges are spaced apart to accommodate an end of the wall **12** of the section **10** of the display sign. A similar adapter, not shown, will be provided to accommodate the opposite end of the wall **12** of the section **10**. The closed ends of the adapters **50** are dimensioned to fit snugly within the holding groove **46** of the section **44** and within the corresponding holding groove in the other end section of the supporting frame for the display sign. Spaced-apart notches **54** are formed in the converging edges **52** of the adapter **50**; and those notches are spaced-apart distances which correspond to the spacing between the longitudinally-directed, outwardly-extending protuberances **14** on the section **10** and to the spacing between the longitudinally-directed, outwardly-extending protuberances **24** on that section. As a result, the free edges **52** of the flanges of the adapters **50** can telescope over the opposite ends of the section **10**, and the notches **54** in those free edges can accommodate the ends of the longitudinally-directed, outwardly-extending protuberances **14** and **24** on the wall **12** of that section. The numeral **60** generally denotes an adapter which can be identical to the adapter **50**.

The spacing between the uppermost notches **54** and the upper edge of the adapter **52** will correspond to the spacing between the uppermost longitudinally-directed, outwardly-extending protuberances **14** and **24** and the bottom of the thick, grooved portion at the upper edge of the wall **12** of the section **10**. The spacing between the lowermost notches **54** and the lower edge of the adapter **50** will correspond to the spacing between the lowermost longitudinally-directed, outwardly-extending protuberances **14** and **24** and the flange-like abutment **20** at the lower edge of the wall **12** of the section **10**. As a result, the free edges **52** of the flanges of the adapter **50** will be coextensive with the portion of the end of the wall **12** of the section **10** which is intermediate the thick, grooved upper portion and the flange-like abutment **20** of that section.

In assembling the display sign provided by the present invention, the sections **10** and **30** and any other sections of that display sign will be cut to the same length; and that length will be substantially equal to the length of the inner face of the top section **40** and to the length of the inner face of the bottom section of the supporting frame of the display sign. Thereafter, adapters **50** and **60** will be telescoped over the opposite ends of the sections of the display sign; and the notches **54** in the free edges **52** of the flanges of the adapters **50** will telescope over the ends of the longitudinally-directed, outwardly-extending protuberances **14** and **24** on the section **10**. The notches in the free edges of the flanges of the adapter **60** will telescope over the ends of the corresponding longitudinally-directed, outwardly-extending protuberances on the section **30** and on any further sections of that display sign. Thereafter, the thick, grooved upper portion at the top of the wall **12** of the section **10** will be telescoped into the holding groove **42** in the upper section **40** of the supporting frame, and the adapter **50** at the left-hand end of that section will be fitted into the holding groove **46** in the section **44** of that supporting frame. The ends of the longitudinally-directed, outwardly-extending protuberances **14** and **24** will be moved into abutting engagement with the inner face of the section **44** of the supporting frame, as shown particularly by FIG. 2; and the converging edges **52** of the flanges of the adapter **50** will overlie the joint between that section of the supporting frame and the adjacent end of the section **10** of that display sign. After the adapter **50** is moved into the holding groove **46** in the section **44** of the supporting frame, the adapters **60** on the left-hand end of the section **30** and on the left-hand ends of any further sections of that display sign will be moved into that holding groove. The converging edges of the flanges of those adapters will overlie the joints between the section **44** of the supporting frame and the adjacent ends of those sections of the display sign.

Once the various sections of the display sign have been assembled with the sections **40** and **44** of the supporting frame for that display sign, the bottom section of that supporting frame will have the holding groove therein telescoped upwardly over the tongue **18** and flange-like abutment **20** of the lowermost section of that display sign. Thereafter, that lower section of that supporting frame will be suitably secured to the section **44** of that supporting frame. At this time, adapters **50** and **60** will be telescoped over the right-hand ends of the various sections of the display sign; and then the holding groove in the right-hand section of the supporting frame for that display sign will be telescoped over the webs of those adapters. The converging edges of the flanges of those adapters will overlie the joints between that right-hand section of that supporting frame and the adjacent ends of the various sections of the display sign. Thereupon, that right-hand section of that supporting frame will be secured to the top and bottom sections of that supporting frame.

By using the adapters **50** and **60**, any and all need of cutting away end portions of the longitudinally-directed, outwardly-extending, indicia-supporting protuberances **14** and **24** on the section **10**, and of cutting away end portions of the corresponding longitudinally-directed, outwardly-extending, indicia-supporting protuberances on the sec-

tion 30 and on the other sections of the display sign is obviated. Also, by using those adapters, full support is provided for the ends of each of the sections of the display sign. In addition, by using those adapters, unsightly gaps between the ends of the various sections of the display sign and the adjacent end sections of the supporting frame for that display sign are obviated.

The free edges of the flanges of the adapter 50 will preferably be spaced apart a distance less than the thickness of the wall 12 of the section 10. Similarly, the free edges of the flanges of the adapter 60 will preferably be spaced apart a distance less than the thickness of the wall 32 of the section 30. The webs of those adapters will be narrower than the holding groove 46 in the end section 44 of the supporting frame and will be narrower than the holding groove in the other end section of that supporting frame; but the flanges of those adapters will diverge outwardly from those webs and from each other. The outer faces of those diverging flanges will engage, and will be pressed toward each other by, the sides of the holding grooves in the end sections of the supporting frame; and, as those outer faces of those diverging flanges are pressed toward each other, they will press the free edges of those flanges into intimate engagement with the opposite faces of the walls of the sections of the display sign. The overall result is that the adapters 50 and 60 will be held snugly within the holding grooves in the end sections of the supporting frame of the display sign, and the ends of the sections of that display sign will be snugly held by the free edges of those adapters.

The adapters 50 and 60 are shown as being used with sections of a display sign that have longitudinally-directed, indicia-supporting protuberances extending outwardly from both faces thereof; and those adapters are particularly well suited for that use. If desired, however, those adapters could be used with sections of a display sign which had longitudinally-directed, indicia-supporting protuberances extending outwardly from just one of the faces of those sections. Further, if desired, the notches 54 in one of the converging edges of each of the adapters 50 and 60 could be widened to make the intervening portions of that one converging edge quite narrow; and, in such event, those intervening portions of that one converging edge would serve as supporting fingers rather than as section-supporting light baffles.

The longitudinally-directed, indicia-supporting, outwardly-extending protuberances 14 on the section 10 are spaced apart uniform distances, and, similarly, the longitudinally-directed, indicia-supporting, outwardly-extending protuberances 24 on that section are spaced apart uniform distances; and those distances are the same. Further the sum of the distances between the uppermost longitudinally-directed, indicia-supporting, outwardly-extending protuberance 14 or 24 and the top edge of the section 10 plus the distance between the lowermost longitudinally-directed, indicia-supporting, outwardly-extending protuberance 14 or 24 and the bottom of the flange-like abutment 20 on that section is equal to the uniform distance between adjacent longitudinally-directed, indicia-supporting, outwardly-extending protuberances 14 or 24. This means that all of the longitudinally-directed, indicia-supporting, outwardly-extending protuberances at one face of the display sign will be spaced apart uniform distances, and that all of the longitudinally-directed, indicia-supporting, outwardly-extending protuberances at the opposite face of that display sign will be spaced apart that same distance. This is important; because it enables indicia-supporting clips, which are spaced apart fixed distances, to be secured to various of the longitudinally-directed, indicia-supporting, outwardly-extending protuberances at either face of the display sign.

The section 10, the section 30, and the other sections of the display sign will preferably be extruded from a sturdy, weather-resistant plastic material. Where those sections are so made, they will be relatively inexpensive and will have closely-controlled dimensions.

The longitudinally-directed, indicia-supporting, outwardly-extending protuberances 14 of the section 10 are in register with the longitudinally-directed, indicia-supporting, outwardly-extending protuberances 24 of that section. Similarly, the longitudinally-directed, inidcia-supporting, outwardly-extending protuberances at the opposite faces of the section 30 and of the other sections of the display sign will be in register with each other. This is desirable; because it will permit any of those sections to be turned end for end without changing the spacing between adjacent longitudinally-directed, indicia-supporting, outwardly-extending protuberances of adjacent sections of the display sign.

Whereas the drawing and accompanying description have shown and described a preferred embodiment of the present invention, it should be apparent to those skilled in the art that various changes may be made in the form of the invention without affecting the scope thereof.

What I claim is:

1. A display sign which has a plurality of sections and wherein each of said sections comprises:
- a wall that is stiff and substantially unyielding,
- a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from one of the faces of said wall,
- said longitudinally-directed, indicia-supporting protuberances being stiff and substantially unyielding,
- said longitudinally-directed, indicia-supporting protuberances being elongated ribs with generally cylindrical outer ends dimensioned to support the bifurcated ends of clips on indicia,
- said longitudinally-directed, indicia-supporting protuberances being spaced apart vertically along said one face of said wall so the vertical distances between adjacent longitudinally-directed, indicia-supporting protuberances are uniform,
- a surface at the upper edge of said wall which is formed and dimensioned to accommodate a complementary surface at the lower edge of the wall of an overlying, abutting section, and
- a surface at the lower edge of said wall which is formed and dimensioned to be complementary to said surface at said upper edge of said wall and which will accommodate a surface at the upper edge of the wall of an underlying abutting, section,
- whereby a plurality of said sections can be interconnected by said surfaces to constitute a substantially continuous wall that has a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from one of the faces thereof,
- the uppermost of said longitudinally-directed, indicia-supporting protuberances being spaced from said upper edge of said wall a predetermined distance and the lowermost of said longitudinally-directed, indicia-supporting protuberances being spaced from said lower edge of said wall a second predetermined distance,
- the sum of the first said predetermined distance and of said second predetermined distance equaling said spacing between adjacent longitudinally-directed, indicia-supporting protuberances,
- whereby said plurality of sections automatically provide uniform spacings between the confronting longtiudinally-directed indicia-supporting protuberances thereof whenever said sections are assembled together.

2. A display sign which has a plurality of sections and wherein each of said sections comprises:
- a wall that is stiff and substantially unyielding,
- a plurality of longtiudinally-directed, indicia-supporting protuberances extending outwardly from one of the faces of said wall,
- said longitudinally-directed, indicia-supporting protuberances being stiff and substantially unyielding,

said longtiudinally-directed, indicia-supporting protuberances being elongated ribs with generally cylindrical outer ends dimensioned to support the bifurcated ends of clips on indicia,

said longitudinally-directed, indicia-supporting protuberancees being spaced apart vertically along said one face of said wall so the vertical distances between adjacent longitudinally-directed, indicia-supporting protuberances are uniform,

a surface at the upper edge of said wall which is formed and dimensioned to accommodate a complementary surface at the lower edge of the wall of an overlying, abutting section, and

a surface at the lower edge of said wall which is formed and dimensioned to be complementary to said surface at said upper edge of said wall and which will accommodate a surface at the upper edge of the wall of an underlying abutting, section,

whereby a plurality of said sections can be interconnected by said surfaces to constitute a substantially continuous wall that has a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from one of the faces thereof,

the uppermost of said longitudinally-directed, indicia-supporting protuberances being spaced from said upper edge of said wall a predetermined distance and the lowermost of said longitudinally-directed, indicia-supporting protuberances being spaced from said lower edge of said wall a second predetermined distance,

the sum of the first said predetermined distance and of said second predetermined distance equaling said spacing btween adjacent longitudinally-directed, indicia-supporting protuberances,

whereby said plurality of sections automatically provide uniform spacings between the confronting longitudinally - directed, indicia - supporting protuberances thereof whenever said sections are assembled together,

a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from the opposite face of said wall of each said section,

the spacing between adjacent longitudinally-directed, indicia-supporting, outwardly-extending protuberances at said opposite face of said wall being uniform, and

said longitudinally-directed, indicia-supporting protuberances which extend outwardly from said opposite face of said wall being in register with said longitudinally-directed, indicia-supporting protuberances which extend outwardly from said one face of said wall,

whereby a section of said display sign can be turned end for end without changing the spacing between adjacent longitudinally-directed, indicia-supporting protuberances.

3. In a display sign that has a wall with a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from one of the opposite faces thereof and which has a supporting frame with a holding groove therein, the improvement which comprises:

adapters that telescope over the opposite ends of said wall and that extend into said groove in said supporting frame,

said adapters having notches therein to accommodate the ends of said longitudinally-directed, indicia-supporting protuberances which extend outwardly from said one face of said display sign.

4. In a display sign that has a wall with a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from one of the opposite faces thereof and which has a supporting frame with a holding groove therein, the improvement which comprises:

adapters that telescope over the opposite ends of said wall and that extend into said groove in said supporting frame,



said adapters having notches therein to accommodate the ends of said longitudinally-directed, indicia-supporting protuberances which extend outwardly from said one face of said display sign,

the ends of said longitudinally-directed, indicia-supporting protuberances being immediately adjacent confronting faces of sections of said supporting frame, and

said adapters spanning the gaps between said confronting faces of said sections of said supporting frame and the ends of said wall.

5. In a display sign that has a wall with a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from one of the opposite faces thereof and which has a supporting frame with a holding groove therein, the improvement which comprises:

adapters that telescope over the opposite ends of said wall and that extend into said groove in said supporting frame,

said adatpers having notches therein to accommodate the ends of said longitudinally-directed, indicia-supporting protuberances which extend outwardly from said one face of said display sign.

said adapters being generally U-shaped in cross section,

the webs of said adapters extending into the holding grooves of said sections of said supporting frame, and

the flanges of said adapters accommodating the ends of said wall.

6. In a display sign that has a wall with a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from one of the opposite faces thereof and which has a supporting frame with a holding groove therein, the improvement which comprises:

adapters that telescope over the opposite ends of said wall and that extend into said groove in said supporting frame,

said adapters having notches therein to accommodate the ends of said longitudinally-directed, indicia-supporting protuberances which extend outwardly from said one face of said display sign,

said adapters having flanges that overlie portions of the ends of said one and said opposite faces of said wall, and

the holding grooves of said sections of said supporting frame urging said flanges of said adapters into intimate engagement with said portions of the ends of said one and said opposite faces of said wall.

7. In a display sign that has a wall with a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from one of the opposite faces thereof and which has a supporting frame with a holding groove therein, the improvement which comprises:

adapters that telescope over the opposite ends of said wall and that extend into said groove in said supporting frame,

said adapters having notches therein to accommodate the ends of said longitudinally-directed, indicia-supporting protuberances which extend outwardly from said one face of said display sign,

said adapters having flanges that overlie portions of the ends of said one and said opposite faces of said wall, and

said flanges having notches therein that accommodate the ends of said longitudinally-directed, indicia-supporting protuberances.

8. In a display sign that has a wall with a plurality of longitudinally-directed, indicia-supporting protuberances extending outwardly from one of the opposite faces thereof and which has a supporting frame with a holding groove therein, the improvement which comprises:

adapters that telescope over the opposite ends of said wall and that extend into said groove in said supporting frame,

said adapters having notches therein to accommodate the ends of said longitudinally-directed, indicia-supporting protuberances which extend outwardly from said one face of said display sign,

said adapters being generally U-shaped in cross section, the webs of said adapters extending into the holding grooves of said sections of said supporting frame, the flanges of said adapters accommodating the ends of said wall, and

said flanges having notches therein that accommodate the ends of said longitudinally-directed, indicia-supporting protuberances.



**References Cited**

UNITED STATES PATENTS

| | | | |
|---|---|---|---|
| 2,802,291 | 8/1957 | Bach et al. | 40—64 |
| 2,847,777 | 8/1958 | Page | 40—63 |
| 3,337,978 | 8/1967 | Weeks | 40—63 |

FOREIGN PATENTS

| | | |
|---|---|---|
| 187,079 | 10/1922 | Great Britain. |

EUGENE R. CAPOZIO, Primary Examiner

WENCESLAO J. CONTRERAS, Assistant Examiner