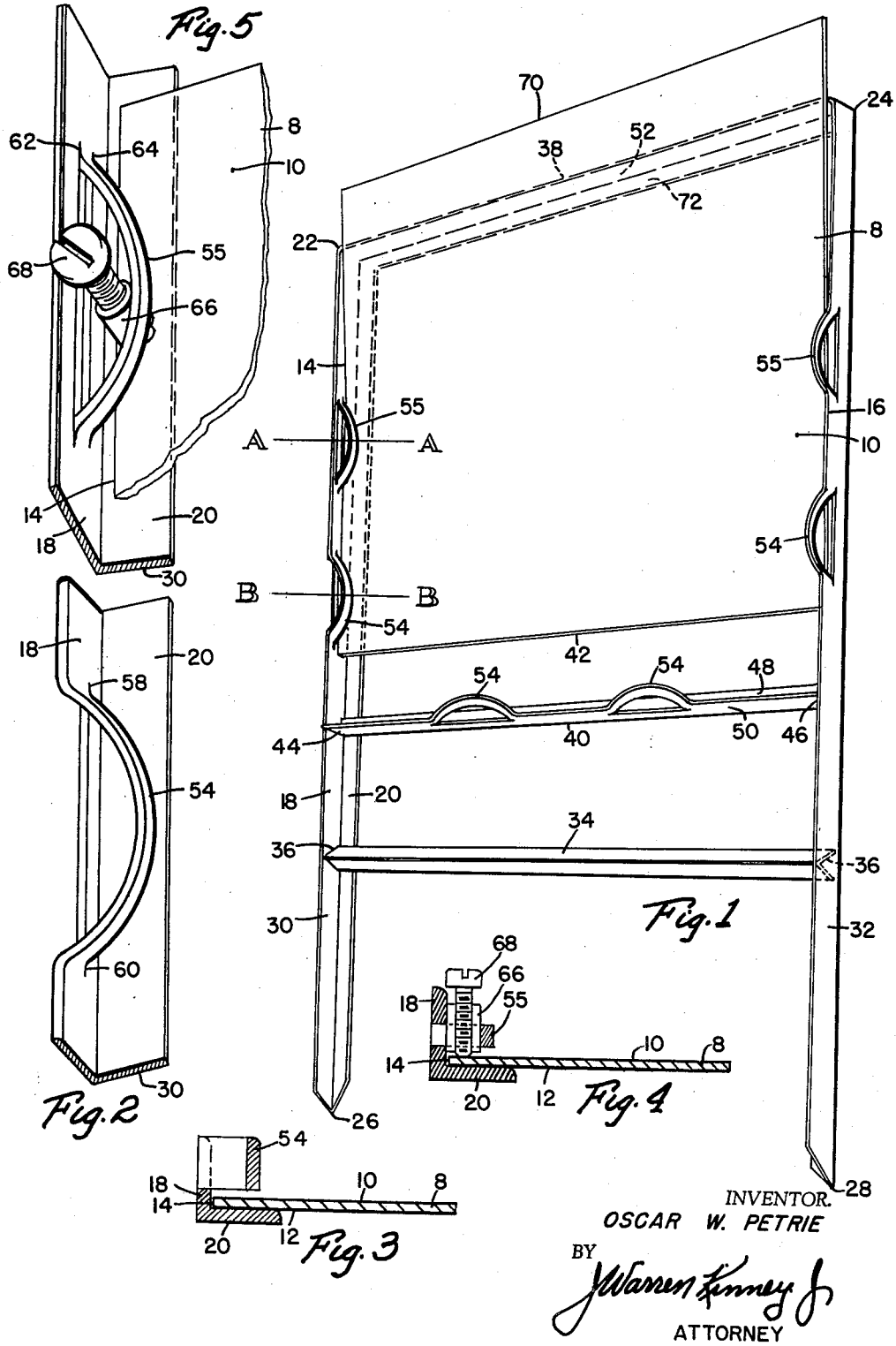
May 12, 1964 O. W. PETRIE 3,132,431

SIGN FRAME

Filed May 3, 1961



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United States Patent Office 3,132,431 Patented May 12, 1964

3,132,431

SIGN FRAME

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Filed May 3, 1961, Ser. No. 107,432
1 Claim. (Cl. 40—125)

The present invention relates to an advertising sign or similar structure which includes a panel to be exhibited within a frame.

An object of the invention is to provide in an advertising sign structure or the like, simple and inexpensive means for applying a panel to a supporting frame, and securely though detachably retaining the panel therein against accidental displacement.

Another object of the invention is to provide a frame and panel structure which may be inexpensively produced, and assembled with extraordinary ease and dispatch, so that the structure may be located and placed at a selected site without undue delay and laborious effort.

A further object is to provide a device of the character stated which is structurally strong, pleasing in appearance, and capable of re-use in different environments with a change of panels whenever desired.

The foregoing and other objects are attained by the means described herein and illustrated upon the accompanying drawing, in which:

FIG. 1 is a perspective view of the device of the invention, showing a panel in process of application.

FIG. 2 is a fragmentary perspective cross-section on an enlarged scale, taken through the frame on line A—A of FIG. 1, the sign panel being omitted.

FIG. 3 is an enlarged cross-sectional view taken on line B—B of FIG. 1.

FIG. 4 is a view similar to FIG. 3, showing a modification.

FIG. 5 is an enlarged perspective view partly in cross-section, showing the modified structure of FIG. 4.

The device of the invention is subject to various uses, including performance as an advertising sign, bulletin board, marker, direction indicator, and the like. When used as an advertising sign, the panel **8** may carry suitable lettering, symbols, or illustrations painted or otherwise applied to one or both of its plane faces **10** and **12** to be exhibited or exposed to view. The panel **8** may be of any suitable material having slight flexibility for limited bending, examples of such material being sheet metal, plywood, composition pressed board, paper board, and the like, depending upon the service and exposure requirements. The panel illustrated herein by way of example is rectangular and of uniform thickness, with substantially parallel side edges **14** and **16**.

Panel **8** is adapted for support within a circumferential frame constructed preferably of metal angle stock, the legs of the angle material being indicated at **18** and **20**, and arranged at right angles to one another. In the preferred construction, a single length of angle stock is bent to substantial inverted U-shape, providing upper corners **22** and **24**, and lower spiked or pointed terminal ends **26** and **28** arranged in spaced substantial parallelism. The spiked ends may be pushed or driven into the earth for holding the sign structure in upright position.

At a distance from the spiked ends of the angle member uprights or side members **30** and **32**, a reinforcing cross member **34** may be applied thereto by welding or otherwise at the ends **36**, to serve as a stop for limiting the extent to which the spiked ends **26** and **28** may be driven into the earth. The ends of the cross member may be conveniently welded to the legs of both uprights **30** and **32**, thereby providing a rigid and durable frame structure. The cross member by preference is parallel to the header **38** at the top of the frame, and may serve

as a step upon which the weight of a man may be applied for driving the spikes into the earth.

Intermediate the header **38** and the cross member **34** is fixed a transverse sill **40** upon which the lower edge **42** of panel **8** may rest, the sill being formed preferably of angle iron stock having opposite ends **44** and **46** welded to the legs of uprights **30** and **32** at equal distances above cross member **34**. Leg **48** of the sill member abuts the inner faces **20** of the uprights **30** and **32**, whereas the leg **50** thereof parallels the horizontal top leg **52** of the header. The confining legs of the header, the sill, and the uprights thereby form a well to receive panel **8**, with one face of the panel resting against those legs of the frame which are coplanar.

In order to preclude lateral displacement of the panel from the well, a series of inwardly projecting stops or abutments **54** and **55** are provided in the legs **30** and **32** of the frame uprights, and preferably also in leg **50** of sill member **40**, the stops or abutments being spaced from the coplanar legs of the frame parts a distance exceeding the panel thickness (FIG. 3). The distance measured between a stop of one upright member, and a correspondingly located stop of the other upright member, is to be less than the width of panel **8**, to prevent lateral displacement of the panel. Also, the distance measured between the stops **54** of sill member **40** and the leg **52** of header **38** is to be less than the height of the panel, for the same purpose.

Referring first to the stops or abutments **54**, as distinguished from those at **55**, attention is directed to FIGS. 2 and 3 wherein it will be noted that stop **54** is produced by initially slitting the metal of leg **18** between the points **58** and **60** at a distance from the free edge of the leg, and then deforming the strap thereby produced by stretching the metal inwardly in the direction of the plane of leg **20**. This involves a simple and inexpensive forming die operation which is highly effective and instantaneous. All of the stops or abutments **54** may be readily formed in this manner.

The stops or abutments **55** are formed with a slight difference, in that the straps constituting them (FIGS. 4 and 5) are produced by initially cutting two parallel slits **62** and **64** within the width of leg **18**, and then deforming the intervening metal by stretching it inwardly in the direction of the plane of leg **20**. By this procedure, an opening is formed between the strap and the leg from which it was struck, to receive a hollow bushing or anchor member **66** firmly driven into the opening and adapted to accommodate a self-threading screw **68** as shown. FIGS. 4 and 5 clearly indicate how the screw may be advanced through the fixed bushing **66** to impinge upon and anchor the panel **8** against leg **20** of the adjacent angle member, to prevent displacement of the panel from the frame.

If desired, the bushing or anchor member **66** may be omitted in the construction of FIGS. 4 and 5, in which event the threaded shank of a self-tapping screw or bolt would engage the adjacent faces of straps **55** and the leg from which it was struck.

It is to be understood that the frame may be provided with stops of the FIG. 4 type, either totally or partially, or if preferred, all the stops or abutments may be of the simpler type illustrated by FIGS. 2 and 3 involving no locking means. In the example of FIG. 1, only two of the stops or abutments are of the locking type, as indicated at **55** at opposite sides of the frame, whereas the remaining stops **54** are of the non-locking type. The number and the arrangement of locking and non-locking stops or abutments employed may be considered a matter of choice or judgment, dependent upon the nature of the service required.

As FIG. 1 indicates, the panel **8** by slight bending may

be advanced downwardly past header **38**, to slide between the coplanar legs of the frame and the several stops of abutments **54** and **55**, until the lower edge of the panel rests upon the horizontal leg **50** of sill **40**. When so advanced to the home position, the top edge **70** of the panel will flip forwardly against the depending vertical leg **72** of header **38**, so that upward displacement of the panel is prevented by the horizontal leg **52** which overlies the panel top edge. The panel having been thusly positioned, and confined by the coplanar legs of the angle members **30**, **32**, **40** and **38**, may, if desired, be locked in place by using the bushings **66** and screws **68** as previously explained.

In the event that the frame is to be supported otherwise than by driving its spiked ends **26** and **28** into the earth, the spiked ends and the stop bar **34** may be omitted from the structure whereupon sill **40** may constitute the lowermost element of the frame.

If desired, the bushings **66** may be internally prethreaded to receive a suitable locking screw. Also, the parts **30**, **32**, and **38**, instead of being integral, may be assembled as separate pieces welded or otherwise joined at their ends to form a panel-confining frame. Various other modifications and changes in the structural details of the device may be resorted to, within the scope of the appended claim, without departing from the spirit of the invention.

What is claimed is:

In a sign structure, a frame to support a sign panel having upper, lower and side edges, said frame including spaced parallel uprights of angle stock, a header and a sill member of angle stock, the header joining top ends of said uprights and the sill joining the uprights below and in spaced parallel relation with the header, the header, sill and uprights forming a well for accommodating a sign panel, the said angle stock providing the header, uprights and sill member each with a pair of legs disposed at right angles to one another, with corresponding legs thereof in a substantially common plane and having forwardly facing surfaces to support the panel along marginal portions of the upper, lower, and side edges thereof, the remaining legs projecting forwardly from said forwardly facing surfaces to extend across the panel edges, said remaining legs of the uprights each being slitted longitudinally to provide a strap and the strap being inwardly offset from the material of the said remaining legs to form an abutment means lying in a plane in parallel relation with and spaced forwardly from said forwardly facing surfaces of the said corresponding legs to intercept forward displacement of a panel inserted between such abutment means and the said forwardly facing surfaces, an elongate threaded element, and means operatively supporting the threaded element between the said strap and the adjacent slitted leg for threaded reciprocation relative to the adjacent forwardly facing surface to engage an inserted panel for locking the panel against said forwardly facing surface of the adjacent said corresponding leg, the slitting of each of said remaining legs of the uprights being along adjacent parallel lines and the material between said lines forming the said inwardly offset strap, and the said means operatively supporting said threaded element comprising an axially bored bushing secured between said strap and portions of the adjacent said remaining leg on both sides of said strap, the said bushing being directed toward but terminating short of the adjacent forwardly facing surface.

References Cited in the file of this patent

UNITED STATES PATENTS

1,581,981	Phelps	Apr. 20, 1926
2,027,790	Schneider	Jan. 14, 1936
2,872,750	Holcomb	Feb. 15, 1959