United States Patent [19]

Freeman et al.

[11] **3,778,915**

[45] **Dec. 18, 1973**

[54] **FRAME ASSEMBLY KIT**

[76] Inventors: **George Freeman; Patricia V. Freeman,** both of 2051-43rd Ave., San Francisco, Calif.

[22] Filed: **June 23, 1972**

[21] Appl. No.: **265,870**

[52] **U.S. Cl.** ..... **40/125 R,** 40/128, 40/140, 40/142 R

[51] **Int. Cl.** **G09f 07/08**

[58] **Field of Search** ..... 40/140, 142 R, 125 R, 40/128, 152, 16–18

[56] **References Cited**

UNITED STATES PATENTS

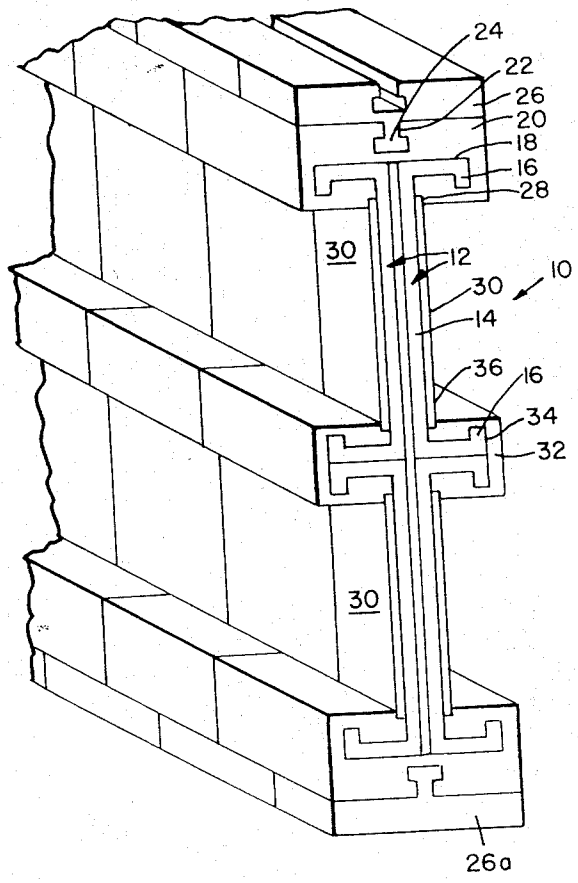
3,208,170	9/1965	Madey	40/140 X
3,154,870	11/1964	Hopp et al.	40/140 X
2,976,634	3/1961	Ashley et al.	40/140 X

Primary Examiner—Robert W. Michell
Assistant Examiner—John F. Pitrelli
Attorney—Stephen S. Townsend et al.

[57] **ABSTRACT**

A frame assembly kit that can be readily assembled and re-assembled to provide for changes in shape and size of display area required. Provisions are included for utilizing indicia emitting light of fluorescent wave length.

11 Claims, 4 Drawing Figures



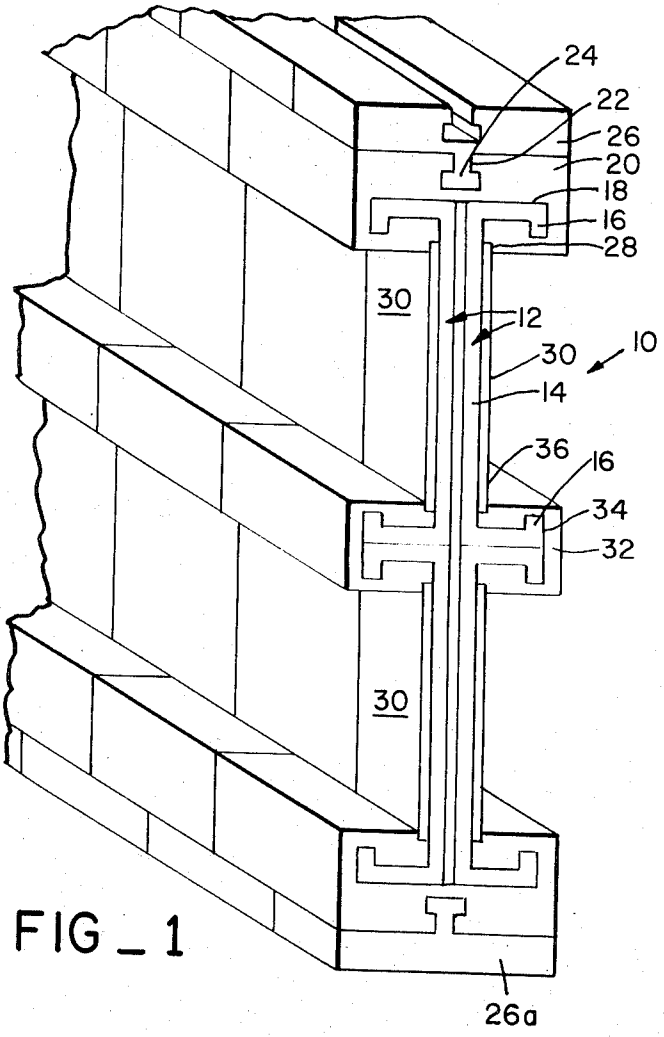


FIG_1

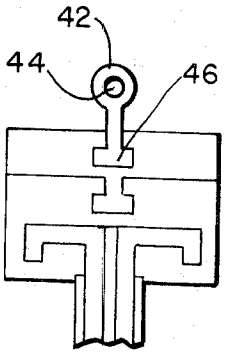


FIG_3

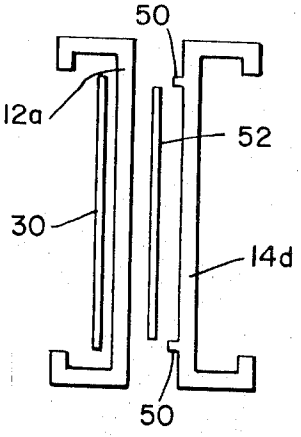


FIG_4

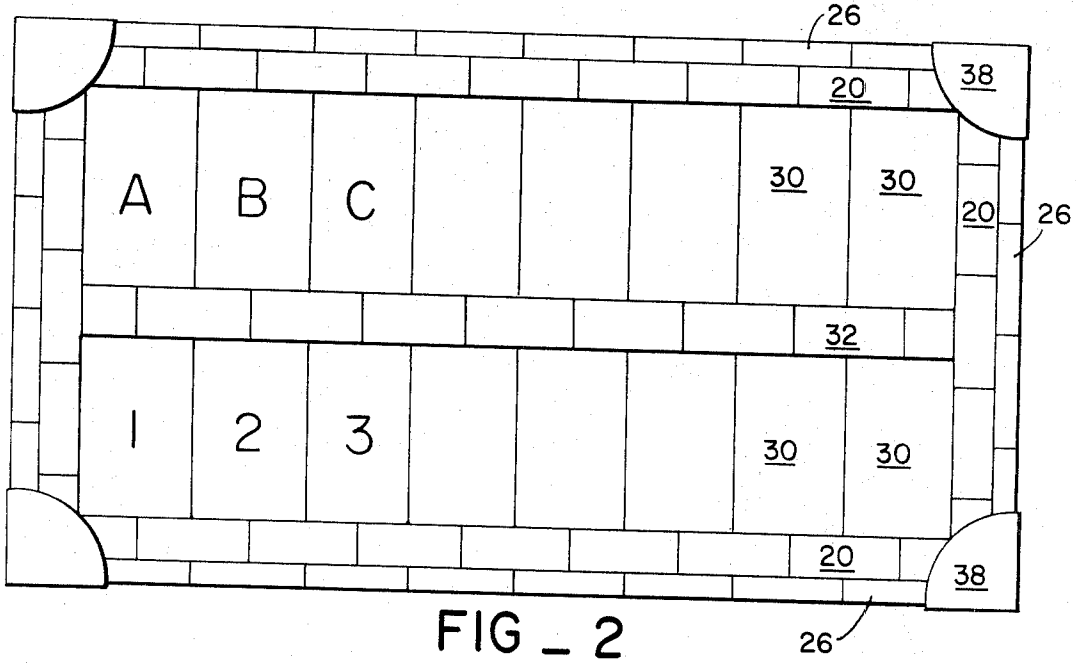


FIG_2

FRAME ASSEMBLY KIT

This invention relates to a frame assembly kit that can be varied in shape and size to accommodate a broad selection of displays and/or indicia.

Both business and residential needs involve the display of information that may vary quantitatively, periodically or even as frequently as from day to day. Typical examples include residence address signs, truck panels and the like. In retail stores particularly, it is desirable to identify various articles of merchandise by both name and price in conspicuous locations for customer enlightenment. Since such information may change frequently, the supporting medium for the letters, characters and/or numerals making up the sign should not only be capable of enlargement or contraction in accordance with the amount of information to be displayed, but it should be constructed to make it possible to easily replace, re-assemble, or change the relative positions of such letters, characters and/or numerals.

The present invention is directed to a display assembly embodying a novel supporting frame adapted to receive a plurality of correspondingly shaped indicia-bearing members, the supporting frame comprising a number of elements that are detachably secured to one another. The frame assembly is capable of being increased in area by addition of either vertical or lateral elements, thereby making it possible to add to the overall dimensions of the display. The novel frame of this invention embodies a construction which not only securely supports the indicia-bearing elements, but permits the convenient removal, substitution and addition of the indicia-bearing elements when the informative material of the display is changed.

These and other objects and advantages of the present invention will become apparent from a reading of the following description. In the accompanying drawings,

FIG. 1 is a perspective end view of one form of assembling the frame assembly;

FIG. 2 is a front view of a completely assembled frame;

FIG. 3 is a side view illustrating a manner of attaching the assembly to a further supporting structure; and

FIG. 4 is a further embodiment of this invention.

Referring specifically to the drawings, wherein similar characters of reference represent corresponding parts in each of the several views, display assembly **10** made in accordance with the present invention is shown to be partially fabricated of identically shaped paired display elements **12.** Each element **12** includes a face plate **14** and a pair of laterally outwardly extending L-shaped edge projections **16** arranged as mirror images in cross-section. Projections **16** extend across the entire width of element **12** and are intended to mate with correspondingly shaped slots **18** in inner frame element **20.**

Inner frame element **20** also includes an elongated slot **22** for further mating engagement with male projection **24** extending for outer frame element **26.** Each of the frame elements **20** and **26** are of some standard length and half-lengths such as about three and six inches, so that they can be staggered (overlapped) so as to provide a self-supporting frame of only incremental size, for holding a plurality of pairs of display elements **12.** Display elements **12** are preferrably provided in widths corresponding to the lengths of frame elements **20** and **26.** Of course, elements **12** can also be of any lesser or greater width. Inner frame element **20** is further provided with an elongated recess **28** of sufficient size to receive and retain indicia-bearing elements **30.** As a preferred alternative, elements **12** and **30** can be formed as a single member with indicia embossed and/or presented on the exposed surface thereof.

The second L-shaped projection **16** of each member **12** is adapted to be inserted into corresponding grooves **34** in interlocking element **32,** having an opening corresponding in cross section to the cross section of two L-shaped projections **16** abutting along the leg connected to face plate **14.** Element **32** is also provided with corresponding recesses **36,** corresponding in shape to recess **28,** for receiving and retaining the other extremity of indicia-bearing element **30.**

As can be seen most clearly from FIG. **2,** through interconnection of various of elements **20, 26, 30** and **32,** a frame assembly having two rows (or more) of indicia can be fabricated. Furthermore, for aesthetic effect, overlapping corner members **38** are provided to retain additional sections of frame assembly composed of interlocking frame elements **20** and **26** therebetween.

Referring to FIG. **3,** support ring **42** is provided with an extension **46** for mating with a slot in outer frame member **26** so that the whole structure can be suspended from an overhead support such as a ceiling or guide wires. Alternatively, element **26a** can be fabricated without the slot as illustrated at the lower portion of FIG. **1.**

Turning now to FIG. **4,** a further embodiment of this invention is illustrated wherein one of the elements **12** is provided with a face plate **14*d*** having a pair of lateral extensions **50** for retaining a fluorescent member **52.** Front element **30** is made of a transparent protective material. Element **12A** constitutes the indicia-bearing surface and is formed with openings corresponding to the indicia desired to reveal fluorescence through the openings therein corresponding to the shape of the indicia desired.

The various component parts of the foregoing assembly can be formed to tightly fit together, yet be assembled, disassembled and re-assembled. Alternatively, permanent construction can be obtained by utilizing various conventional adhesives or by riveting or soldering and the like. The various components can be formed of contrasting colors to create an eye-appealing appearance. The assembly kit of this invention can be utilized to form more than one display area. Furthermore, the plurality of display areas can be interlocked by hooks and other female and male elements either at top or bottom in addition to support ring **42.**

Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it will be obvious that certain changes and modifications may be practiced within the scope of the invention, as limited only by the scope of the appended claims.

I claim:

1. A frame assembly for providing an indicia display, said assembly comprising:

a first plurality of display elements, each said display elements including an indicia bearing member, each said display element having first and second complementarily configured L-shaped end portions extending along the width thereof, said elements being arranged in a row;

first and second groups of inner frame elements each having a mortise of complementary configuration to said first and second L-shaped end portions of said display elements extending along the width thereof, said mortise providing an open slot along a first face of said inner element, each said inner frame element having a fastening means extending along a second face generally opposite said first face, said first and second groups being arranged in two rows substantially parallel to said row of display elements, said first and second L-shaped end portions of each of said display elements being received in the mortises of adjacent inner frame elements of said first and second groups respectively so that said inner frame elements overlap the boundary between adjacent display elements; and

first and second groups of outer frame elements each having attachment means extending along a first face thereof and having a configuration complementary to said fastening means, said attachment means of said outer frame elements of said first and second groups being engaged with the fastening means of adjacent inner frame elements of said first and second groups respectively so that said outer frame elements overlap the boundary between adjacent inner frame elements.

2. The apparatus of claim **1** wherein said fastening means comprises a channel along the width of said inner frame element, said channel having a narrowed neck portion, and said securing means comprises a male projection extending outwardly of said first outer frame element surface and having an enlarged head portion wider than said neck portion and received in said channel.

3. The apparatus of claim **1** wherein said outer frame elements of at least one of said groups are further provided with mounting means adapted to be engaged by a mounting member.

4. The apparatus of claim **3** wherein said mounting means comprises a channel extending along the width of said outer frame element, said channel having a narrowed neck portion.

5. The apparatus of claim **1** wherein said display elements, said inner frame elements and said outer frame elements have substantially identical widths.

6. The apparatus of claim **1** wherein said outer frame elements and said display elements are aligned with their edges substantially coplanar.

7. The apparatus of claim **1** wherein said indicia bearing members have first and second end portions, and said open slots provided by said mortises of opposed ones of said inner frame elements each having a notch therealong for receiving said first and second end portions respectively for retaining said indicia bearing member.

8. The apparatus of claim **1** further including a second plurality of display elements each having first and second complementary configured L-shaped end portions extending along the width thereof and received in the mortises of adjacent inner frame elements of said first and second groups of inner frame elements respectively, said second plurality of display elements being arranged in back to back relation to said first plurality of display elements.

9. The apparatus of claim **8** wherein said display elements of said first plurality include a facing member having first and second end portions, and said open slot provided by said mortises of opposed ones of said inner frame elements each having a notch therealong for receiving said first and second end portions respectively for retaining said facing member;

said first and second L-shaped end portions of said display elements being joined by an intermediate portion having a rear wall surface, the intermediate portion of said display elements of said first plurality being provided with light transmitting indicia, the rear wall surface of said display elements of said second plurality having retaining means; and further including means sandwiched between said first and second plurality of display elements in cooperation with said retaining means for transmitting the light to said indicia.

10. The apparatus of claim **1** wherein each of said display elements comprises first and second double L-shaped component members and a coupling member having a T-shaped mortise extending along the width thereof, said component members being juxtaposed with abutting L-shaped ends thereof received in said T-shaped mortise.

11. The apparatus of claim **10** further including a second plurality of display elements substantially similar to said first plurality of display elements and arranged in back to back relation thereto.

* * * * *