Sept. 27, 1966 R. G. CAMPBELL 3,275,818

DISPLAY MEANS

Filed Aug. 26, 1964

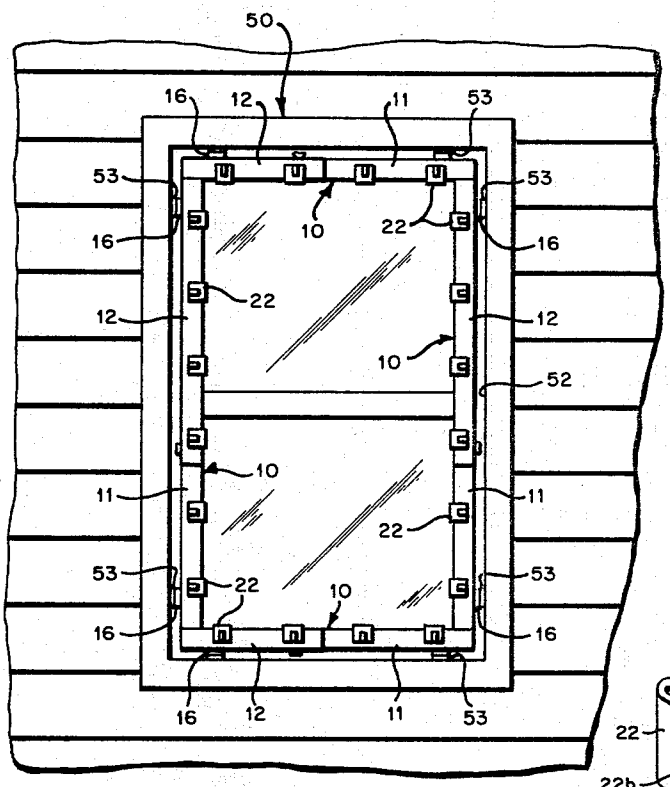

Fig. 1

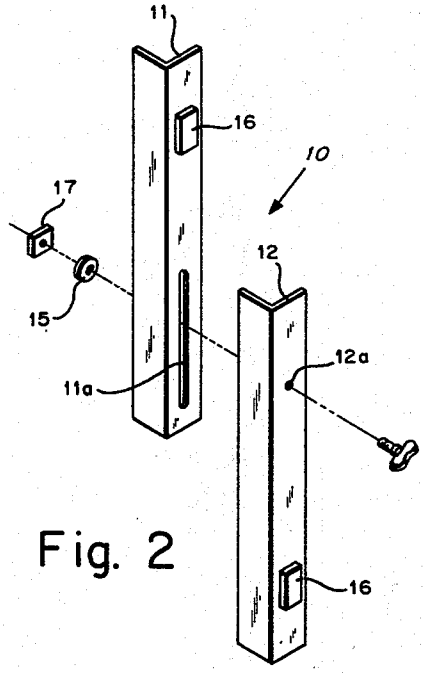

Fig. 2

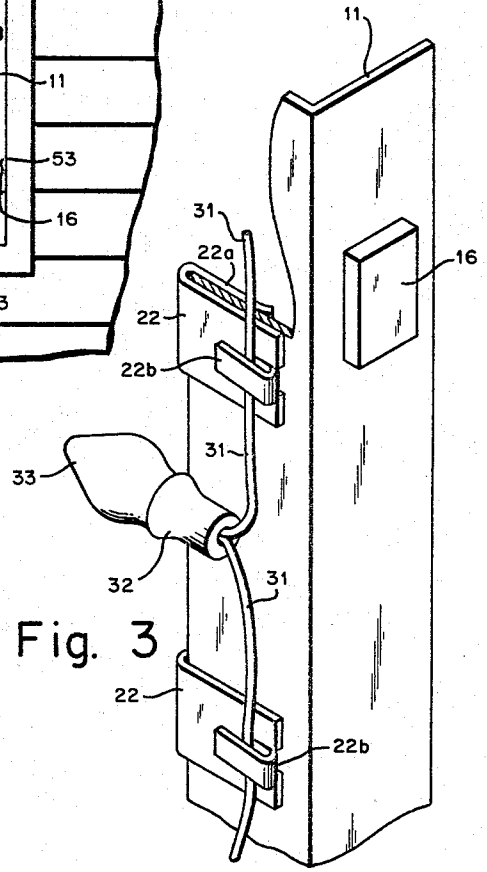

Fig. 3

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United States Patent Office 3,275,818 Patented Sept. 27, 1966

3,275,818

DISPLAY MEANS

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Filed Aug. 26, 1964, Ser. No. 392,133
4 Claims. (Cl. 240—10)

This invention relates to a display means. More particularly, it relates to a frame or mount suitable for the provision of a wide variety of displays or arrangements. The invention relates with more particularity to a set of mutually adjustable modular elements, each equipped with magnets. Other elements include co-operating magnetic parts, fastening means to removably assemble the modular means, and holding or clip means to hold lights or other devices on said frame or display mount.

A particular application of this invention lies in the provision of exterior house decorative lighting for the Christmas season or similar occasions. Other expedients have been proposed to deal with this problem. Such other expedients require relatively elaborate elements including spring elements, and rely on frictional engagements. Such previously known expedients are useful only for mounting the display in a jamb. That is, broadly speaking, they are useful only for mounting between opposed surfaces, whereas the present invention permits mounting both in a window or door jamb or on a flat surface such as a wall, all of which may be broadly described as mounting surfaces.

It is an object of this invention to provide a display means.

It is another object of this invention to provide an adjustable frame or mount for supporting lights or other devices, said frame or mount comprising a set of modular mutually adjustable elements, fastening means to hold said elements together in a fixed relationship, and magnetic means on said elements, together with magnetizable parts to which said magnets can adhere.

Other aims and objects of this invention are made apparent in the following specification and claims.

The invention is best understood in connection with the accompanying drawings in which like reference numerals refer to like parts and in which:

FIGURE 1 is an elevation view of the side of a house, partially fragmented, showing the display means in a window jamb,

FIGURE 2 is an exploded perspective view of two coacting modular elements of the means, and

FIGURE 3 is a perspective view, partially fragmented, showing a light held on one of the modular elements.

The structure of the modular elements is best shown in FIGURE 2. A modular element is an elongated member, with its body bent or otherwise formed to have a right angle extending longitudinally. Such elements are broadly and generally known in a wide art as angle irons. In this patent, modular element **11** and modular element **12** may both be described as rigid longitudinally right angled modular elements. Such elements are preferably unitary and may be made by bending a flat strip of aluminum, plastic, or steel, for example, as shown. Preferably, each modular element **11** or **12** has a single longitudinal bend which divides the element into two legs of equal width. Preferably, the modular elements are initially made of sheet materal.

Each modular element **11** and **12** is provided with a single magnet **16**. As shown in FIGURES 2 and 3, magnet **16** is preferably a small flat piece of magnetized material. The magnet **16** is fastened to one surface of one of the legs of the modular element. The surface to which magnet **16** is attached is one that faces away or outwardly from the right angle made by the legs. The magnets **16** may be of any suitable permanent magnet material, such as Alnico, for example. Magnet **16** may

be attached to modular element **11** or modular element **12** by any convenient means, such as by the use of an adhesive.

The exploded assembly of two modular elements is generally designated **10** in FIGURE 2. Element **12** comprises, in addition to magnet **16**, described above, a hole **12***a* extending through the same leg as that on which the magnet is mounted. Modular element **11** is identical to element **12** in all respects except that it is provided with a longitudinally elongated slot **11***a* through the same leg on which its magnet **16** is provided. Slot **11***a* and hole **12***a* may each be described as fastening apertures. Both modular elements **11** and **12** have their magnets **16** relatively close to one end thereof and their apertures **11***a* or **12***a* respectively close to the other end thereof.

It is apparent from FIGURE 2 that element **11** may be nested against or assembled with element **12** by moving it along the broken line in that figure. Fastening apertures **11***a* and **12***a* will then register and fastening means may be provided through both of these apertures to hold elements **11** and **12** firmly together. A preferred fastening means includes a bolt having a wing head, shown at the right end of the broken line, a washer **15** and a nut **17**. The elements may thus be fastened together to provide any desired total length of the assembled elements within the limits afforded by the longitudinal extent of slot **11***a*.

With only the modular elements and fastening means described above, a complete display mount or frame assembly **10** may be provided as best shown in FIGURE 1. A jamb **50** surrounds a window in a wall. It is desired to provide the display mount **10** around the entire jamb, that is providing a rectangular four-sided figure. It is only necessary to provide pairs of elements **11** and **12**, and the entire display mount or assembly **10** around the entire jamb **50** may be thus completed. It is not necessary to provide any other element or means at the angles in the over-all mount **10** within jamb **50**. It is not necessary to provide any direct means for fastening a given pair of elements **11** and **12** with any other pair.

A plurality of steel or iron buttons **53** are provided at spaced intervals around the entire outline of jamb **50**. Each such button is affixed to the jamb in any convenient known way. A preferable way is by the use of an adhesive. The buttons **53** may be generalized by describing them as magnetizable parts. It is not necessary to exercise extreme care in the spacing of the buttons **53**. Provided that the spacing is somewhere between the spacing of magnets **16** on a pair of modular elements **11** and **12** when extended fully and contracted fully, the spacing of buttons **53** will be satisfactory. There is no limitation at all in the spacing between buttons **53** on surfaces at an angle to each other, as for example the two buttons **53** near the lower right corner of jamb **50** as shown in FIGURE 1. It is an easy matter to place these buttons with only a rough visual estimate of the spacing.

In assembling a complete display mount **10** in a jamb **50**, the following steps are followed: The array of buttons **53** is provided, as described above. A pair of modular elements **11** and **12** are loosely and adjustably assembled and their magnets **16** are respectively placed against adjacent buttons **53**. The fastening means on the pair of modular elements is then tightened. This process is repeated until the entire assembly **10** is completed.

As best shown in FIGURE 3, the assembly **10** is well suited for the arrangement of ornamental lights. A lamp **33** in base **32** and connected to a pair of electric wires **31** is provided. As shown in FIGURE 3, this lamp **33**, base **32** and wires **31** is part of a plurality of such lamps as are well known and widely available as for Christmas decorations.

A plurality of holding means for clips **22** are provided. These clips **22** are provided on the leg of element **11** other

than the leg on which magnets **16** is provided. The clips **22** are preferably generally U-shaped parts of elastic material, such as sheet steel. A back leg **22***a* of clip **22** fits over the back of the leg of modular element **11**, as shown in FIGURE 3. On the front portion of clip **22** is provided a recurved extension **22***b* which grips wire **31**. A plurality of such clips **22** are provided along all that length of assembly **10** on which it is desired to provide lights. The lights are then assembled and held by the clips as shown in FIGURE 3.

To dismantle the structure, it is only necessary to pull the pairs of modular elements off the buttons **53**. Of course, it is preferable to remove the lights first. The buttons **53** are left in place.

The invention is shown in connection with illuminating devices but, of course, other objects may be attached, such as for example tinsel. The clips **22** are shown and described herein only as typical holding means for fastening something to display mount **10**. It is understood that other holding means may be provided. As shown in FIGURE 2, there is a difference in the fastening apertures **11***a* and **12***a*. This requires the use of two different modular elements **11** and **12**. It is possible to make all the fastening apertures as longitudinally elongated slots, as in slot **11***a* on element **11**. The advantage of such a structure is that only one type of longitudinally right angled modular element needs to be provided. A disadvantage is that it is somewhat harder to easily assemble the elements together with the fastening means.

When the assembly **10** is removed, only the small inconspicuous buttons **53** remain. These buttons may be left in place permanently. It is even possible to paint over them without destroying the magnetic attraction. Of course, if the jamb **50** or other surface on which display mount **10** is to be mounted is of magnetic material, it is possible to dispense altogether with the buttons **53**. However, the utility of this invention is believed to be particularly applicable to the nonmagnetic walls and jambs which exist in most homes.

Another important aspect of this invention is that the assembly **10** does not have to be assembled between opposing wall faces. If desired, the buttons **53** may all be provided on a single surface, and the assembly and mounting may take place in precisely the same manner with the same results. It is also possible to assemble the pairs of modular elements as described above to form any desired shape or set of shapes that may be made of straight segments. Thus, for example, the word "Xmas" may be spelled out on a flat wall. In such a case, the letter "*s*" would be approximated by a series of short segments. To make such a word, a plurality of buttons **53** would be affixed to the wall to form the letters. It is also apparent that if more buttons **53** than required are used, that is, if they are closer together than necessary, the assembly may still be made.

The scope of the invention is to be determined by the appended claims and is not to be limited by the foregoing specification and drawings which are illustrative.

I claim:

1. A display means comprising a plurality of pairs of nested modular elements, adapted to be mounted on a mounting surface at least partially vertical, each said pair being disposed in a fixed relationship to other said pairs but unattached to any other said pair, each said pair comprising two modular elements, each said element comprising an elongated rigid member having a longitudinal right angled bend therein, said bend forming a first leg and a second leg, each said leg having an inner surface facing said right angle and an outer surface facing away from said right angle, a single magnet on said outer face of said first leg close to one end of said element, a fastening aperture through said first leg close to the other end of said element, said elements of each said pair being nested together with the inner leg surfaces of one said element against the outer leg surfaces of said other element and said first leg of one element over said first leg of said other element, said fastening apertures in each said element being registered with each other, fastening means through said registered fastening apertures, each of said magnets on a said pair facing in the same direction and one of said fastening apertures in a said pair being a longitudinally elongated slot, said mounting surface including magnetic material, said first legs of all said elements in all said pairs being against said mounting surface so that the said magnets contact said magnetic material, and said second legs are of said elements of said pairs are provided with removeable, adjustable holding means thereon to hold a display.

2. A display means as set forth in claim **1** wherein said holding means comprises a plurality of U-shaped elastic clips, each said clip gripping the inner and outer faces of said outer leg of one said element, each said clip including a recurved extension to grip a display.

3. A display means as set forth in claim **2** wherein said display is a string of electric lights along a wire, and said wire is held in said recurved extension of said clips.

4. A display means as set forth in claim **3** wherein said mounting surface is a window jamb and wherein said magnetic material thereon is a plurality of magnetic buttons permanently affixed to said jamb and spaced so that each said magnet on said display means touches and is magnetically held to a button, and said elements are disposed on said jamb in successive end to end relationship.

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