

- [54] **FRAMES**
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- [30] **Foreign Application Priority Data**
- May 24, 1973 United Kingdom..... 24873/73

- [52] U.S. Cl. **40/152**
- [51] Int. Cl. **G09f 1/12**
- [58] Field of Search 40/125 H, 145, 152.1, 155, 40/152

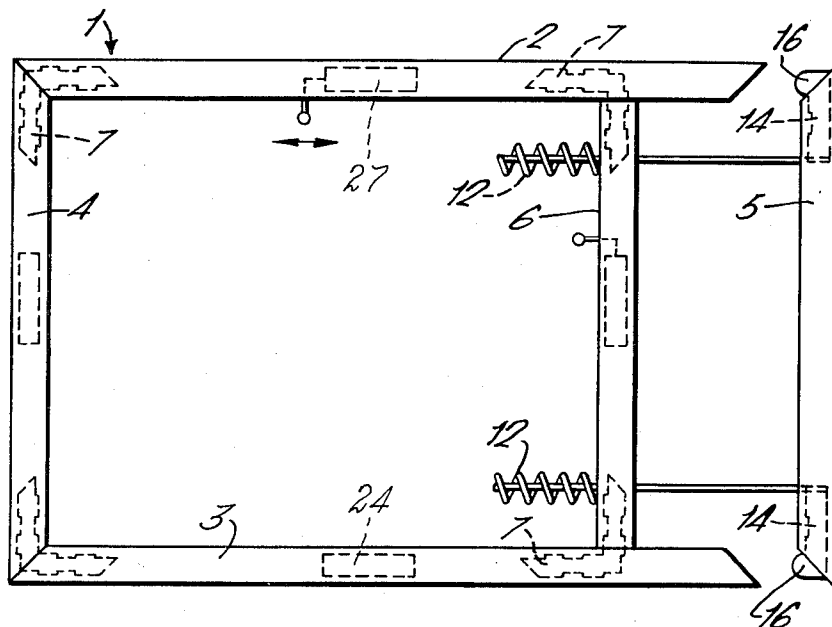
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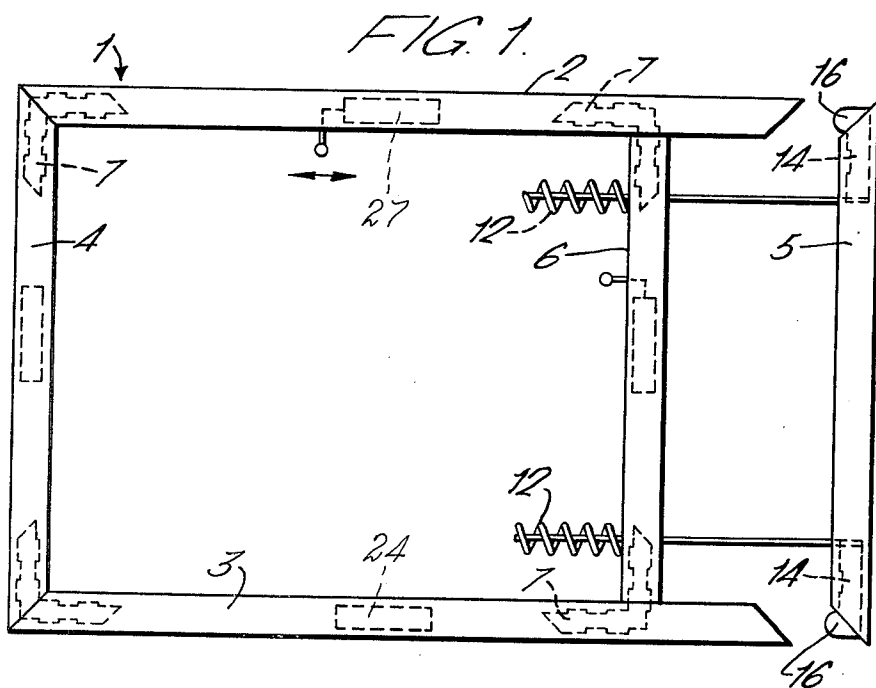
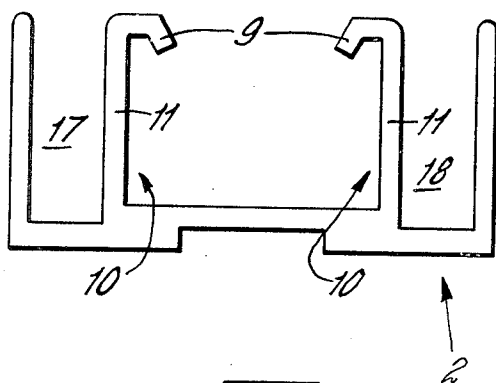
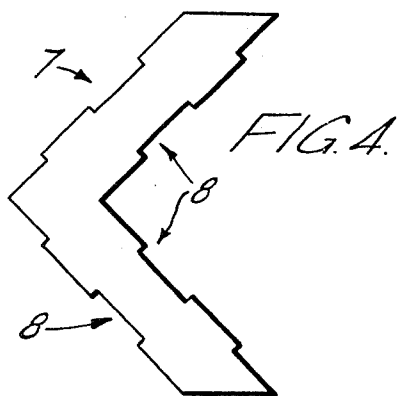
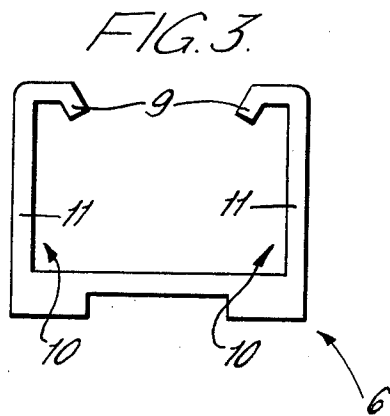
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[57] **ABSTRACT**

A frame for mounting a picture, etc. has one side held captive with the others but able to be removed or de-mounted from engagement therewith so that the picture etc. can be mounted in or removed from the frame.

8 Claims, 11 Drawing Figures





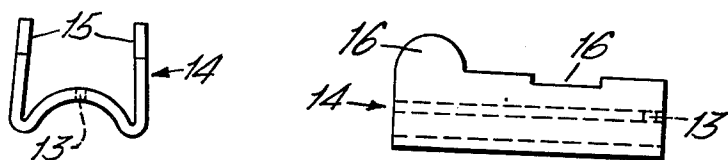


FIG. 5.

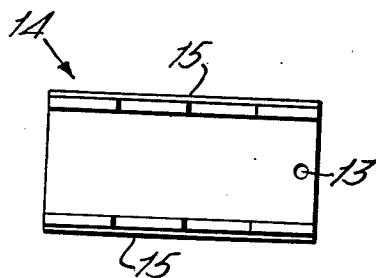
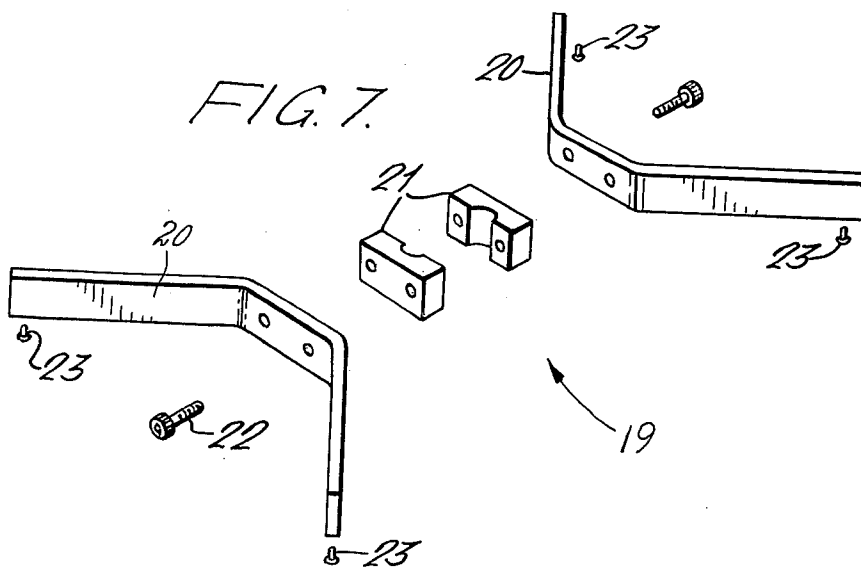


FIG. 7.



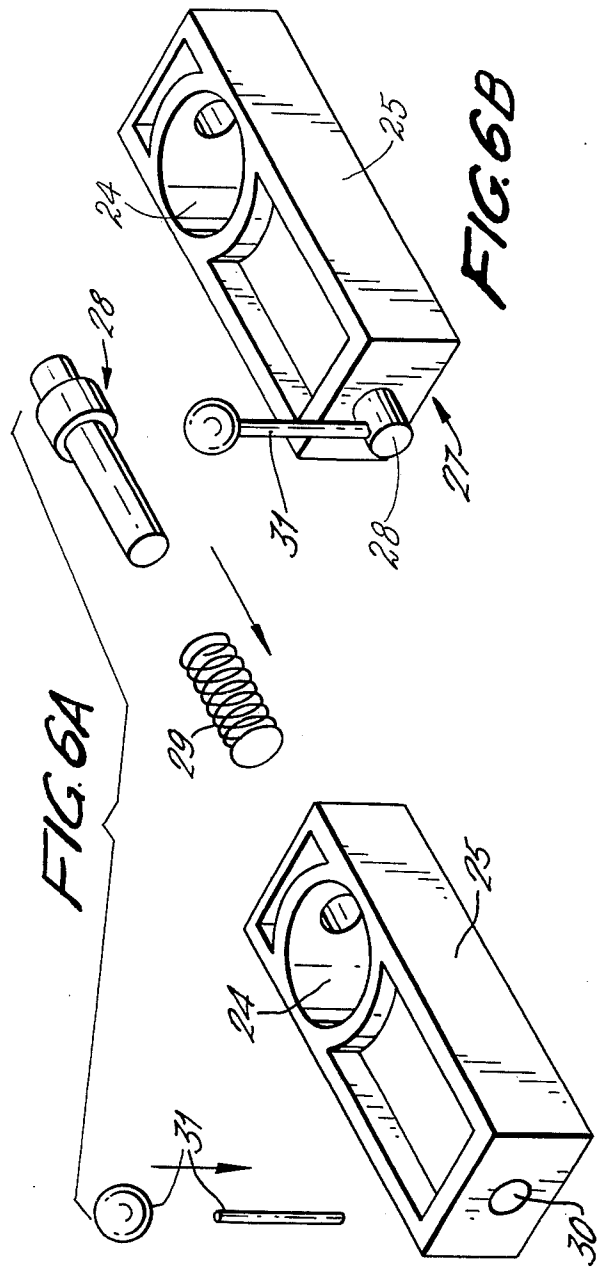


FIG. 8.

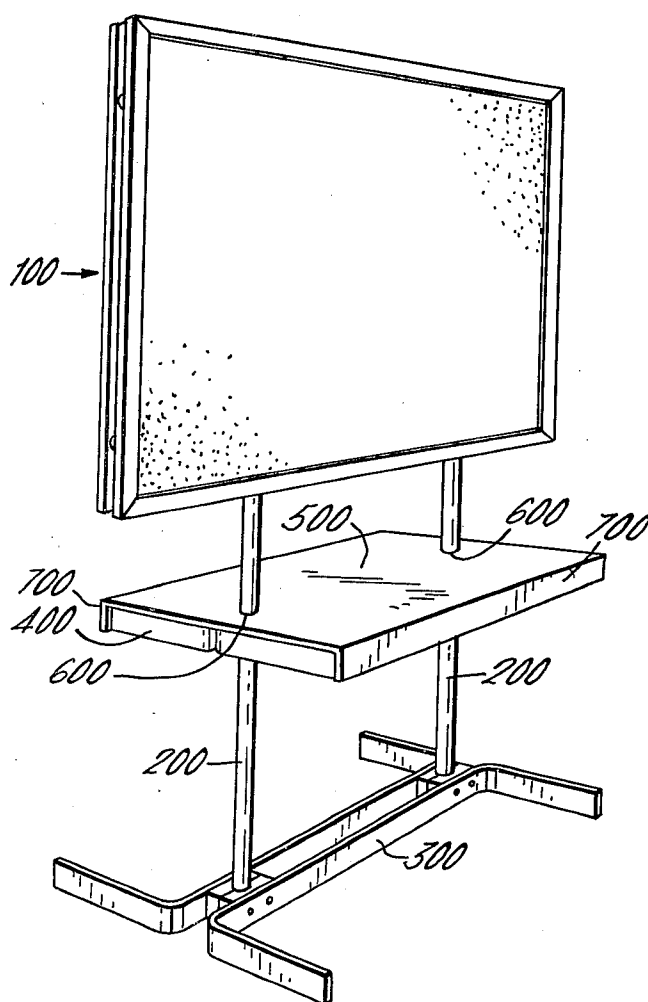


FIG. 9.

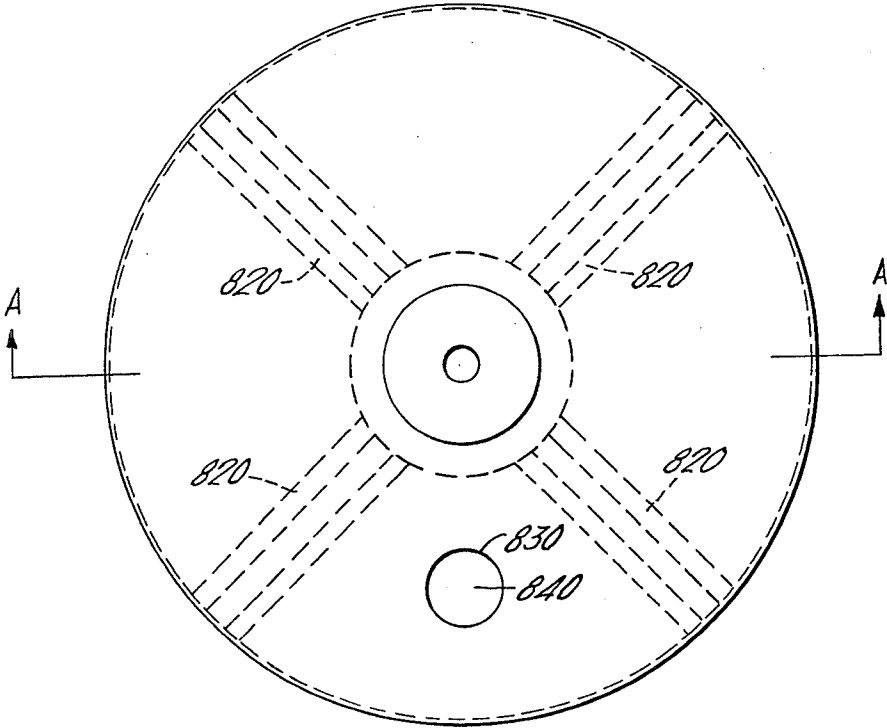
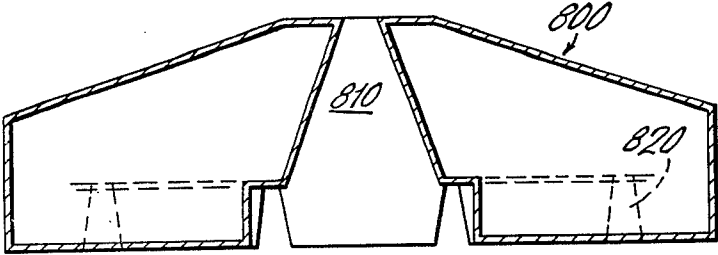


FIG. 10.



FRAMES

The invention relates to improvements in and relating to frames, particularly of the kind which are used to support pictures, posters, display means or similar articles such as display panels.

It is often necessary for a picture or poster to be replaced in a frame when, for example, a display or exhibition is changed. The frame is thus required to be of such a construction that the picture or poster can be removed or replaced easily.

According to a first aspect of the invention there is provided a frame for a picture, poster or the like, such as a display panel, comprising a plurality of sides which include means for receiving a picture, poster, or the like, one of or part of one of the sides at least having means enabling it to be demountable from the remaining sides, so that a picture, poster or the like can be mounted in or removed from the frame.

According to a second aspect of the invention there is provided a frame for a picture, poster or the like, such as a display panel, comprising a plurality of sides which are arranged to receive a picture, poster, display means or the like, one of or part of one of the sides in a first position forming one edge of the frame, and in a second position being secured to the remaining part of the frame by securing means and displaced from the first position, so that a picture, poster or the like can be mounted in or removed from the frame.

Preferably the means comprises at least one resilient means secured between the one side and a member spaced from the one side and extending substantially parallel thereto, the member being between the one side and an opposition, parallel side of the frame.

The resilient means may comprise a spring.

The frame may be mounted on a free standing base, which base may include a base jacket which is inherently weighted or can be filled with a filler for weighting it.

The frame may be mounted on a free-standing base on a pair of supports. Intermediate the frame and the base there may be a shelf. The shelf is suitably an acrylic plastics moulding which slides on the supports to rest on a support which is similar in construction to the base. The shelf may have a lip at one edge.

Frames embodying the invention are diagrammatically illustrated, by way of example, in the accompanying drawings, in which:

FIG. 1 shows an elevational view of the frame with the one side in the second position;

FIG. 2 shows a section through an extrusion forming the sides of the frame;

FIG. 3 shows a section through a cross rail member;

FIG. 4 shows an elevation of securing means;

FIG. 5 shows an end elevation, side elevation and plan of a retaining plate;

FIGS. 6A and 6B respectively show an exploded and an assembled perspective view of a lock;

FIG. 7 shows an exploded perspective view of a base;

FIG. 8 shows a perspective view of a frame including a shelf unit;

FIG. 9 shows a plan view of part of a base; and

FIG. 10 shows a section through part of the base on the line A—A in FIG. 9.

Referring to the drawings, the frame 1 shown is rectangular in shape and has two parallel long sides 2 and 3 and two parallel shorter sides 4 and 5 which extend

at right angles to the sides 2 and 3. Parallel to the sides 4 and 5 there is an intermediate member or rail 6 which is spaced from but positioned along the sides 2 and 3 nearer to the side 5 than the side 4.

The sides 2,3,4 and 5 are formed from an aluminium extrusion having the profile in cross-section shown in FIG. 2, abutting ends of the sides 2,3 and 4 being mitred and secured together by pairs of right angle jointing members or clips 7 which have a surface configuration as shown in FIG. 4 and are made from 14 s.w.g. mild steel, zinc plated and passivated. The clips 7 have surface depressions 8 to give a castellated appearance.

The intermediate rail 6 has the cross-sectional profile shown in FIG. 3 and is also secured to the sides 2 and 3 by pairs of clips 7 (see dashed lines in FIG. 1).

To assemble the sides 2,3 and 4 and the intermediate rail 6, one limb of one clip 7 is seated in one channel 10 formed by one 30° inwardly directed lip 9 of the extrusion forming the sides 2 and 3 and one limb of a second clip 7 is similarly engaged in the second channel 10 so that the other limb of the clips 7 is free. The lips 9 are locally removed adjacent the mitre to provide a cut-out or rebate so that the respective clip 7 can be offered into position at an angle, pivoted to the vertical and then secured by locally deforming the lips 9 over the depressions 8 in the clips 7. The free other limb of the clip 7 then lies in the same plane as internal walls 11. The side 4 and the intermediate rail 6 are seated on the respective free other limbs of the pairs of clips 7 protruding from the side 2 and the side 3 in a similar manner. The walls 11 defining the channels 10 in the extrusions mount the lips 9 (FIGS. 2 and 3), and deformation downwardly over the depressions 8 in the clips 7 secures the extrusions rigidly together.

The side 5 is secured to the remaining part of the frame formed by the sides 2,3 and 4 by means or securing means in the form of a pair of springs 12 which are mounted in spaced apart relation on the intermediate rail 6, part of each spring 12 passing at one end through a respective hole in the intermediate rail 6 and at the other end being secured in a hole 13 in a respective retaining plate 14 mounted at each end of the side 5. The retaining plate 14 is made from 16 s.w.g. mild steel which is zinc plated and passivated. It is of a generally 'U'-shape in cross-section, the base of the 'U' being concave and accommodating the hole, the limbs 15 tapering inwardly slightly (FIG. 5). The limbs 15 at one end form tongues 16 which, when the retaining plates 14 are in position in the side 5, protrude therefrom. The limbs 15 also have depressions 16 and lie in use in the channels 10 formed by the in-turned 30° lips 9 of the side 5, the walls 11 being punched or deformed to secure the retaining plates 14 in position.

In a first position, the side 5 lies in the same plane as the rest of the frame, the tongues 16 being received in the ends of channels 10 of the respective sides 2 and 3. In this first position the springs 12 hold the side 5 securely in place. The side 5 can be removed from the first position by pulling to the right to the position shown in FIG. 1 against the springs 12 and can then be moved laterally to lie in a plane offset from the plane of the rest of the frame but parallel thereto so that the channel 17 or the channel 18 of the sides 2 and 3 is exposed and a picture, poster, display means or the like can be pushed into the channel 17 or 18.

The side 5 can then be returned to the first position so that the frame is complete again and the picture,

poster, display means or the like is secured in position.

The frame can be wall mounted, hung (as with a standard picture frame) or it can be mounted on a stand comprising a pole (not shown) and a base 19 into which a lower end of the pole is secured. The base 19 comprises a pair of 'V'-section members 20 which have secured between them a pair of blocks 21 which define a bore in which the pole is received. The two members or feet and the blocks are secured by an Allen headed socket bolt 22, and feet or inserts 23 are pushed into suitable holes at the end of the 'V'-section members 20.

The other end of the pole passes through a hole in the side 3 and through an aligned hole 24 in a body member 25 of a lock assembly, the body member 25 lying in the channel 26 of the side 3, as shown in dashed lines in FIG. 1. The upper end of the pole is releasably locked in an assembled lock unit 27 comprising a body member 25 with the hole 24 for receiving the end of the pole, a slide 28 mounted under pressure of a spring 29 in a bore 30 transverse to and intersecting the hole 24, and a hand grip or pin 31. In use the pin 31 is drawn to the left, thus drawing the slide 28 to the left (see the double headed arrow in FIG. 1) so that the hole 24 is unobstructed, the end of the pole is inserted in the hole 24, and the pin is then released or pushed to the right so that the slide 28 engages the pole, either at its surface or in a suitable hole therein.

It will be understood that at the lower hole 24, only a body member 25 is used to provide a guide for the pole. Further, the body member 25 or completed assembly 27 is mounted in a respective side of the frame by sliding into the channel between the walls 11, and deforming the lips 9 downwardly at both ends and on both sides of the body member. The angle of the lip 9 becomes less than 30° after the deformation.

The frame may be used with its longest side horizontal as shown or vertically, in which case a body member 25 and lock assembly 27 are mounted respectively in the side 4 and in the intermediate rail 6.

FIG. 8 shows a frame 100 supported via a pair of supports 200 in a base 300. Intermediate the base 300 is a bracket 400 similar to the base on which is supported a shelf 500 of any suitable material. The shelf 500 slides downwardly over the supports 200, which pass through holes 600 in the shelf. The shelf 200 has edge lips 700 for a neat appearance. An upward lip, not shown, could be included. The bracket 400 may be adjustable in position.

Referring now to FIGS. 9 and 10, a base weight 800 comprises a hollow body having a central hole 810 through which a support post or pole can pass, V-section grooves, slots or channels 820 for receiving rectangular members forming part of the base 19, and a filler 830 closed by a plug or cap 840.

In use, the base weight 800 is positioned on the base 19 with the rectangular members (not shown) in their respective grooves, slots or channels 820 and the support post through the hole 810. Water, sand, shale shingle or the like flowable, heavy material is then placed in the hollow body through the hole 830.

If the frame is to be moved, the base weight is emptied through the hole by tilting.

It will also be understood that although aluminium has specifically been described for the extrusions, for forming the frame any suitable material may be used. Further, the resilient means may be of a rubber or the like connector(s) or other suitable member.

It will also be understood that the two channels 17 and 18 allow a double-sided presentation when the frames are mounted on the pole or support post to form an integral, free standing unit. Also, when wall mounted, the display panel or the like mounted in the channel 17 or 18 (whichever is farthest from the wall), effectively conceals the wall mounts, which can engage in the other channel nearest the wall, to provide a neat appearance. In all mountings, whether free standing, wall mounted or suspended on a chain, the rail 6 is concealed by the poster, picture or the like.

I claim:

1. A frame for a display means, such as a picture, poster, display panel or the like, comprising a first pair of channel-shaped elongate members forming sides which are substantially parallel one to the other and a second pair of elongate channel-shaped members forming sides which are substantially parallel one to the other and extend at right angles to the first pair of said elongate members, each of said elongate members having four substantially parallel and spaced apart wall means whereby three parallel grooves are defined, an internal pair of said wall means having downwardly inclined lips at their free edges, and wherein there is means adapted to allow one of said elongate members to be demountable from but remaining secured to the remaining elongate members of said frame, said means comprising an intermediate channel-shaped member having walls with downwardly inclined lips at their free edges, said walls defining a groove with a width corresponding to the width of the middle groove of said first and second pairs of elongate members, said intermediate member being positioned to lie between and parallel to the elongate members of one of said pairs of elongate members and nearer to said one of said elongate members than the other, and resilient means coacting between said intermediate member and said nearer one of said elongate members for urging said nearer one of said elongate members towards said remaining elongate members of said frame, said remaining elongate members of said frame and said intermediate member being secured together by L-shaped clips which are received in said grooves, said demountable one of the elongate members having locating means protruding from the ends thereof for being received in said grooves, said locating means and said resilient means being adapted to allow movement of said one elongate member between a first position in which the locating means is received in the grooves and the frame is complete and a second position in which said one elongate member has been moved away from said intermediate member against the force of said resilient means to allow the locating means to be removed from said grooves, and said urging means permitting said one elongate member to be moved laterally with respect to the plane of the frame when said one elongate member is in said second position to allow access of a display means to one of the outer pair of three grooves and then to the other of the outer pair of the three grooves.

2. The frame as defined in claim 1, wherein said lips are turned inwardly and downwardly at an angle of substantially 30°.

3. The frame as defined in claim 1, wherein said L-shaped clips have depressions in their limbs, said lips being deformed to engage in said depression, whereby said sides and said clips are secured together.

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4. The frame as defined in claim 1, wherein there are holes in a pair of said sides, said holes being adapted to accommodate support post means for supporting said frame, and wherein there is lock assembly means, said lock assembly means being disposed in one of said sides and arranged to lock said frame releasably to said support post means.

5. The frame as defined in claim 4, wherein said lock assembly means comprises body means defining a hole through which said support post means can pass, reciprocable slide means and spring means, said reciprocable slide means and said spring means being disposed in transverse bore means of said body means which intersects with said hole, whereby said reciprocable slide means is urged by said spring means towards said hole to engage, in use, said supporting post means.

6. The frame as defined in claim 4, wherein there is base means, an end of said supporting post means remote from the frame being mounted in said base means, wherein there is weighted base jacket means,

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said base jacket means being adapted to engage said base means.

7. The frame as defined in claim 4, wherein there are a pair of support post means, and bracket means, said bracket means being disposed intermediate the length of said support post means and adapted to support shelf means.

8. A frame according to claim 1, wherein each of said remaining elongate members and said intermediate member are fixedly interconnected by a pair of said L-shaped clips which are disposed in substantially parallel relationship, said pair of clips as extending between an adjacent pair of said members being disposed within the middle groove as defined between said internal pair of wall means and positioned adjacent the opposite sides of said middle groove, and the lips as formed on the free edges of said internal pair of wall means being deformable into engagement with said clips for fixedly holding same in position.

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