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**US 4311295 A**

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Other: **Online: EPODOC, WPI, JAPIO**

(54) Abstract Title: **A rail mounted merchandise display system**

(57) The system comprises a single support rail 1A, for fixing to a wall or partition in horizontal disposition, on which a substantially vertical member 11A is slidably supported by means of an engaging plate 12A, which can be releaseable attached to it through notches 47, 48 at locking points 31 at discrete points along most of its length. Brackets or support arms 16A and spacers 20A (20B in Fig.6) can be similarly be attached to the vertical member, also at discrete points along most of its length, in order to provide different arrangements suitable for supporting shelves or hanging garments. Rail 1A and engaging plate 12A have complementary profiles 13A (and 72, 76 Fig.11 or 84, 81 Fig.12) to prevent tilting of the vertical member 11A and therefore provide increased stability.

FIG 5

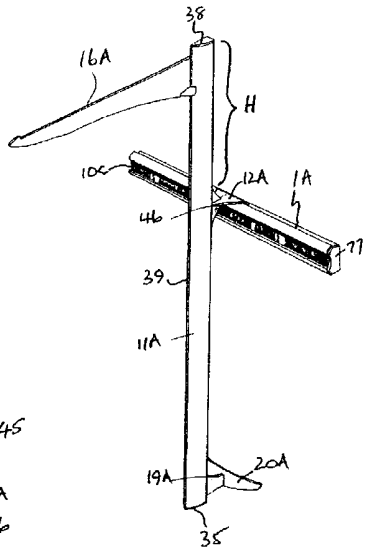
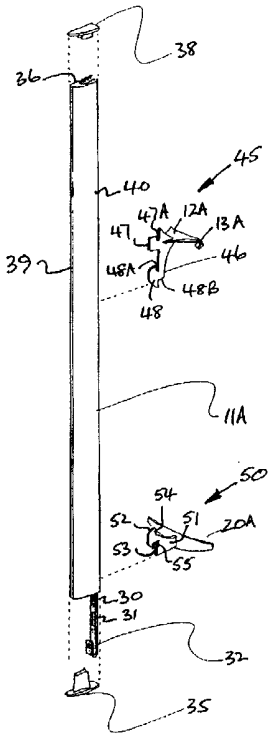



FIG 7

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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

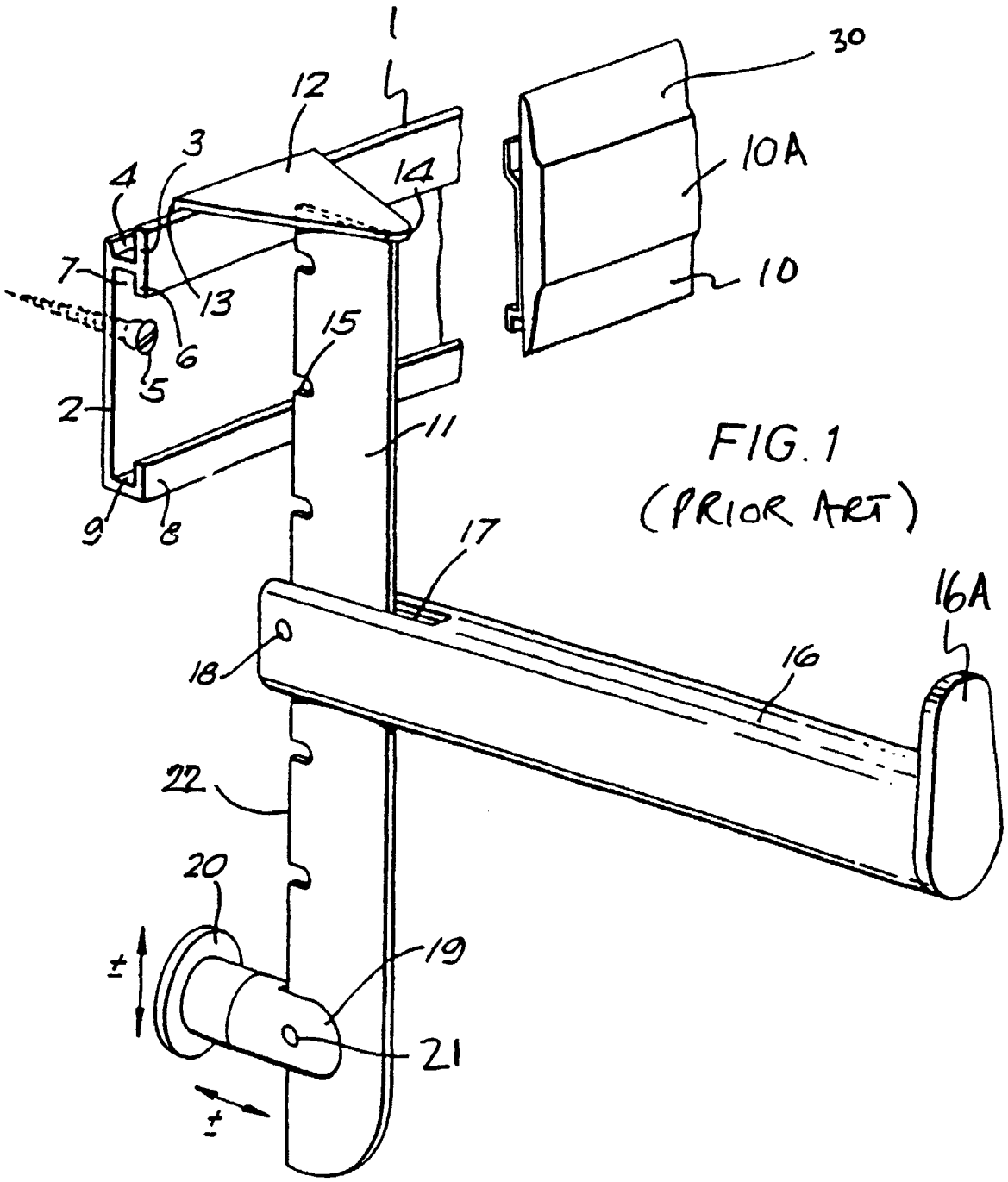



FIG. 1
(PRIOR ART)

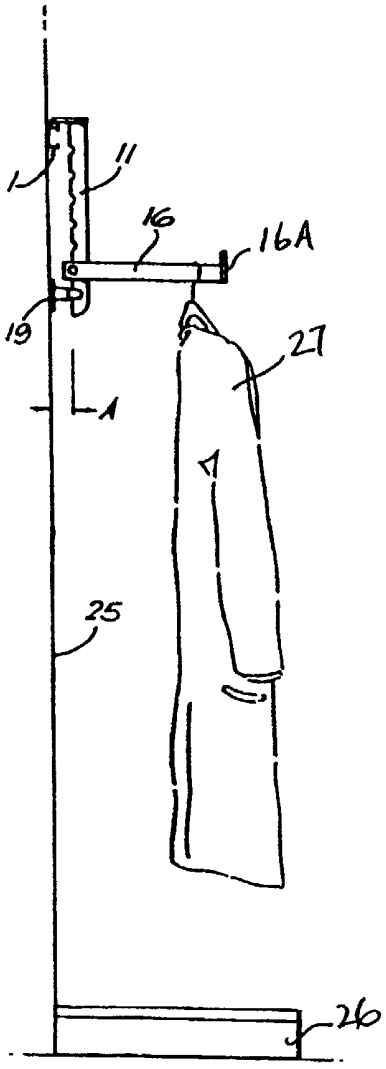



FIG 2
(PRIOR ART)

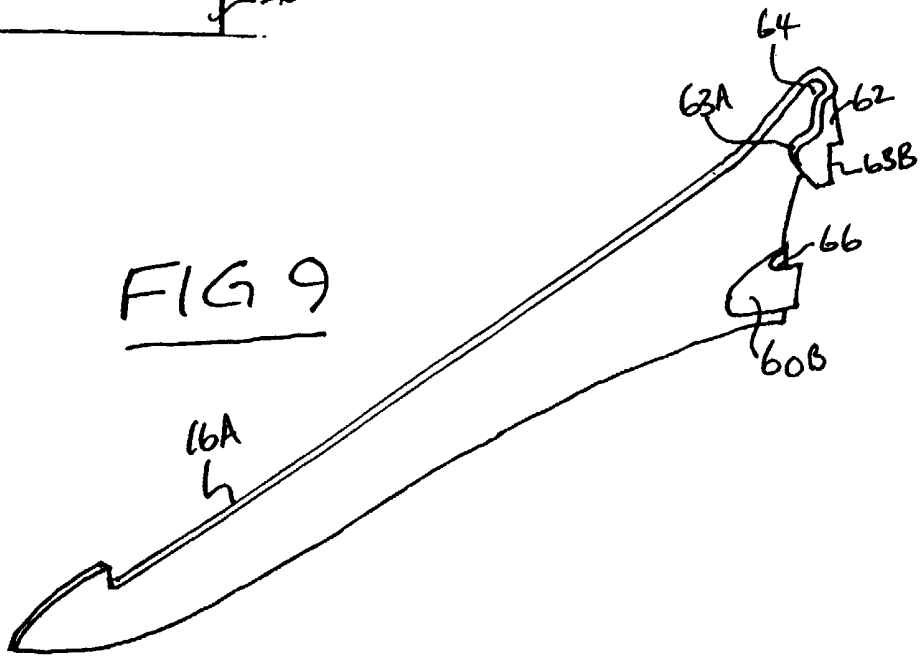



FIG 9

FIG 3 (PRIOR ART)

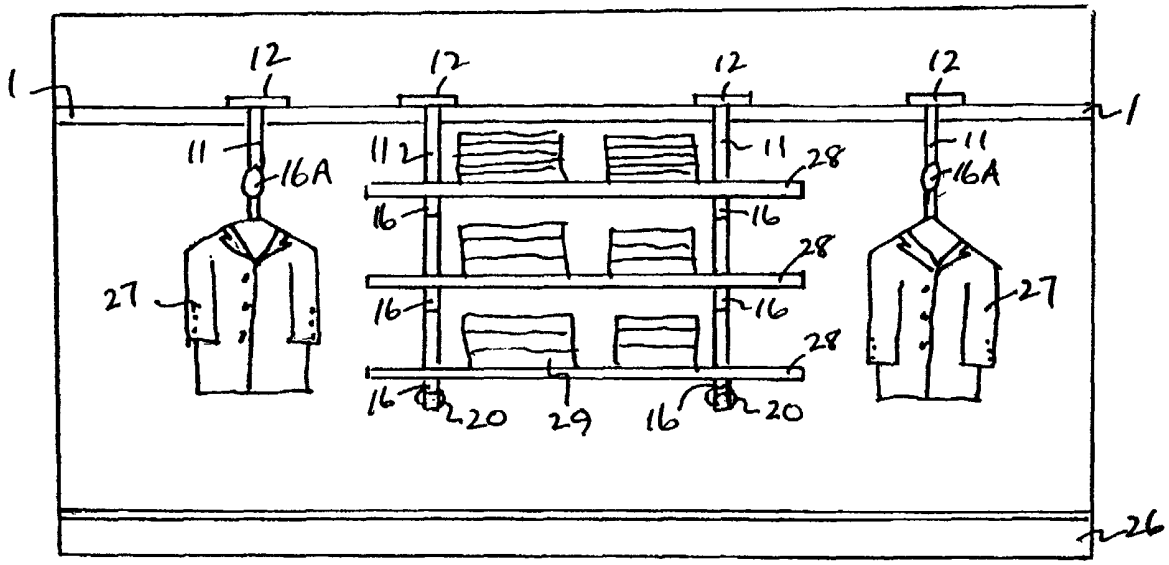



FIG 4

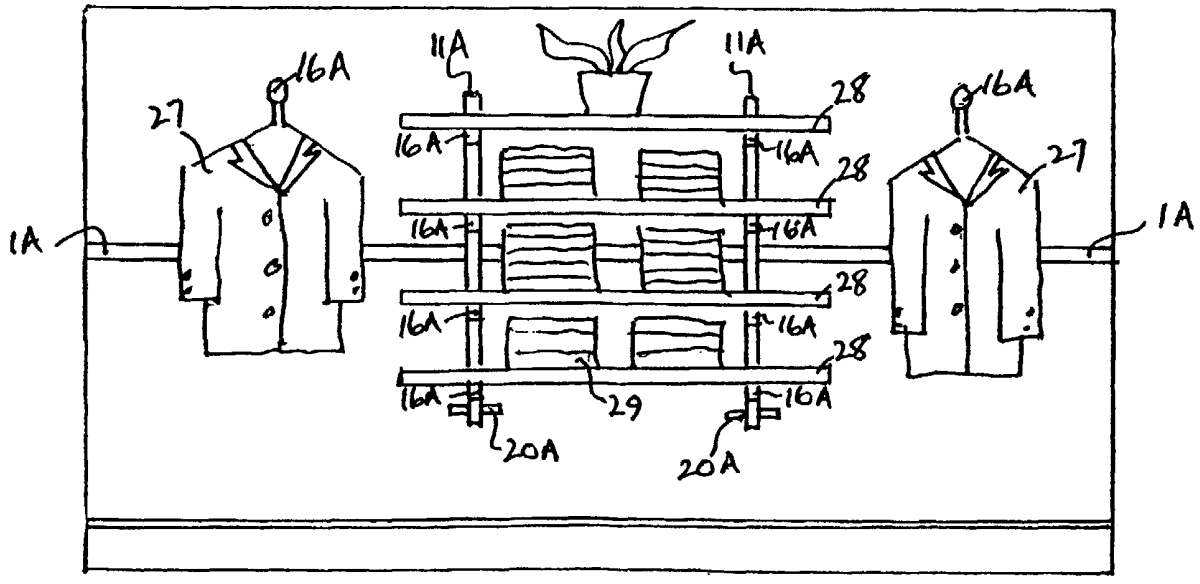


FIG 5

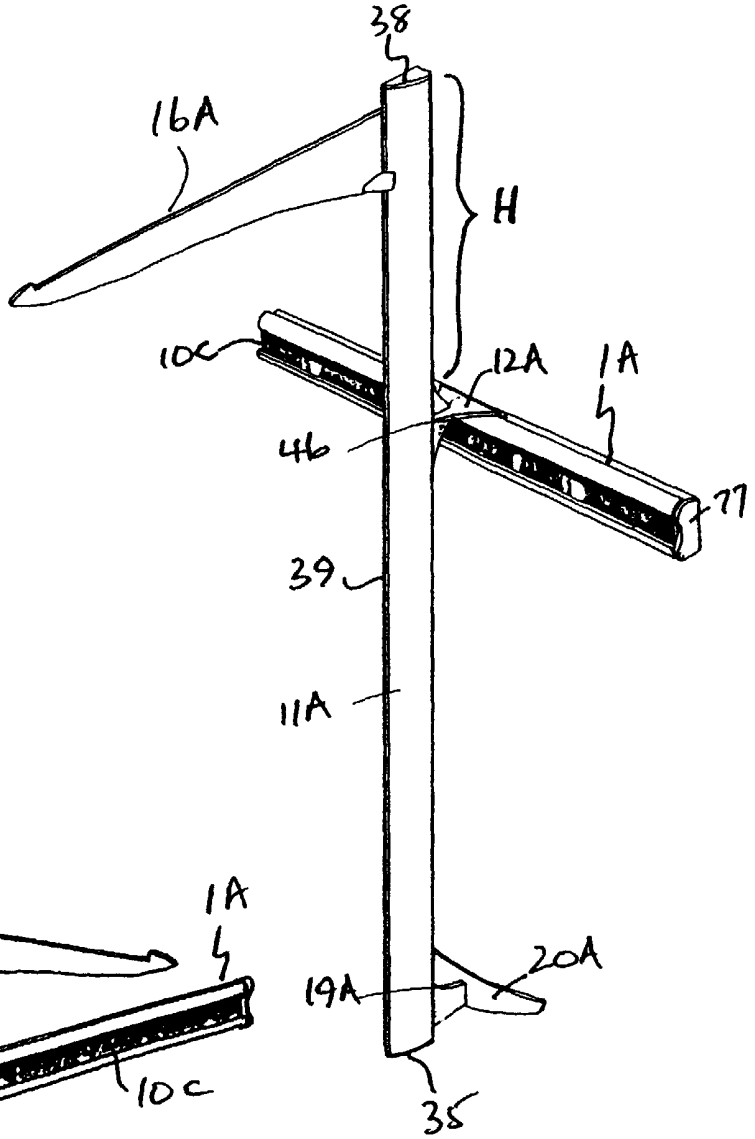

38
16A
H
10C
12A
1A
46
77
39
11A
19A
20A
35

FIG 6

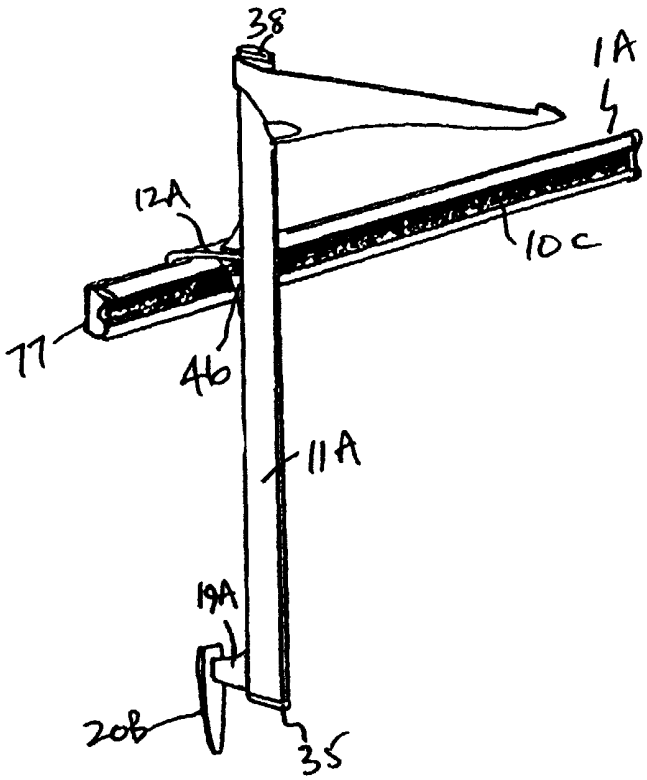

38
1A
12A
10C
77
46
11A
19A
20B
35

FIG 7

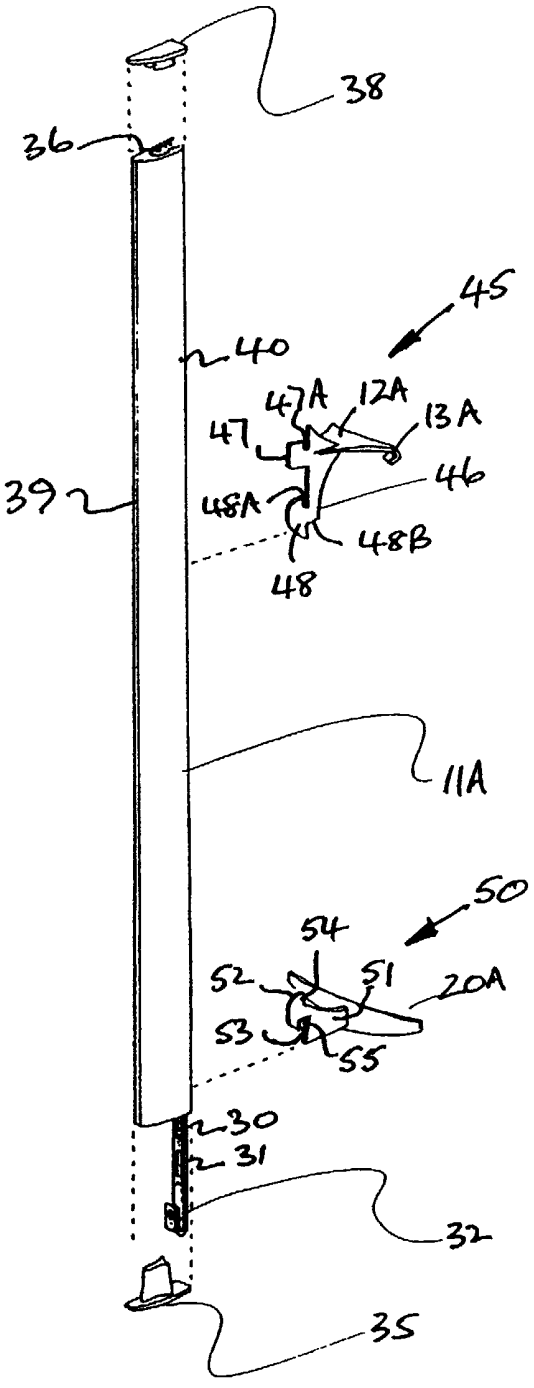

38
36
45
40
47A
12A
13A
47
46
39
48A
48B
48
11A
50
54
52
51
20A
53
55
30
31
32
35

FIG 8

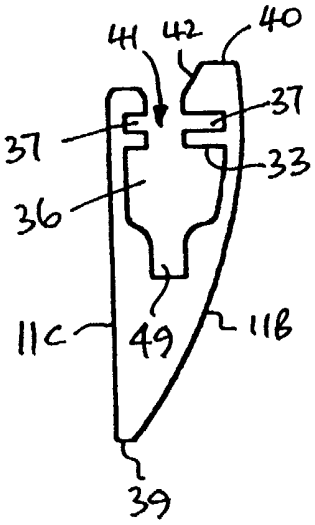

41
42
40
37
37
33
36
11C
49
11B
39

FIG 10

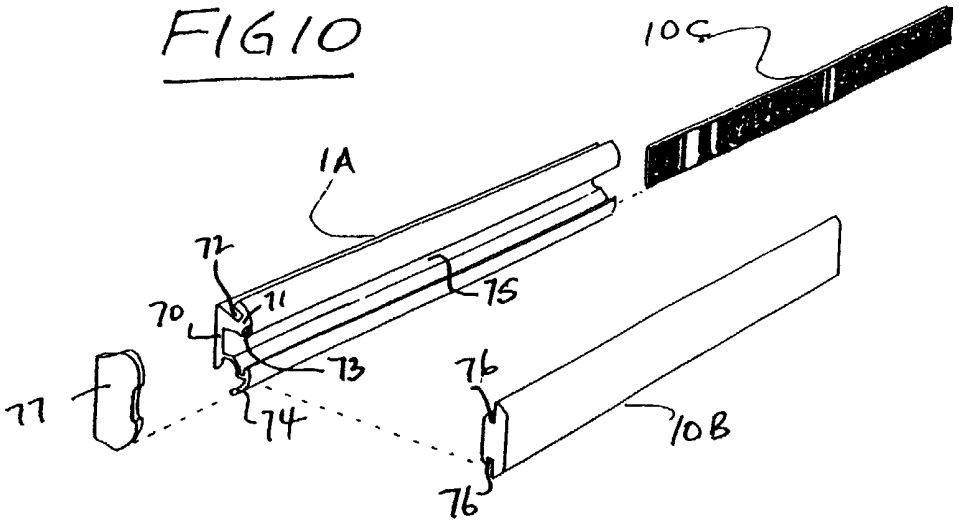



FIG 11

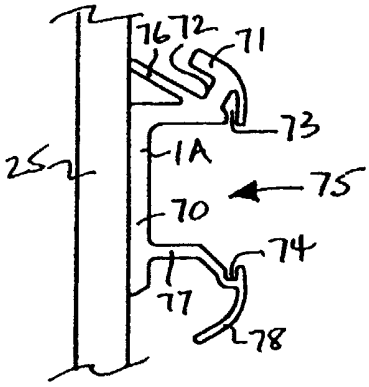



FIG 12

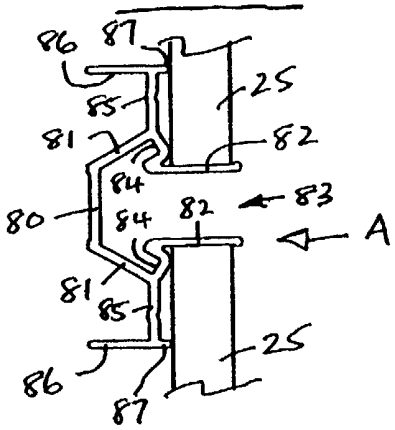



FIG 13

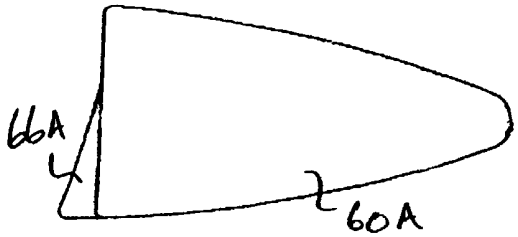
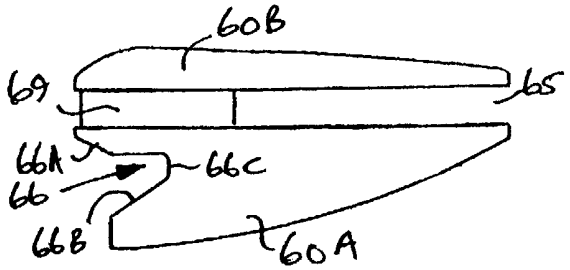



FIG 14



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# Improved Display System for Merchandise

This invention relates to an improved display system for merchandise.

Our European patent No. 0521038 discloses a shop merchandising system which comprises an anchor rail for attachment to a mounting surface in a substantially horizontal disposition and at least one hanging member mounted thereon, the anchor rail being adapted for mounting to an upright surface such as a wall or partition and the or each hanging member being discrete and demountably attachable to the anchor rail and removable therefrom at any location along its length to hang freely therefrom with no other means of support. At least a part of the or each hanging member is in contact with the wall but unattached thereto and the or each hanging member comprises an upright portion which extends substantially vertically with respect to the anchor rail and a support arm extending outwardly therefrom, the or each hanging member being movable along the anchor rail independently of an adjacent hanger.

The major improvement provided by this system over prior art systems at the time which used fixed uprights screwed to the walls at predetermined intervals was that it provided great lateral flexibility as the hanging members could be moved laterally along the hanging rail as required to adapt the system to the merchandise to be displayed.

Whilst the system disclosed in our earlier granted European patent No. 0521038 provided significant advances over prior art systems at the time, it did suffer from some drawbacks. For instance, the hanging rail was generally always visible because the hangers were suspended from it by

hanging means located at the top of each hanger. Furthermore, if the merchandise had to be displayed on a wall or partition with a long vertical drop, a pair of spaced horizontal hanging rails had to be used as a long single hanger was found to be too laterally unstable particularly when the merchandise was displayed on support arms connected to it.

It is also desirable to be able to display merchandise above the level of the hanging rail but this has not been possible with prior art systems as the hangers tended to pivot about their point of attachment to the hanging rail and thus became very unstable when merchandise was displayed on the support arms connected to them, particularly when single individual hangers were used.

According to the invention, there is provided a display system for merchandise comprising a single support rail attachable in a substantially horizontal disposition to an upright support surface such as a wall or partition, a hanger detachably mountable on said support rail by rail mounting means located intermediate the opposite ends of the hanger whereby a substantial portion of the length of the hanger extends upwardly above the rail when the hanger is suspended therefrom, the hanger being supported only by the support rail, freely movable laterally therealong and unattached to the upright support surface, and a support arm attachable to the hanger at any location along the length thereof to extend outwardly therefrom.

Preferably the hanger includes mounting means which extend along the whole length thereof adapted to receive the rail mounting means and the arm. In the preferred embodiment, the hanger has a front and rear and

the mounting means is located at the rear of the hanger. In the preferred embodiment, the mounting means is a slotted insert preferably removably fitted in the hanger.

Preferably the rail mounting means includes a mounting portion to engage the rail. In the preferred embodiment, the mounting portion is a triangular plate with a lip extending along one side thereof. Alternatively, a hook can be provided at each end of said plate. Conveniently the rail mounting means includes releasable attachment means located opposite the lip or hooks to connect the rail mounting means to the hanger.

The system preferably also includes a spacer releasably attachable to the hanger to keep the hanger spaced from the upright surface but substantially parallel thereto. Preferably the spacer comprises a foot portion which contacts the upright surface and mounting portion to attach the spacer to the hanger.

Preferably the arm comprises a blade with a U-shaped hook at one end thereof having a portion which projects forwardly towards the opposite end of the blade. Preferably the hook is located at the upper rear corner of the blade. In a preferred embodiment, a stop is provided on one side of the blade adjacent the rear edge thereof to engage with the front edge of the hanger when the arm is mounted thereon. Preferably the stop has a notch therein which receives the front edge of the hanger when the arm is mounted on the hanger.

Preferably the support rail has a front edge with a lip therealong which is engaged by the rail mounting means on the hanger. In the preferred embodiment, the rail has a rear edge and the lip includes a portion directed towards the rear edge of the rail.

In the preferred embodiment, the rearwardly directed portion is inclined at an acute angle to the horizontal and the rail has an inclined surface which is spaced from but parallel to said inclined inwardly directed portion of the lip to leave a gap therebetween to receive the rail mounting means. These surfaces assist in locating the rail mounting means on the hanging rail.

In the preferred embodiment, the rail includes a pair of opposed slots extending along the length thereof to receive a decorative insert therein.

A preferred embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a prior art display system for merchandise;

Figure 2 is a side view of the system shown in Figure 1 but mounted in position on a wall of partition;

Figure 3 is a front view showing the display system shown in Figure 1 displaying merchandise on a wall;

Figure 4 is a view similar to that shown in Figure 3 but using the improved display system of the invention;

Figure 5 is a perspective view of the display system of the present invention;

Figure 6 is a perspective view of the display system shown in Figure 5 but viewed from the opposite side;

Figure 7 is an exploded perspective view of the hanger shown in Figure 5;

Figure 8 is a cross-section through the body of the hanger shown in Figure 7;

Figure 9 is a perspective view of one type of support arm for use with the hanger shown in Figures 5-7;

Figure 10 is an exploded perspective view of the anchor rail shown in Figures 5 and 6;

Figure 11 is a cross-section through the anchor rail shown in Figure 10;

Figure 12 is a cross-section through an alternative anchor rail;

Figure 13 is a side view of the bracket stop shown in Figures 5, 7 and 9; and

Figure 14 is a plan view of the bracket stop shown in Figure 13.

**Detailed Description of the Preferred Embodiments**

Referring to Figure 1 of the drawings, there is shown a shelving/display system in accordance with our European patent No. 0521038 which comprises an anchor rail 1 which is preferably a metal extrusion of constant cross section. The rail can be of any suitable length (only part of a length is shown in Figure 1) and includes a flat body section 2 whose upper region is formed as a T section with lips 3 and 6. Upstanding lip 3 extends along the front edge of the rail to define a channel 4 between it and the surface (not shown) to which the anchor rail is mounted by means of screws 5 whereas lip 6 defines channel 7 which also extends along the whole length of the rail 1. The lower portion of the body part 2 includes an L-shaped portion having an

upstanding lip 8 extending along the length of the rail which defines a channel 9 between said lip 8 and the body portion 2. A suitably shaped insert 10 can be fitted into the channel 7,9 and retained therein by means of the lip 6,8. The insert 10 can be a decorative panel e.g. of wood or plastics material to cover up the screws 5. Alternatively, if the shelving/display system is to be used to display clothes or other articles, then the prices or size of the article can be included on the front face 10A of the insert.

A hanger 11 is suspended from the anchor rail by engagement means which, in the illustrated embodiment, comprise plate 12 welded to the top of the hanger 11. A lip 13 extends downwardly from the plate 12 along its edge remote from apex 14. The hanger 11 has notches 15 provided along its rear edge adjacent the anchor rail 1. A support arm 16 with a slot 17 formed in one end thereof and a pin 18 extending across said slot is attached to the hanger 11 so as to extend outwardly therefrom generally at 90° to the rail 1. It will be appreciated from the arrangement shown in Figure 1 that the pin 18 engages in the slot 15 thereby retaining it in position relative to the hanger 11. Depending on which slot 15 is used, the height of the support arm 16 in relation to the rail can be adjusted. A spacer 19 is fitted to the end of the hanger remote from the plate 12. This spacer includes a foot 20 which is preferably screw fitted into the spacer 19 so as to be adjustable in relation thereto. The spacer can be fitted to the hanger 11 at any location along its length either using pin 21 or by means of a friction fitting or other suitable means.

When the shelving/display system is assembled as illustrated in Figure 1, the lip 13 on the front edge of the plate 12 at the top of the hanger 11 engages over the upstanding lip 3 at the front edge of the anchor rail 1. The spacer 19 spaces the rear edge 22 of the hanger 11 from the wall or partition 25 so as to keep it parallel thereto. The spacer 19 also provides stability for the hanger 11 by filling in the gap A (see Figure 2) between the rear edge 22 of the hanger 11 and the wall or partition 25 to which the anchor rail 1 is screwed. Another advantage of the spacer 19 is that any downward load applied to the arm 16 is split between the lip 13 and the spacer 19 so the load is spread along the length of the hanger 11 and transmitted to the upright surface through the spacer 19 and the lip 13 on the engaging plate 12. Thus, not all of the load on the arm 16 is taken by the lip 13 so the risk of the anchor rail 1 being torn out of the wall is substantially reduced.

Referring now to Figure 2, it can be seen that the arrangement illustrated comprises an anchor rail 1 attached to a vertical surface such as a wall 25. The hanger 11 is spaced from the wall 25 by means of the spacer 19 and a support arm 16 extends from the hanger 11 outwardly therefrom at 90° from which a coat 27 is suspended. In the illustrated embodiment, a plinth 26 is provided at the bottom of the wall 25.

Referring now to Figure 3, this shows, by way of example, a different way in which our prior art display system illustrated in Figures 1 and 2 can be used. An anchor rail 1 is screwed or otherwise attached to an upright surface such as wall or partition 25. A plinth 26 is provided at the base of the upright surface 25 similar to that shown in Figure 2. Hangers 11 are suspended from the anchor rail 1 by hooking the plates

12 thereto. Garments such as coats 27 are hung from arms 16 extending outwardly from each hanger 11. In the illustrated arrangement, a set of shelves is located between the pair of hangers 11 on which the coats are displayed. The shelves are formed by using a pair of spaced hangers 11 which are attached to the anchor rail 1 by means of the plates 12 at the top end thereof. Arms 16 are fitted to the hangers 11 and extend outwardly therefrom and shelves 28 are mounted on the pairs of spaced arms 16. The bottom of each hanger 11 has a spacer with a foot 20 attached thereto to space the hanger 11 from the wall 25 so that its rear edge 22 is parallel to the wall. Merchandise 29 is displayed on the shelves 28.

Referring now to Figures 5 and 6, there is illustrated the improved display system of the present invention which, although similar to our earlier system, differs significantly from it. The system comprises an anchor rail 1A to which a hanger 11A can be releasably attached by means of mounting plate 12A. A spacer 19A having a foot 20A at the end thereof spaces the hanger 11A from the upright surface (not shown) to which the anchor rail 1A is mounted. An arm 16A is attached to the hanger 11A in a manner to be described hereafter and extends outwardly therefrom.

It should be noted that the rail mounting means, i.e. plate 12A is attached to the hanger 11A intermediate its ends so that a substantial portion H of the upper part of the hanger 11A extends upwardly above the anchor rail 1A. The advantages of this will be described hereafter.

Figure 6 is the other side of the display system shown in Figure 5 but it should be noted that the foot 20B attached to the spacer 19A is vertically orientated and of a different configuration to the foot 20A shown in Figure 5.

The hanger 11A is shown in more detail in Figures 7 and 8. It can be seen that the hanger 11A comprises a metal extrusion of the configuration shown in cross section in Figure 8 which includes a planar face 11C and an opposite curved face 11B. The two faces 11B and 11C meet at a front edge 39. Rear edge 40 of the hanger 11A has an access opening 41 with chamfered lead-in face 42 on one side thereof. A slot 37 extends longitudinally of the hanger 11A parallel to rear face 40.

A central cavity 36 is formed in the hanger 11A with a groove 49 extending from it. The groove 49 is located opposite the slot 37 for reasons which will be explained hereafter.

An elongate sheet metal insert 30 having rectangular apertures 31 spaced at regular intervals along the length thereof is inserted in the slot 37. The insert 31 has a U-shaped end portion 32 and is a loose fit in the slot 37. Several of the top slots 31 are preferably 23mm in length whereas the rem ıgth for reasons which will be explain inserted in the slot 37, the U-shaped ear wall 33 of the slot 37. Thus, the wei supported by the end portion 32 of the inse

A bottom plug 35 is received in the central aperture 36 running through the hanger 11B to close the bottom end thereof and, similarly, a top plug 38 is fitted into the central space 36 to close off the top of the hanger.

It will be appreciated from the foregoing description that once the metal strip 31 has been fully inserted in the slot 37 in the hanger body 11A, it provides a series of regularly spaced slots 31 extending along the whole length of the rear 40 of the hanger 11 the purpose of which will be described shortly.

The rail mounting means in the form of clip 45 can be attached to the hanger 11A at any location along its length in a manner to be described. The clip 45 comprises a body portion 46 formed with an upper hook portion 47 with a notch 47A in its upper edge and a lower hook portion 48 with a notch 48A formed in its upper edge. The lower hook portion 48 also has an abutment 48B on its rear lower end. A triangular plate 12A is attached to the upper region of the body portion 46 and extends at 90° therefrom, its edge remote from the body portion 46 being rolled over to provide a pair of spaced hooks 13A as illustrated. Alternatively, a single rolled lip 13A can be formed.

The clip 45 is attached to the hanger 11A by first inserting the lower hook portion 48 into one of the longer dimensioned upper slots 31. Because only these larger upper slots will accept the hook portion 48 of the clip 45, this ensures that it can only be attached to the hanger in its upper region thereby ensuring that a substantial portion of the hanger (portion H in Figure 5) will always extend upwardly above the rail 1 when the hanger is mounted thereon.

Having inserted the hook portion 48 into the appropriate slot 31, the clip 45 is then pivoted upwardly so that the top hook portion 47 is received in the slot 31 immediately above the slot in which the hook portion 48 is received. When fully home, the hook portions 45 and 48 locate in the groove 49 in the rear of the central cavity 36 in the hanger body 11A. Once in position, the clip 45 is lifted so that the notches 47A and 48A receive and locate the top edge of the slots 31 in which they are mounted to prevent the clip 45 being removed therefrom. For removal, the clip 45 first needs to be pressed downwardly to disengage the notches 47A and 48A and the procedure can then be reversed. The method of attaching a clip 45 to the hangers 11A ensures a tight fit between the two components which provides a rigid connection giving excellent stability and a stable base to which an arm 16A can be attached.

There are several advantages in arranging for the clip 45 to be able to be mounted on the hanger 11A at a selection of locations along the length thereof. Firstly, it allows maximum flexibility to hide the hangers 11A behind merchandise supported by or on the hangers 11A. For instance, it allows the clip 45 to be attached to the hangers 11A much nearer the top thereof, which is helpful if shelving is suspended from the hanging rail with the top shelf located closely adjacent the hanging rail 1A because the hanging rail is hidden behind the top shelf. Secondly, it allows a single design of hanger to be used with either surface mounted or rear mounted recessed hanging rails. Thirdly, its design provides a stable connection with the hanging rail which prevents any pivoting of merchandise displayed on the part of the hanger extending upwardly above the hanging rail.

Spacer 50 is attached to the hanger 11A in a similar manner and it can be seen from Figure 7 that the spacer comprises a body portion 51 with a hook 52 formed at one end thereof. A flat foot 20A is attached to the body 51 at 90° thereto. The hook 52 has an upper abutment face 54 formed thereon facing the foot 20A and a lower abutment face 53 facing away from the foot 20A. The bottom corner of the hook 52 where it meets with the lower abutment face is formed with a notch 55.

To attach the spacer 50 to the hanger 11A, the hook 52 is first pivoted upwardly so that the hook 52 can be inserted into the selected slot 31 (it will only fit into one of the smaller dimensioned lower slots 31 in the lower part of the insert 20). The spacer 50 is then pivoted downwardly until the lower abutment face 53 contacts the insert 30. In this position, the front edge of the hook 52 is located in the groove 49 at the bottom of the central cavity 36 in the hanger 11A. The spacer 50 is then pressed downwardly so that the bottom of the slot 31 engages in the notch 55 to prevent the spacer 50 being removed from the insert 30.

From the foregoing description, it can be seen that the clip 45 or the spacer 50 can be attached to the hanger 11A at the required location along its length. This is particularly advantageous as it provides the system with great flexibility.

Because the clips 45 are releasably attached to the hangers 11A, one standard form of hanger can be used with both the surface mounted rail shown in Figure 11 or the recessed rear mounted rail shown in Figure 12 as only the hanging clip 45 needs to be changed. In our earlier prior art

system, the clip was welded to the hanger so special hangers and clips had to be manufactured depending on whether they were to be used with a surface mounted or rear mounted hanging rails.

Referring now to Figures 10-12, there is shown in more detail the anchor rail 1A. This is a metal extrusion comprising a flat planar rear section 70 with a longitudinally extending rearwardly facing slot 72 formed thereon between rearwardly inclined surface 76 and rearwardly extending front lip 71. Bottom edge of the rearwardly extending lip 71 has a groove 73 formed therein.

The anchor rail 1A also has a bottom portion 77 extending outwardly from the rear section 70 which is configured as illustrated in Figure 11 and includes a longitudinally extending slot 74 therein along its top front edge. A curved portion 78 extends downwardly therefrom along the length of the rail 1A. This configuration provides a gap 75 between the upper lip 71 and the lower curved portion 78. A planar insert 10C can be inserted in the front of the rail 1A by sliding it along the slots 71 and 74. Alternatively, a different configuration of insert 10B can be inserted in the slots 71 and 74 in the rail 1A by fitting the formed section 76 on the rear of the insert 10B into the grooves 71 and 74 in the rail 1A.

The rail 1A is attached to an upright surface such as a wall or partition 25 by means of screws (not shown) which pass through the rear section 70 of the rail 1A to hold it firmly in position on the wall 25 in known manner. The anchor rail 1A shown in Figure 11 is surface mounted on the wall 25 whereas the anchor rail shown in Figure 12 is mounted behind the wall 25 leaving only gap 83 visible from the front. The rear

mountable anchor rail shown in Figure 12 comprises a rear wall 80 with inclined walls 81 extending forwardly therefrom. A rearwardly facing upper groove 84 is formed between said inclined forwardly extending portion 81 and a horizontal portion 82. Similarly, a lower rearwardly facing groove 84A is formed between the lower forwardly extending inclined portion 81 and the horizontally extending portion 82. A slot 83 is defined between the two horizontally forwardly extending portions 82. A rib 85 extends along the length of the groove 84 and a web 86 having a foot 87 is attached to said web 85 at 90° thereto. The bottom of the rail 1A is a mirror image of the top as can be seen from the drawings.

As can be seen from Figure 12, the anchor rail 1A can be attached to the rear of the wall or partition 25 so that it is concealed when viewed from the front, the feet 87 engaging with the rear face of the wall 25 and the forwardly extending portions 82 extending through the wall or partition 25 to define slot 83 therebetween. When viewed from the front in the direction of arrow A, the anchor rail 1A is concealed and all that is visible is slot 83 in the wall 25.

The anchor rails 1A shown in Figures 10-12 are preferably extruded from a metal material and are of constant cross section and indefinite length. Each open end of the anchor rail 1A can be closed by an end stop or plug 77 (see Figure 10) in known manner.

Referring now to Figure 9, there is shown an example of one type of arm 16A which can be attached to the hanger 11A. The illustrated embodiment shows a horizontal arm which comprises a blade 16B having a U-shaped section 62 at its rear upper corner which includes a

forward facing hook 63 with a space 64 therebetween. The hook 63 has a rearward facing abutment surface 63B provided on its rear edge and a curved cam surface 63A on its forward upper edge. A resilient stop 60 having a recess 66 therein is fitted to the rear of the blade 16B adjacent the bottom edge thereof. The exact shape of the stop 60 is better illustrated in Figures 13 and 14. Referring in particular to Figure 14, it can be seen that face 60B of the stop 60 is relatively planar whereas face 60A is curved. The stop 60 has a slot 65 formed therein to enable it to be attached to the blade 16B by sliding the stop 60 onto the blade until a cut-out therein (not shown) locates on section 69. Recess 66 has a planar face 66A with an inclined chamfered lead-in face 66B on one side and a lead-in chamfered face 66B on its other side, faces 63A and 63B terminating in an end wall 66C.

The way in which an arm 16 is attached to the hanger 11 will now be described. As previously explained, the rear edge 40 of the hanger 11A has a series of spaced apertures 31 formed in it into which the teeth 47,48 of the clip 12A can be inserted to attach the clip 12A to the hanger at any position along its length as already described. The foot 50 can similarly be attached to the hanger 11 by inserting the hook 52 in one of the slots 31 in the insert 30 as described.

In order to attach an arm 16 to the hanger 11A, the arm 16 is first of all placed against the flat face 11C of the hanger 11 and the U-shaped section 62 is placed in the groove 41 formed in the rear of the hanger 11. The lead-in chamfered edge 42 guides the hook 63 into the groove. This is important as the hook 63 has to be inserted "blind" into the rear of the hanger. Once the hook 63 has dropped into the selected slot 31 in

the insert 30 in the hanger 11A, the arm 16 is pivoted downwardly until abutment face 63B contacts the inside front face of the insert 30 and the front edge 39 of the hanger 11 locates in the cut-out 66 in the stop 60.

Turning now to Figure 4, this shows an example of how the display system of the invention can be used to display merchandise. It will be noted first of all that the anchor rail 1A is mounted much lower down on the wall than the prior art rail 1 shown in Figure 3. Hangers 11A of the invention are attached to the rail 1A as illustrated with a substantial portion thereof (distance H) extending upwardly above the rail. Hanging rails or arms 16A for garments extend forwardly from the hangers 11A at opposite ends and garments such as coats 27 are suspended therefrom.

A set of shelves 28 are supported on spaced hangers 11A between the coats 27 on which merchandise 29 is displayed.

It should be noted that an important feature of the invention can be appreciated from the set up shown in Figure 4 in that the support rail 1A is largely hidden by the merchandise displayed i.e. the coats 27 or the merchandise 29 on the shelves 28 thereby giving a pleasing effect. In our prior art system shown in Figure 3, the rail 1 has to be mounted much higher as the top of each hanger 11 is attached to it so it is always visible and becomes a visual feature of the display system which a customer may not always want.

Another important advantage of the preferred display system of the invention is that because the hook or hooks 13A face forward and locate

in the rear facing slots 72 or 84 in the anchor rail, the lip 71 or surface 81 stops the clips 12A from being knocked upwardly by accident and jumping or pivoting from side to side out of the rail. This feature therefore provides substantial added stability to the system not found in the prior art.

Another important feature of the display system of the invention is that because a major portion of the hanger 11A extends above the anchor rail 1A, any pivotal movement from side to side will be about its point of attachment to the rail 1 rather than its upper end as in the prior art hanger shown in Figures 1-3 so the system has increased lateral stability and longer hangers 11 can be used. This particularly useful if a single hanger 11A needs to be used to display merchandise.

A still further advantage of the display system of the invention is that the unsightly cut-outs at the rear of the prior art hangers 11 shown in Figure 1 have been dispensed with so the hanger can be much sleeker and aesthetically pleasing.

## Claims

1. A display system for merchandise comprising a single support rail attachable in a substantially horizontal disposition to an upright support surface such as a wall or partition, a hanger detachably mountable on said support rail by rail mounting means intermediate the opposite ends of the hanger whereby a substantial portion of the length of the hanger extends upwardly above the rail when the hanger is suspended therefrom, the hanger being supported only by the support rail, freely movable laterally therealong and unattached to the upright support surface and a support arm attachable to the hanger at any location along the length thereof to extend outwardly therefrom.

2. A system as claimed in claim 1 wherein the hanger includes mounting means which extend along the whole length thereof adapted to receive the rail mounting means and the arm.

3. A system as claimed in claim 1 wherein the hanger has a front and rear and the mounting means is located at the rear of the hanger.

4. A system as claimed in claim 3 wherein the mounting means is a slotted insert fitted in the hanger.

5. A system as claimed in claim 4 wherein the slotted insert is removably mounted in the hanger.

6. A system as claimed in any preceding claim wherein the rail mounting means includes a hook portion to engage the rail.

7. A system as claimed in claim 6 wherein the rail mounting means includes releasable attachment means located opposite the lip to connect the rail mounting means to the hanger.

8. A system as claimed in any preceding claim including a spacer releasably attachable to the hanger to keep the hanger spaced from the upright surface but substantially parallel thereto.

9. A system as claimed in claim 8 wherein the spacer comprises a foot portion which contacts the upright surface and a mounting portion to attach the spacer to the hanger.

10. A system as claimed in any preceding claim wherein the arm comprises a blade with a U-shaped hook at one end thereof having a portion which projects forwardly towards the opposite end of the blade.

11. A system as claimed in claim 10 wherein the hook is located at the upper corner of the blade.

12. A system as claimed in claim 10 or claim 11 wherein a stop is provided on one side of the blade adjacent the rear edge thereof to engage with the front edge of the hanger when the arm is mounted thereon.

13. A system as claimed in claim 12 wherein the stop has a notch therein in which receives the front edge of the hanger when the arm is mounted on the hanger.

14. A system as claimed in claim 12 or claim 13 wherein the stop is made of a moulded resilient material.

15. A system as claimed in any preceding claim wherein the support rail has a front edge with a lip therealong which is engaged by the rail mounting means on the hanger.

16. A system as claimed in claim 15 wherein the rail has a rear edge and the lip includes a portion directed towards the rear edge of the rail.

17. A system as claimed in claim 16 wherein the rearwardly directed portion of the lip is horizontal.

18. A system as claimed in claim 16 wherein the rearwardly directed portion is inclined at an acute angle to the horizontal.

19. A system as claimed in claim 18 wherein the rail has an inclined surface which is spaced from but parallel to the inclined inwardly directed portion of the lip.

20. A system as claimed in any of claims 15-19 wherein the rail includes a pair of opposed slots extending along the length thereof to receive a decorative insert therein.

**Application No:** GB 0214005.1 **Examiner:** Pablo Cappellini
**Claims searched:** 1 to 20 **Date of search:** 27 November 2002

# Patents Act 1977
# Search Report under Section 17

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.T): A4B

Int Cl (Ed.7): A47F (5/00 , 5/08 , 5/10) ; A47B (57/58 , 96/06) ; E04G5/06 ; F16L3/08

Other: Online: EPODOC, WPI, JAPIO

**Documents considered to be relevant:**

| Category | Identity of document and relevant passage | | Relevant to claims |
|---|---|---|---|
| Y | EP 0521038 | (CIL SHOPFITTERS LTD.) Fig. 1 Note slots 7 & 9 for receiving decorative insert | 8, 9 &20 |
| XY | US 5392934 | (FOX) Figs. 1, 2, 6, 12, 13 & 15. Note elements 18, 50, 104, 106, 108 & 86 | X: 1 to 3, 6 to 7 & 15 Y: 8 & 9 |
| XY | US 4311295 | (JAMAR, JR) Figs. 1 to 7. Note elements 20, 30, 24, 50,70, 72, 74, 80 & 82 | X: 1, 2, 6, 7, 10, 11 & 15 Y: 20 |

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| X | Document indicating lack of novelty or inventive step | A | Document indicating technological background and/or state of the art |
| Y | Document indicating lack of inventive step if combined with one or more other documents of same category | P | Document published on or after the declared priority date but before the filing date of this invention |
| & | Member of the same patent family | E | Patent document published on or after, but with priority date earlier than, the filing date of this application |