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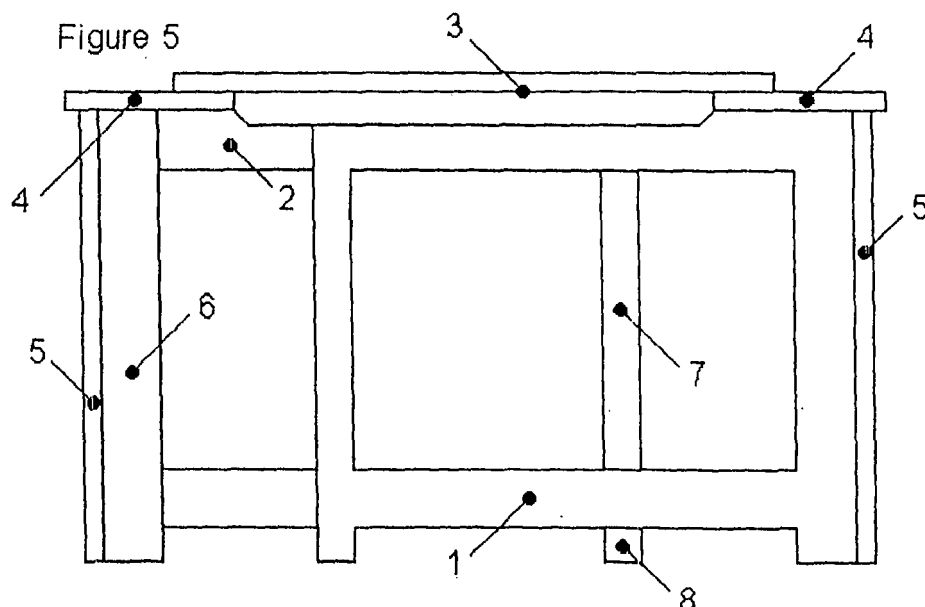
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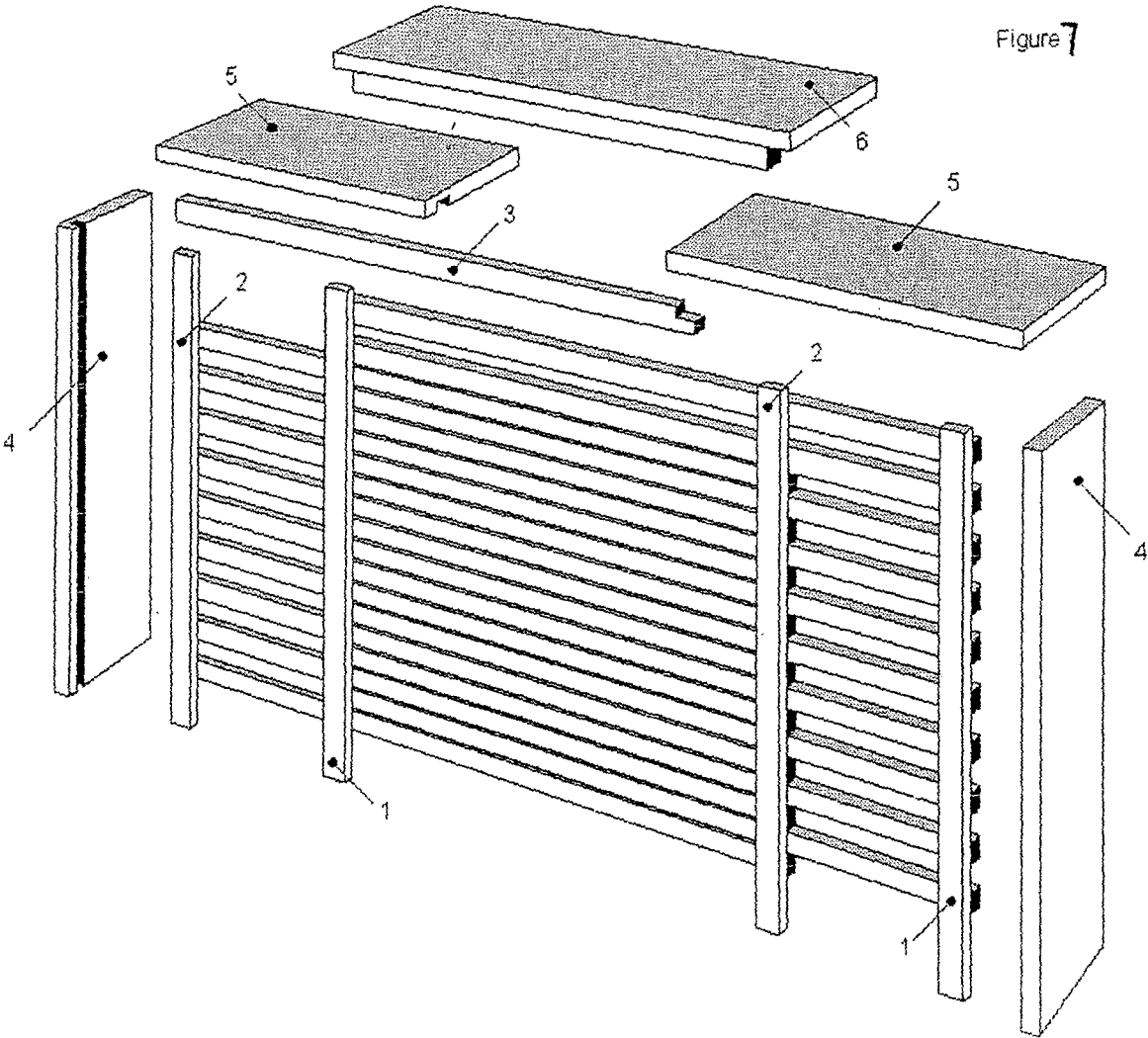
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(54) **Radiator cover**

(57) A radiator cover comprises of only two main sections 1, 2 arranged to slide relative to each another to adjust the width of the cover for various widths of radiators. Sections 1, 2 may be mirror images of each other, may comprise of panels with raised blocks 6, 7, 8 which interlock and permit the sections 1, 2 to slide and may have foot portions to raise the sections 1, 2 above the ground to produce a gap to assist airflow. Sections 1, 2

may comprise of side sections 5 and top shelves 4 that are covered and secured to a pelmet 3 which prevents relative movement when the sections 1, 2 are adjusted to the required radiator size. A central opening of the cover may have a perforated decorative panel, a mesh, a solid panel or a material screen attached. Sections 1, 2 may comprise of interlocking horizontal slats (figs 7 - 10) connected at their ends by vertical slats which are received in channels in the side sections.





Description

[0001] This invention relates to radiator covers that may be adjusted in width.

[0002] Radiators are commonly used to heat homes and workplaces and it is well known to provide covers for them. This may be done to safely shield the hot surfaces of a radiator to reduce the possibility of burning or blistering of the skin through direct contact. This is particularly important when children or elderly people may come into contact with the radiator. Alternatively or additionally, a cover may be provided for decorative effect, for example where what may be regarded as the harsh and functional lines of the radiator do not suit a particular decorative scheme.

[0003] Radiator covers have become increasingly popular in recent years and are widely available in a multitude of sizes providing different widths and heights. They may also be specifically made to the required size by tradesmen and DIY enthusiasts.

[0004] However, the need to provide a wide range of sizes to cover the many designs of radiator, or to create bespoke covers, is clearly undesirable. Radiator covers have therefore been developed that will horizontally adjust so that a single product can safely and securely shield the surfaces of a wide spectrum of alternative radiator widths.

[0005] Such a known cover is disclosed in EP-A-1384957. This comprises a central section and two outwardly extending side sections which are arranged to slide outwards relative to the central section to provide the desired width for the cover. Once the cover has been extended to the desired size it may be fixed in place.

[0006] This design does indeed allow the cover to be adjusted in size, but the requirement for three separate main components is a drawback and there are also inherent restrictions in the aesthetic effects that can be provided.

[0007] According to the invention there is provided a radiator cover comprising only two main sections which together cover, in use, the radiator, the two sections being arranged to slide relative to each other to thereby adjust the width of the cover.

[0008] Thus, by means of the invention, only two, as opposed to three, main sections are required to provide an essentially complete radiator cover that may be used with a variety of sizes of radiator. Although the two main sections can differ in size from each other (e.g. for aesthetic effect), they are preferably of similar or identical size.

[0009] As well as simplifying the design, the use of two components also dispenses with the need to check that the two side sections of the prior art design are extended equally, thereby simplifying installation.

[0010] The two sections will also most commonly be generally mirror-images of each other.

[0011] Each main section may be generally rectangular in form and comprise a front panel for covering the

front of part of the radiator, a side panel for covering one end of the radiator, and a top panel for covering part of the top of the radiator.

[0012] The front panels may be perforated, slatted or otherwise provide air flow passages and/or decorative effect. The side and top are most commonly solid, but may also have air flow passages, slots, decorative features etc. The front may typically be provided in the form of a "picture frame" and the centre may then be filled with a perforated panel. Another arrangement is for the front to comprise bars in the form of a gate and these may be arranged to interdigitate with bars from the other main section.

[0013] The front panels may also be provided with foot portions so that the panel is raised above the ground. This may assist airflow and has a pleasing effect aesthetically.

[0014] Although the front panel of one main section will normally be partially or wholly behind the other, preferably the panels are configured so that both sides of each are visible in use. In this way when the cover is extended to cover a radiator, the impression of three front panels is provided: the observer sees a central portion where the panels overlap which is defined by the left-most side of the right panel and the right-most side of the left panel and a panel on each side of this. Where the picture frame type arrangement described above is used, the vertical members of the frames define four vertical borders. These are at the edges of the three panels (one at each outer edge and two surrounding the centre section).

[0015] It will be appreciated that as the two main sections are moved apart, a gap will appear between the two top parts of the cover. This may not matter in some applications (e.g. when the top is above eye-level), and indeed may be regarded as aesthetically appropriate in others, however, preferably a further member is provided to cover this. This may be in the form of a pelmet. The pelmet may be a standard size to cover just part of the top of the cover (over the gap) or it may be cut to match the full length of the adjusted cover. In either case, it is preferably secured in position so that the main sections are then prevented from relative movement.

[0016] It will be appreciated that other decorative components can be added to the cover, for example it may be desired to add strips to cover parts of the "picture frames" to avoid having a stepped portion on the front. However, it is envisaged that the two main sections by themselves provide an essentially effective and complete cover.

[0017] Viewed from another aspect, the invention provides a radiator cover that can be adjusted in width and includes:

- a) two front sections which interlock and slide against each others frames to adjust in width and shield the front face of a radiator;
- b) a top pelmet to shield the top centre of the radiator

and aesthetically disguise and strengthen the space left between the two top shelves after adjustment;
 c) two top panels to shield the outer faces of the radiator top; and
 d) two side sections to shield the ends of the radiator.

[0018] As discussed above, another preferred form of the invention relates to the use of slatted front panels. Slats may be provided within the "picture frame" arrangement discussed above. Alternatively, horizontal slats can be provided that are connected to vertical bars. The slats on the two main sections are preferably offset so that they can interdigitate. If they are spaced by the width of one slat then the effect of a solid central panel with slatted side panels may be achieved.

[0019] Thus, according to a further aspect of the invention there is provided a radiator cover that can be adjusted in width and includes:

- a) two slatted front sections which interlock and fix within each others frames to form a flat surface that can slide to adjust in width and shield the front face of a radiator;
- b) a top pelmet to shield the top centre of the radiator and aesthetically disguise and strengthen the space left between the two top shelves after adjustment;
- c) two top shelves to shield the outer faces of the radiator top and guide the lateral movement of the front panels;
- d) two side sections to shield the ends of the radiator and locate the front panels.

[0020] Embodiments of the invention will now be described, by way of example only, and with reference to the accompanying drawings:-

Figure 1 illustrates one front panel of part of a radiator cover according to a first embodiment of the invention;

Figure 2 illustrates the other front panel of the same embodiment;

Figure 3 illustrates channels on the underside of the top panel of this embodiment;

Figure 4 illustrates the front view of the complete radiator cover of figures 1-3 in a closed position;

Figure 5 illustrates the front view of the radiator cover in a half extended position;

Figure 6 illustrates the front view of the complete radiator cover in a fully extended position;

Figure 7 illustrates an exploded perspective view of a second embodiment of the invention;

Figure 8 illustrates the positioning of the two front panels of the second embodiment with the right-hand panel shaded light grey to assist in identifying the separate components of each panel;

Figure 9 illustrates the channels on the underside of the top shelves of the second embodiment for location of the side sections (vertical in the illustration)

and as a guide for the two front panels; and
 Figure 10 illustrates the rear view of the two front panels of the second embodiment side by side with a dotted line showing where the slats on the right-hand panel in the picture will locate in the spaces on the left-hand panel in the picture.

[0021] As may be seen from figures 1-6 generally, the radiator cover of the first embodiment incorporates two front sections (1) (2), two top shelves (4), two side sections (5) and a central pelmet (3). These are arranged so that the radiator cover is a horizontally adjustable.

[0022] The two front sections (1) (2) interlock and stand parallel to each other to give the effect of a single framed radiator cover as shown in Figure 4. In addition, the two front sections (1) (2) are able to slide when in position to adjust horizontally in size and give the effect of a three framed radiator cover as shown in Figure 5.

[0023] The two front sections (1) (2) may also be fully adjusted in width so as the interlocking frames meet again and give the appearance of a two framed radiator cover - Figure 6.

[0024] The interlocking of the frames is achieved through raised blocks on the front face (Figure 1) of one panel and the back (Figure 2) of the other panel which interlock through the open areas in the centre of the frames and the bottom horizontal bar of the frame.

[0025] This is shown in Figure 1 which illustrates the front panel with the raised blocks (6) (7) (8) on the face (2) which would sit at the rear of the accompanying front panel (1). The illustration shows a section raised (6) which locates into the side section (5) and a section raised (7) which positions inside the frame of the accompanying front panel (1) and a section raised (8) on which the lower part of the accompanying front panel (1) sits. Figure 2 illustrates the other flat faced front panel (1) with a section raised (7) to the rear of the panel which positions inside the frame of the accompanying front panel (2) and another section raised (8) on which the lower part of the accompanying front panel (2) sits.

[0026] Another feasible option for this effect is achieved with raised blocks on a single panel which interlock. The frames (1) (2) are assisted in their lateral adjustment by locating into a channel or guide to the width of the underside of the two top shelves (4) as in Figure 3 which also has a channel in which to locate the side sections (5) running part of its depth.

[0027] The side sections (5) also have a channel or guide running vertically to locate the front sections (1) (2). A raised block (6) can be used to locate one front section (2) into the relevant side section (5), this raised block will then meet with the front face of the parallel front section (1) when the cover is reduced to its smallest width - see Figure 4.

[0028] Figure 3 shows the channels on the underside of the top shelves (4) for location of the side sections (5) (vertical in the illustration) and as a guide for the two front panels (1) (2).

[0029] In use, the width of the cover is adjusted to the required size (which may be fully extended as shown in Figure 6 or partially extended as shown in Figure 5) before being fixed into position by screwing through the bottom of the two top shelves (4) into the underside of the central pelmet (3). Finally, the cover is fixed to the wall behind the radiator to be, shielded.

[0030] The central opening of the cover exposed once the two front sections (1) (2) are positioned can be shielded with a perforated decorative panel cut to size or an alternative covering for the exposed area may be a firm mesh, solid panel or material screen.

[0031] There is a gap below the two front panels (1) (2) to allow for cold air intake.

[0032] A second embodiment of the invention is shown in figures 7 to 10.

[0033] As may be seen from figure 7, the two front panels (1) (2) interlock and fix within each other by laying the horizontal slats parallel to each other leaving a small gap to allow for a smooth movement and a displacement of the thickness of the upright slats to alternate slats at each end. Then laying two vertical slats at either end and securing alternate horizontal slats to the outside upright of one end and the inside upright of the opposite end then repeating the exercise for the remaining horizontal and upright slats - see Figure 8. With this arrangement, the two front panels (1) (2) are then able to slide when fixed together to adjust the cover horizontally in size.

[0034] Figure 7 shows the two front panels (1) (2) in an adjusted position so as the horizontal slats in the central area of the cover remain parallel and the outer areas have alternate slats showing. This illustration also shows a channel in the left-hand side panel (4) in which to locate the front panels (1) (2) and a channel to the underside of the left-hand top shelf (5) in which to locate and guide the vertical slats.

[0035] Figure 8 illustrates the positioning of the two front panels (1) (2) with the right-hand panel shaded light grey to assist in identifying the separate components of each panel. The illustration also shows the displacement of the ends of the horizontal slats so as the vertical slats can be fixed parallel at each end and adjustment is still possible

[0036] Figure 10 illustrates the rear view of the two front panels (1) (2) side by side with a dotted line showing where the slats on the right-hand panel in the picture will locate in the spaces on the left-hand panel in the picture. The illustration also shows the displacement of the horizontal slats to one edge so as to locate into a channel in the side panels (4)

[0037] The front panels (1) (2) are assisted in their lateral adjustment by locating into a channel or guide to the underside of the two top shelves (5) as in Figure 9 which also has a channel in which to locate the side sections (4) running part of its depth. Figure 9 illustrates the channels on the underside of the top shelves (5) for location of the side sections (4) (vertical in the illustration) and as a guide for the two front panels (1) (2)

[0038] The side sections (4) can also have a channel or guide running vertically to locate the front sections (1) (2) and this is done by offsetting the ends of the horizontal slats the thickness of the channel or guide from the edge of the vertical upright.

[0039] The cover width is adjusted to the required size and then the top bar (3) is cut to size and fixed into position adjoining the top bar on the right-hand side panel (1) and touching the left-hand side section (4).

[0040] Support of the top shelf is gained by fixing the two top shelves (5) and support bar (3) into position and then locating the central pelmet to cover any gap left after adjustment.

[0041] As with the first embodiment, the width of the cover is adjusted to the required size before fixing the radiator cover to the wall behind the radiator to be shielded.

[0042] The openings between the slats after adjustment can be shielded with a perforated decorative panel cut to size or an alternative covering for the exposed areas may be a firm mesh, solid panel or material screen.

[0043] Again, as with the first embodiment, there is a gap below the two front panels (1) (2) to allow for cold air intake and a gap below the support bar (3) to allow hot air to escape.

Claims

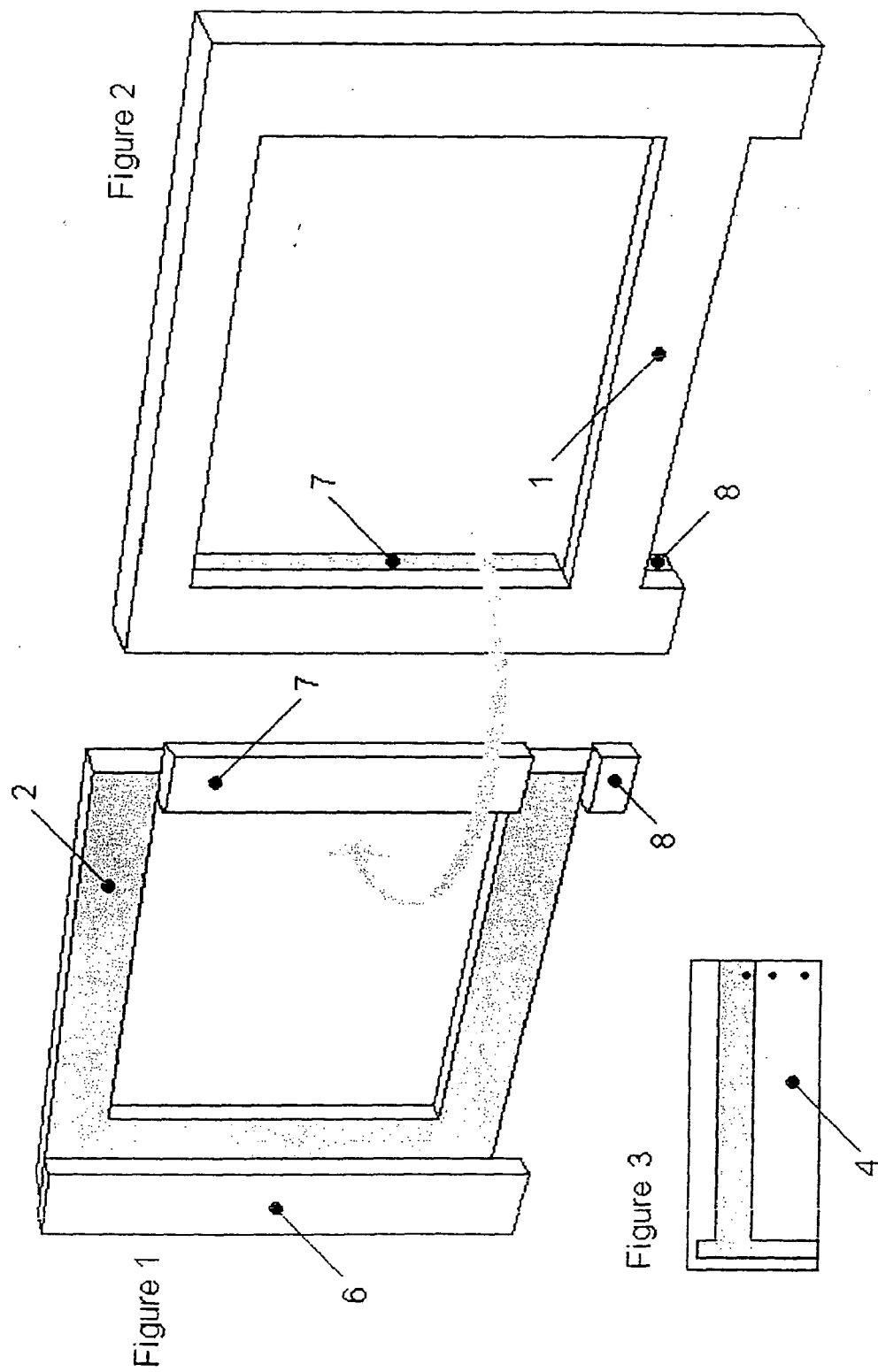
1. A radiator cover comprising only two main sections which together cover, in use, the radiator, the two sections being arranged to slide relative to each other to thereby adjust the width of the cover.
2. A radiator cover as claimed in claim 1, wherein the two sections are generally mirror-images of each other.
3. A radiator cover as claimed in claim 1 or 2, wherein each main section is generally rectangular in form and comprises a front panel for covering the front of part of the radiator, a side panel for covering one end of the radiator, and a top panel for covering part of the top of the radiator.
4. A radiator cover as claimed in claim 1, 2 or 3, wherein the front panels are perforated, slatted or otherwise provided with air flow passages and/or decorative effect.
5. A radiator cover as claimed in claim 4, wherein the front panels comprise bars and the bars of one main section are arranged to interdigitate with bars from the other main section.
6. A radiator cover as claimed in any preceding claim, wherein the front panels are provided with foot portions so that the front panel is raised above the

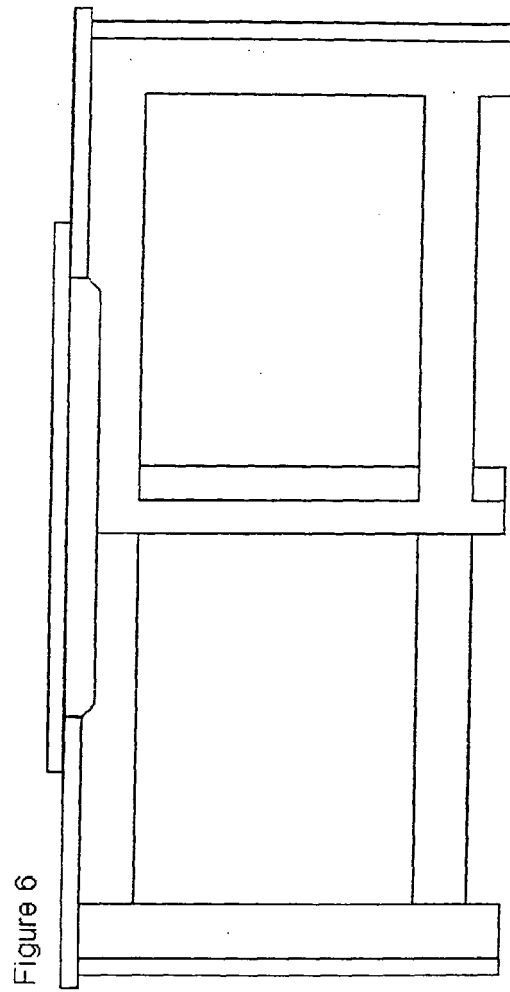
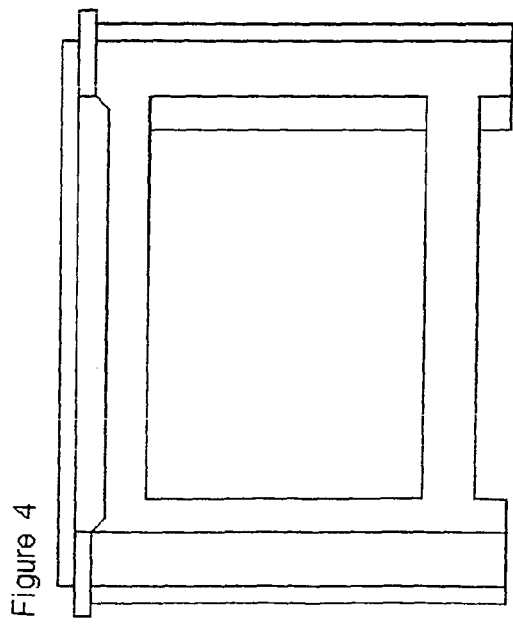
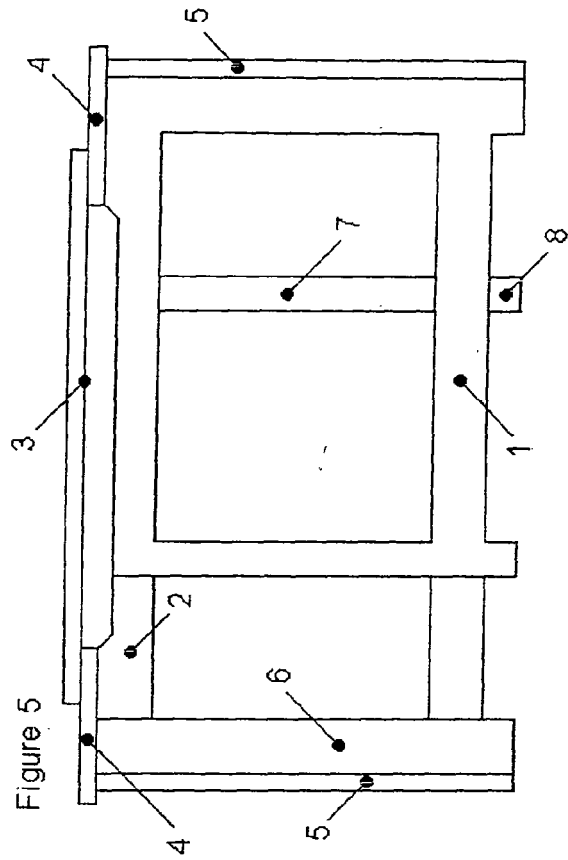
ground.

7. A radiator cover as claimed in any preceding claim, wherein the front panels are configured so that both the left and right sides of each panel are visible in use when viewed from the front. 5
8. A radiator cover as claimed in any preceding claim, wherein a central pelmet is provided to cover any gap between the two top panels. 10
9. A radiator cover as claimed in claim 8, wherein the pelmet is secured in position so that the two main sections are prevented from relative movement. 15
10. A radiator cover that can be adjusted in width and includes:
 - a) two front sections which interlock and slide against each others frames to adjust in width and shield the front face of a radiator; 20
 - b) a top pelmet to shield the top centre of the radiator and aesthetically disguise and strengthen the space left between the two top shelves after adjustment; 25
 - c) two top panels to shield- the outer faces of the radiator top; and
 - d) two side sections to shield the ends of the radiator. 30
11. A radiator cover that can be adjusted in width and includes:
 - a) two slatted front sections which interlock and fix within each others frames to form a flat surface that can slide to adjust in width and shield the front face of a radiator; 35
 - b) a top pelmet to shield the top centre of the radiator and aesthetically disguise and strengthen the space left between the two top shelves after adjustment; 40
 - c) two top shelves to shield the outer faces of the radiator top and guide the lateral movement of the front panels;
 - d) two side sections to shield the ends of the radiator and locate the front panels, 45

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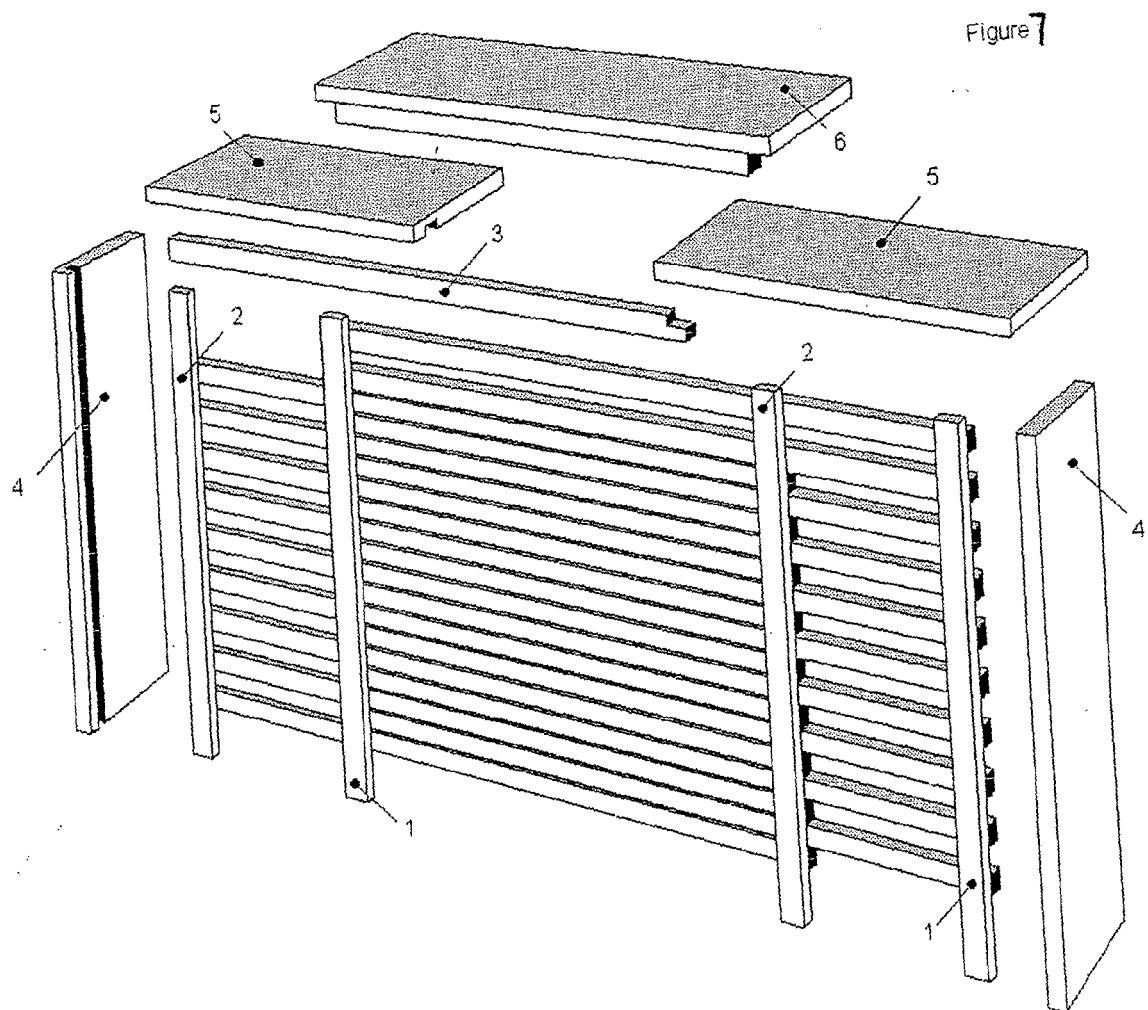


Figure 8

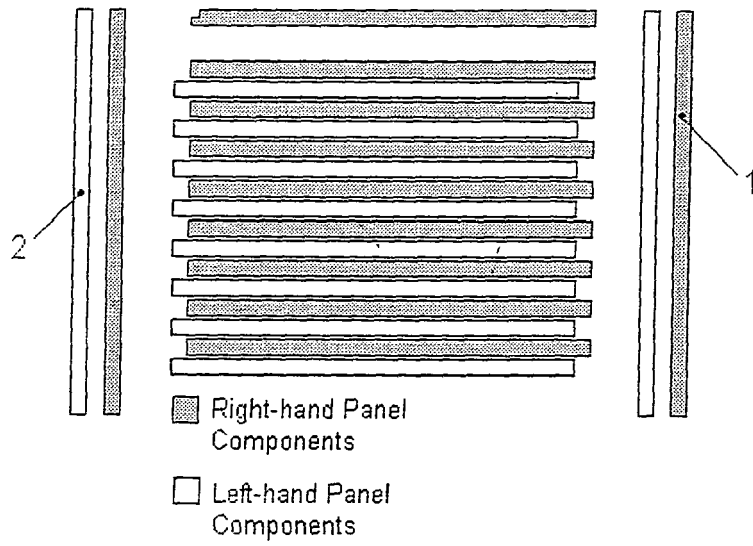


Figure 9

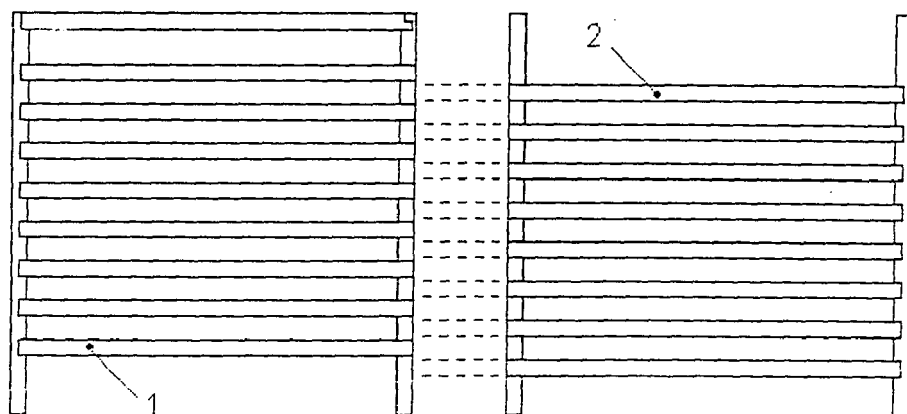
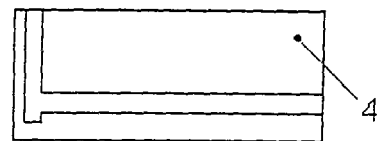


Figure 10

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- EP 1384957 A [0005]