It is to be understood that, if any prior art is referred to herein, such reference does not constitute an admission that the prior art forms a part of the common general knowledge in the art, in Australia or any other country.

SUMMARY

According to a first aspect of the present invention, there is provided a system for mounting a panel such as an acoustic panel, baffle or fin, the system comprising:
an elongate member, a base of the member being configured to enable it to be mounted with respect to a structure, with opposing sidewalls of the member extending from the base such that, in profile, the sidewalls define a neck portion that extends to an enlarged head portion of the member;
a panel having a recess formed in an edge thereof, the recess being configured to generally correspond to an external profile of the member whereby an inner recess portion is enlarged to receive the member head portion, with an outer recess portion being configured to receive the member neck portion, the outer recess portion opening out of the panel edge such that, when the member is located in the panel recess, it is transverse to the panel and retains the panel to the member.

According to a second aspect of the present invention, there is provided an elongate member for use with the system as described in the first aspect, the elongate member being configured in the form of an elongate channel, such that a base of the channel is configured to be mounted with respect to the structure, and such that opposing spaced sidewalls of the channel extend from the base to define the channel, wherein the channel locates and houses a light source therewithin, and wherein the channel retains an elongate cover formed of a light-transmissive material at an opening to the channel located between the channel sidewalls.

According to a third aspect of the present invention, there is provided a method for mounting a panel with respect to a structure, the method comprising:
i mounting a base of an elongate member with respect to the structure, the member being configured as described in the first and second aspects;

ii. mounting to the member a panel that is configured as described in the first and second aspects, the mounting of the panel to the member being by way of locating the member in the panel recess.

According to a fourth aspect of the present invention, there is provided a system for mounting a panel such as an acoustic panel, baffle or fin, the system comprising:

- a first elongate member, a base of the first member being configured to enable it to be mounted with respect to a structure, with opposing sidewalls of the first elongate member extending from the base such that, in profile, the sidewalls extend from the base to define a neck portion, the sidewalls projecting laterally out from the neck portion to define an outwardly projecting step-formation, each sidewall extending from its respective step-formation to an enlarged head portion of the first elongate member;
- a first panel, the first panel arranged to be located adjacent to the first elongate member whereby an edge of the first panel locates adjacent to the neck portion of the first elongate member, and a face of the first panel locates adjacent to the head portion of the first elongate member; and
- one or more clamping elements, each clamping element arranged to apply a clamping force to a respective panel located at the first elongate member, the force being applied at a face of the panel that is opposite to said panel face located at the head portion of the first elongate member, whereby the panel is clamped to the elongate member.

There is disclosed a system for mounting a panel with respect to a structure (e.g. a ceiling, ceiling space, false ceiling, wall, frame, divider, partition, border, fixture, furniture, etc.). The panel can take the form of an acoustic panel, baffle, fin, blade or fabric but is not so limited.

The system comprises an elongate member. A base of the member is configured to enable it to be mounted with respect to the structure. Opposing sidewalls of the member extend from the base such that, when the

member is viewed in profile (i.e. from the member end), the sidewalls are configured to define a neck portion that extends to an enlarged head portion of the member.

The elongate member typically takes the form of a channel (e.g. so that it may be formed as an elongate extrusion, such as from a metal, composite or plastic). However, in a variation, the elongate member may have a solid form (e.g. to have a rod-like or bar-like form) or may be of closed hollow section, but in each case the member still has the neck portion and enlarged head portion. In these latter cases the sidewalls and base can define respective sides/surfaces of the solid form or hollow section.

The system also comprises a panel. As above, typically the panel takes the form of an acoustic panel, baffle or fin. The panel has at least one recess formed in an edge thereof (e.g. to be located in an in-use upper edge when the panel is to be suspended, or in an in-use side edge when the panel is to be used as a divider, barrier, etc.). The at least one recess is configured to generally correspond to an external profile of the member. Thus, the recess can be provided with an inner recess portion that is enlarged to receive (e.g. snugly or closely) the

member head portion. The recess can also be provided with an outer recess portion that is configured to receive (e.g. snugly or closely) the member neck portion. The outer recess portion opens out of the panel edge (e.g. to enable the member to be mounted with respect to the structure). In use, when the member is located in the panel recess, it is transverse to the panel and retains the panel to the member.

For example, one or both of the member and panel may be configured whereby the member can be slid laterally through the recess to retain the panel to the member. Additionally or alternatively, one or both of the member and panel may be configured whereby the member can be push-fit into the recess, via the open outer recess portion, to retain the panel to the member.

The panel can be configured to be mounted to each member in a generally orthogonal arrangement (e.g. each panel extends at a right angle to the longitudinal axis of each member). Alternatively, the panel can be configured to mount at an angle to each member (e.g. each panel extends at an angle other than ~90° to the longitudinal axis of each member). Further, each member need not be straight, and may e.g. be curved.

The system can provide for “universal” panel mounting. In this regard, the system can accommodate a range of panel widths (e.g. ranging from 4mm to 150mm panel thicknesses). The system can also accommodate a range of panel lengths (e.g. multiple spaced members can be mounted with respect to the structure to support long panels). The member may be direct-fixed to the structure or may be suspended or spaced from the structure. Thus, the system can allow for quick and easy installation. The system may be factory prefabricated and may be supplied as a kit e.g. along with installation instructions. A kit may be supplied without panels. For example, preformed panels may be supplied separately to other components of the mounting system.

The system can be modular in that members and panels can each easily be adapted on site to suit the particular application, including by using member end caps and connectors, as outlined below. In some forms, as outlined below, the system may integrate lighting. In some forms, as outlined below, the member may also directly support there-within a panel in the form of a fin.

When the elongate member takes the form of an elongate channel, a base of the channel may be configured to be mounted with respect to the structure (e.g. to be direct-mounted to, or suspended or spaced from, the structure). The opposing spaced sidewalls of the channel can extend from the base to define the channel.

Typically, the channel is configured such that the base extends between and joins the channel sidewalls. Each sidewall may then extend to a distal end edge such that the sidewalls are spaced apart to define an opening to the channel. However, in a variation of the channel, the base may instead be defined by elongate, spaced base walls, whereby an opening between the base walls can be defined along the length of the base. In this variation, the channel sidewalls may be connected (e.g. as a continuous wall) instead of being spaced apart at their distal end edges.

In an embodiment, when the elongate channel is viewed in profile (i.e. from an end thereof), each channel sidewall may be configured to define an outwardly projecting step-formation at the juncture of the neck portion with the head portion. For example, a neck portion of the sidewall may extend generally orthogonally from the base to the step-formation. The step-formation may then comprise a step that projects out (e.g. laterally) from a neck portion of the sidewall. Then, a head portion of each sidewall may extend from its respective step (e.g. it may extend so as to form an acute angle with its respective step). The head portion of each sidewall may extend to a distal end edge of the sidewall. Alternatively, the head portion of each sidewall may extend such that the sidewalls are connected (e.g. as a continuous wall) instead of being spaced at their distal end edges.

opposing and inwardly projecting lips that extend for a length of the base recess (e.g. for the entire length or for discrete portion(s) of the base recess). These lips can be employed to secure the suitable fastening mechanism.

In this regard, in an embodiment, the system may further comprise a mounting fixture (i.e. the mounting fixture can provide one such suitable fastening mechanism). The mounting fixture may be configured for mounting to the structure (e.g. directly or to be suspended/spaced therefrom).

A portion of the mounting fixture may be configured to locate within the base recess and be retained therein by the lips. For example, the mounting fixture may be elongate, with one end of the elongate mounting fixture being configured for mounting with respect to the structure. This one end may be directly mounted to (e.g. by being affixed within) the structure. Alternatively, this one end may be configured to be suspended or spaced from the structure (e.g. via a wire, rod, etc.). Further, this one end of the mounting fixture may be located at that portion of the mounting fixture that is located (i.e. protrudes) outside of the base recess in use (i.e. the mounting fixture can project away from the base in use).

The other end of the mounting fixture may be provided with a groove therein (e.g. a peripherally extending groove formation). The groove enables the other end of the mounting fixture to locate within the base recess – e.g. to be retained therein by the lips locating in the groove.

In an embodiment, a wall of the base recess may be countersunk on an opposite side of the wall to the base recess. The countersunk side may extend for a length of the base recess wall (e.g. for the entire length or for discrete length(s) of the wall). An LED strip light may be located in the countersunk side. The countersunk side may also be configured to have one or more fasteners secured thereat (e.g. for direct mounting of the base to the structure). Each fastener may pass through a respective aperture formed in the base recess wall, which aperture may also be countersunk to flush-mount a head of the fastener therein. In this

In an embodiment, the system may further comprise at least one end cap (i.e. typically two end caps per member). Each end cap may be configured for secure location at a respective end of the member. The end caps can e.g. aesthetically finish off an installation and can cover any sharp edges of the member ends. The end caps may be moulded from a plastic material, which may also be light-transmissive or opaque.

In one form, when the member is hollow, each end cap may comprise a boss that protrudes from a plate. The boss can be formed to have an external profile that generally corresponds to (e.g. closely matches) an internal profile of the hollow member. This can enable the end cap to be push-fit into the respective end of the member.

In another form, when the member is hollow, each end cap may take the form of a connector. The connector can have bosses that protrude from respective, opposite sides of a plate. Again, each boss can be formed to have an external profile that generally corresponds to (e.g. closely matches) an internal profile of the hollow member. Thus, each boss may be push-fit into an end of a respective hollow member such that the connector can extend between and connect hollow members end-to-end.

In an embodiment, each boss may comprise a number of elongate panel-retaining inserts that project from a surface of the plate. A first pair of inserts can be arranged to locate between each flange and the base. A second pair of inserts can be arranged to locate between each flange and a respective sidewall distal end edge. In use, the first and second inserts can cooperate with the flanges, base and sidewalls to retain the end cap to the member end.

Also disclosed herein is an elongate member for use with the system as set forth above. The elongate member may be configured in the form of an elongate channel, such that a base of the channel is configured to be mounted with respect to the structure, and such that opposing spaced sidewalls of the

channel extend from the base to define the channel. The channel locates and houses a light source therewithin. The channel retains an elongate cover formed of a light-transmissive material at an opening to the channel located between the channel sidewalls.

Also disclosed herein is a panel for use with the system as set forth above. The panel may be configured as set forth above (e.g. to comprise at least one corresponding recess therein).

Also disclosed herein is an elongate cover for use with the system as set forth above. The cover may be configured as set forth above.

Also disclosed herein is an end cap for use with the system as set forth above. The end cap may be configured as set forth above.

Also disclosed herein is a mounting fixture when that mounting fixture is used with the system as set forth above. The mounting fixture may be configured as set forth above.

Also disclosed herein is a kit for use with the system as set forth above. The kit can comprise one or more of the channel, panel, elongate cover, or end cap or as set forth above. The kit can optionally comprise one or more mounting fixtures as set forth above. The kit may alternatively be supplied without panel(s), which may be supplied separately to other components of the mounting system.

Also disclosed herein is a method for mounting a panel as set forth above with respect to a structure. For example, the method can be employed to install one or more such panels using one or more elongate members as set forth above. The method can be used to install such panel(s) at or in relation to a ceiling, ceiling space, false ceiling, wall, frame, divider, partition, border, fixture, furniture, etc. The panel to be installed can take the form of an acoustic panel, baffle or fin, but again is not so limited.

In another form of the method, each member may be mounted indirectly to the structure (e.g. via one or more mounting fixtures, such as set forth above). For example, each member may be suspended or spaced with respect to the structure.

In one embodiment, the method may further comprise retaining an elongate cover to the or each member. For example, when multiple panels are mounted to the member(s), a discrete elongate cover may be retained at the member to locate between adjacent panels. A discrete elongate cover may also be retained at the member to locate between an end-most panel and a respective adjacent member end. Each discrete elongate cover may be configured as set forth above.

In one embodiment, the method may further comprise securing at least one end cap (typically two end caps) to a respective end of each member. Again, the end cap may be configured as set forth above.

In one embodiment of the method, the end cap may be a connector as set forth above (i.e. the connector may be located between so as to connect adjacent members end-to-end).

There is also disclosed a system for mounting a panel such as an acoustic panel, baffle or fin. The system can, for example, be configured to support a so-called “cloud” panel, baffle or fin. The system can e.g. allow the panel to be suspended from a structure. The system can e.g. allow a number of panels to be suspended from a structure.

The system comprises a first elongate member. A base of the first member is configured to enable it to be mounted with respect to a structure (e.g. at or suspended from a ceiling, ceiling space, false ceiling, roof, etc.). Opposing sidewalls of the first elongate member can extend from the base such that, in profile (i.e. when viewed from the member end), the sidewalls can define a neck portion. The sidewalls can project laterally out from the neck portion to

define an outwardly projecting step-formation. Each sidewall can extend from its respective step-formation to an enlarged head portion of the first elongate member. Thus, in the system, the first (or each) elongate member can be as defined above.

The system also comprises a first panel. Typically, the first panel takes the form of an acoustic panel, baffle or fin. The first panel can be arranged to be located adjacent to the first elongate member. In this regard, an edge of the first panel can locate adjacent to the neck portion of the first elongate member, and a face of the first panel can locate adjacent to the head portion of the first elongate member. Thus, when the first member is mounted with respect to a structure (e.g. a ceiling, ceiling space, false ceiling, roof, etc.), the first member can support thereat a respective edge of the first panel (i.e. the first panel can likewise be mounted with respect to the structure).

For example, where the system only makes use of one elongate member, an opposite edge of the first panel may be supported by an opposing structure (e.g. a wall, post, etc.). Thus, one edge of the first panel can be supported by the first elongate member, and e.g. the opposing edge of the first panel may be supported at the wall, post, etc.

In an embodiment, the system may further comprise a second panel. Typically, the second panel also takes the form of an acoustic panel, baffle or fin. The second panel may be arranged to be located adjacent to an opposite side of the first elongate member to where the first panel is to be located. In this regard, an edge of the second panel can locate adjacent to the neck portion of the member, and a face of the second panel can locate adjacent to the head portion of the member. Thus, the one elongate member can support respective edges of first and second panels at either side thereof.

In an embodiment, the system may further comprise a second elongate member. The second elongate member may be located adjacent to the

extend from the first elongate member end at an orthogonal or non-orthogonal angle. Additionally, the second elongate member may extend from the first elongate member end from either an end of the second elongate member, or from an intermediate location of the second elongate member. In each such case, the first panel may span between the first and second elongate members whereby respective edges of the first panel are supported at the first and second elongate members. Further, a second panel may be arranged at an opposite side to the first panel.

In an embodiment, the system may further comprise third and, optionally, fourth elongate members. For example, the second elongate member may be arranged to oppose and be spaced apart from the first elongate member, and the fourth elongate member may be arranged to oppose and be spaced apart from the third elongate member. When the system comprises first to fourth elongate members, these may be arranged and employed to support a first panel having four sides (e.g. square, rectangle, rhombus, trapezium, etc.). In this regard, the first panel may be configured to locate between and be supported at respective edges thereof by the first, second, third and fourth elongate members.

For example, the third and fourth elongate members may extend between and join the first and second elongate members (e.g. form a closed body of elongate members). In this arrangement, the respective ends of the third elongate member may be located at respective ends of the first and second elongate members, and the respective ends of the fourth elongate member may be located at respective opposite ends of the first and second elongate members.

In an embodiment, the system may comprise more than four elongate members, which can be assembled and arranged in the various configurations as outlined above. For example, the resulting configuration may comprise a five or more-sided regular polygon (e.g. a closed body with equal length sides). Alternatively, the system may be configured in the form of an

irregular polygon, i.e. sides of unequal length. The first and further panels to be supported thereat can be configured accordingly.

In an embodiment, the second panel may be configured to surround and be supported at respective inner edge(s) thereof by the first, second, third and, when present, fourth or more elongate members. For example, an inner aperture of the second panel may be configured with the same external shape as the configuration of the first, second, third, or more elongate members.

The system further comprises one or more clamping elements. Each clamping element can be arranged to clamp at least one panel to a respective elongate member. For example, each clamping element can be arranged to be connected to an elongate member at the base of the elongate member.

Each clamping element may be adjustable and can be arranged to apply a clamping force to a respective panel located at the elongate member. In this regard, each clamping element may be connected to a respective elongate member via a rod. Each clamping element may be rotated around the rod between a non-clamping and clamping position.

In a variation, the rod may be threaded, whereby the rod can be screw-adjusted to increase or to release the clamping force.

When in the clamping position, the force that is applied by each clamping element can act at a face of the panel that is opposite to the panel face that is located at the head portion of the elongate member. In an embodiment, each clamping element may be arranged at an elongate member to apply a clamping force to respective panels located at either side of the elongate member.

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments will now be described, by way of example only, with reference to the accompanying drawings in which:

CLAIMS

1. A system for mounting a panel such as an acoustic panel, baffle or fin, the system comprising:

an elongate member, a base of the member being configured to enable it to be mounted with respect to a structure, with opposing sidewalls of the member extending from the base such that, in profile, the sidewalls define a neck portion that extends to an enlarged head portion of the member;

a panel having a recess formed in an edge thereof, the recess being configured to generally correspond to an external profile of the member whereby an inner recess portion is enlarged to receive the member head portion, with an outer recess portion being configured to receive the member neck portion, the outer recess portion opening out of the panel edge such that, when the member is located in the panel recess, it is transverse to the panel and retains the panel to the member.

2. A system according to claim 1 wherein one or both of the member and panel are configured whereby the member can be slid laterally through the recess and/or push-fit into the recess via the open outer recess portion.

3. A system according to claim 1 or 2 wherein the elongate member is in the form of an elongate channel, such that a base of the channel is configured to be mounted with respect to the structure, and such that opposing spaced sidewalls of the channel extend from the base to define the channel.

4. A system according to claim 3 wherein, in profile, each channel sidewall comprises an outwardly projecting step-formation at the juncture of the neck portion with the head portion, with sides of the panel recess being configured to define corresponding inwardly projecting step-formations at the juncture of the inner recess portion with the outer recess portion whereby, when the channel is

located in the recess, the corresponding channel and panel step-formations face each other to thereby enable retention of the panel to the channel.

5. A system according to claim 3 or 4 wherein the channel is configured such that the base extends between and joins the channel sidewalls, with each sidewall extending to a distal end edge such that the sidewalls are spaced to define an opening to the channel, with each sidewall distal end edge comprising an inwardly projecting lip that runs for a length of the sidewall, with the lips being configured to retain an elongate optionally strip-like cover at an opening to the channel, such as by a snap- or slide-fit.

6. A system according to any one of the preceding claims wherein an external side of the base comprises an inwardly formed elongate recess that opens out from the base, the opening to the base recess being defined by opposing and inwardly projecting lips that extend for a length of the base recess, the base recess for receiving a mounting fixture being configured for mounting to a structure, with a portion of the mounting fixture being configured to locate within the base recess and be retained therein by the lips, and with another portion of the mounting fixture able to locate outside of the base recess to project away from the base in use.

7. A system according to any one of the preceding claims wherein each sidewall further comprises an elongate flange that projects inwardly from an intermediate location of a respective sidewall, each flange extending for a length of a main channel recess, with the flanges generally projecting towards each other, with each flange comprising a lip that extends at an acute angle from a distal end edge of the flange and away from the base.

8. A system according to any one of the preceding claims wherein the panel comprises a number of discrete recesses spaced out along the edge thereof, each for locating a respective member therein, with opposing inwardly-facing faces of the panel outer recess portion tapering outwardly at the panel edge such that these

inward faces are able to engage with corresponding external faces of the member sidewalls to thereby guide the member when it is push-fit into a respective panel recess via the open outer recess portion.

9. A system according to any one of the preceding claims, the system further comprising an elongate cover which, when the member takes the form of a channel, is configured to be retained at an opening to the channel with the elongate cover comprising an elongate strip that has a pair of elongate, spaced parallel flanges projecting from and extending along a face thereof, with a distal end edge of each such flange being configured to interact with, such as by snap- or slide-fitting, a respective formation defined at a corresponding distal end edge of each sidewall, such that the elongate cover can be retained at and thereby cover the opening to the channel.

10. A system according to any one of the preceding claims, the system further comprising at least one end cap, each end cap being configured for secure location at a respective end of the member such that, when the member is hollow, each end cap comprises a boss that protrudes from a plate, the boss having an external profile that generally corresponds to an internal profile of the hollow member, such that the end cap may be push-fit into the respective end of the member.

11. An elongate member for use with the system as set forth in any one of the preceding claims, the elongate member being configured in the form of an elongate channel, such that a base of the channel is configured to be mounted with respect to the structure, and such that opposing spaced sidewalls of the channel extend from the base to define the channel, wherein the channel locates and houses a light source therewithin, and wherein the channel retains an elongate cover formed of a light-transmissive material at an opening to the channel located between the channel sidewalls.

12. A method for mounting a panel with respect to a structure, the method comprising:

mounting a base of an elongate member with respect to the structure, the member being configured as set forth in any one of claims 1 to 11;

mounting to the member a panel that is configured as set forth in any one of claims 1 to 11, the mounting of the panel to the member being by way of locating the member in the panel recess.

13. A method according to claim 12 wherein the panel is mounted to the member by a relative sliding of the member laterally through the recess and/or by push-fitting the member into the recess via the open outer recess portion.

14. A method according to claim 12 or 13 wherein the panel comprises a number of discrete recesses spaced out along the edge thereof, wherein a number of members that correspond to the number of discrete panel recesses are mounted in a spaced manner with respect to the structure, and wherein a number of panels are mounted to the member(s), such as in a spaced manner.

15. A system for mounting a panel such as an acoustic panel, baffle or fin, the system comprising:

- a first elongate member, a base of the first member being configured to enable it to be mounted with respect to a structure, with opposing sidewalls of the first elongate member extending from the base such that, in profile, the sidewalls extend from the base to define a neck portion, the sidewalls projecting laterally out from the neck portion to define an outwardly projecting step-formation, each sidewall extending from its respective step-formation to an enlarged head portion of the first elongate member;

- a first panel, the first panel arranged to be located adjacent to the first elongate member whereby an edge of the first panel locates adjacent to the neck portion of the first elongate member, and a face of the first panel locates adjacent to the head portion of the first elongate member; and

- one or more clamping elements, each clamping element arranged to apply a clamping force to a respective panel located at the first elongate member, the force being applied at a face of the panel that is opposite to said panel face located at the head portion of the first elongate member, whereby the panel is clamped to the elongate member.

16. A system according to claim 15, the system further comprising a second panel, the second panel arranged to be located adjacent to an opposite side of the first elongate member to where the first panel is to be located, such that an edge of the second panel locates adjacent to the neck portion of the first elongate member, and a face of the second panel locates adjacent to the head portion of the first elongate member.

17. A system according to claim 15 or 16, the system further comprising a second elongate member, the second elongate member being located adjacent to the first elongate member but arranged so as to support another edge of the first panel at the neck portion of the second elongate member, with the face of the first panel locating adjacent to the head portion of the second elongate member.

18. A system according to claim 17, wherein the second elongate member is arranged:

parallel to and spaced apart from the first elongate member, such that the first panel is able to span between the first and second elongate members to be supported at opposite edges of the first panel;

at an angle to the first elongate member, such that the first panel is able to span between the first and second elongate members whereby respective edges of the first panel are supported at the first and second elongate members.

19. A system according to any one of claims 17 to 18, the system further comprising third and fourth elongate members, wherein the second elongate member is arranged to oppose and be spaced apart from the first elongate

member, and wherein the fourth elongate member is arranged to oppose and be spaced apart from the third elongate member, and wherein the third and fourth elongate members extend between and join the first and second elongate members.

20. A system according to claim 19, wherein respective ends of the third elongate member are located at respective ends of the first and second elongate members, and wherein respective ends of the fourth elongate member are located at respective opposite ends of the first and second elongate members.