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INT CL **F16M**
Other: **EPODOC, WPI, INTERNET**

(54) Abstract Title: **Display screen mounting apparatus**

(57) A display screen mounting system 1 comprises a first mounting frame 12 for attachment to a vertical surface 40, and a first display panel 16 for receiving a display screen 50, the first display panel 16 being attached to the first mounting frame 12. The frames and panels may have openings 20 for cables 34 to pass through to behind the panel, thus hiding the cables 34 from view. A spirit level 32 may be provided as part of the first mounting frame. The screens may be attached to the panels by cooperating brackets 26, 27, with the frames attached to the wall via screws 13. Furthermore there may be at least one plate 22 attached to the display panel for providing a shelf 24 for supporting one or more ancillary devices 30. A template may be provided for prior to mounting the apparatus on the wall. A display screen mounting method is also disclosed.

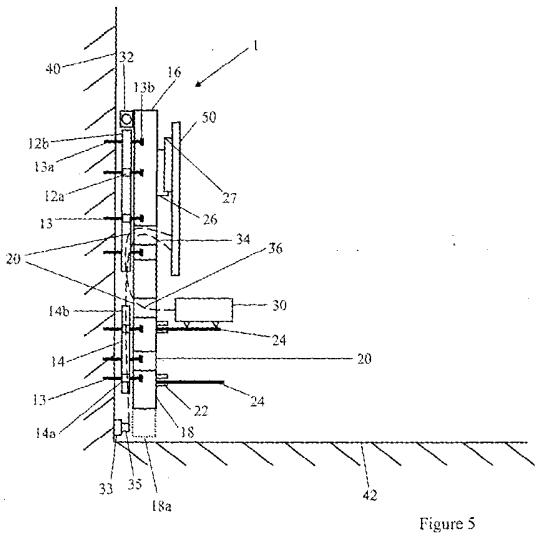

Figure 5

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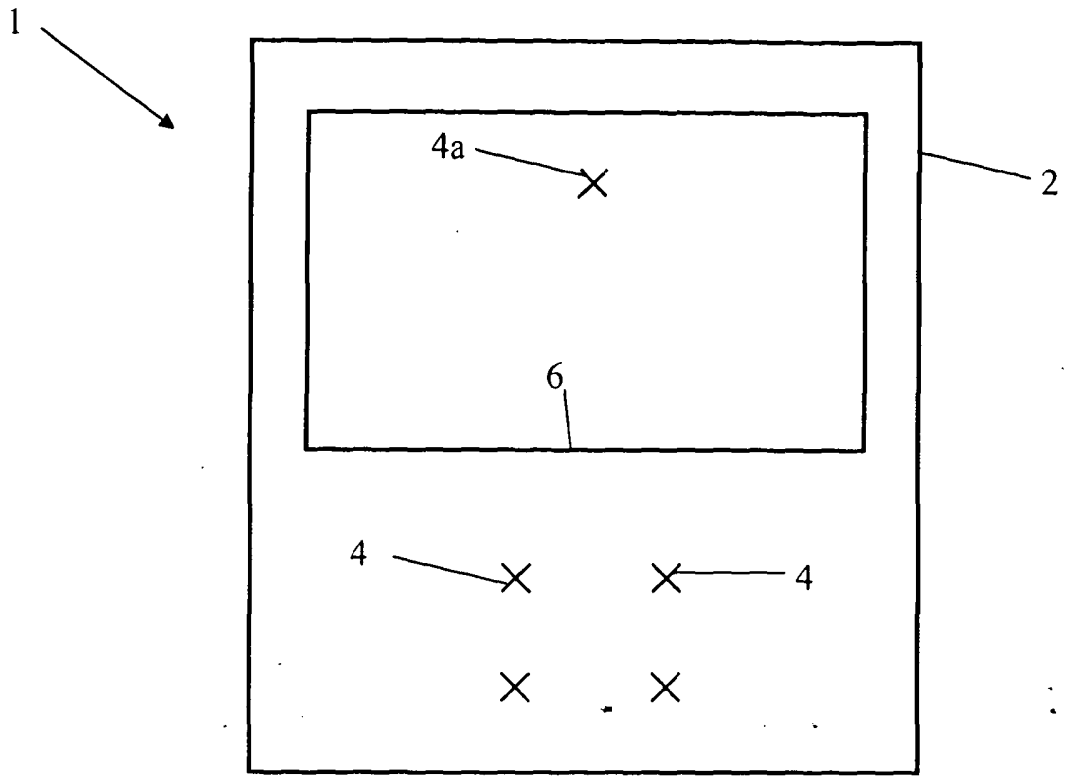

Figure 1

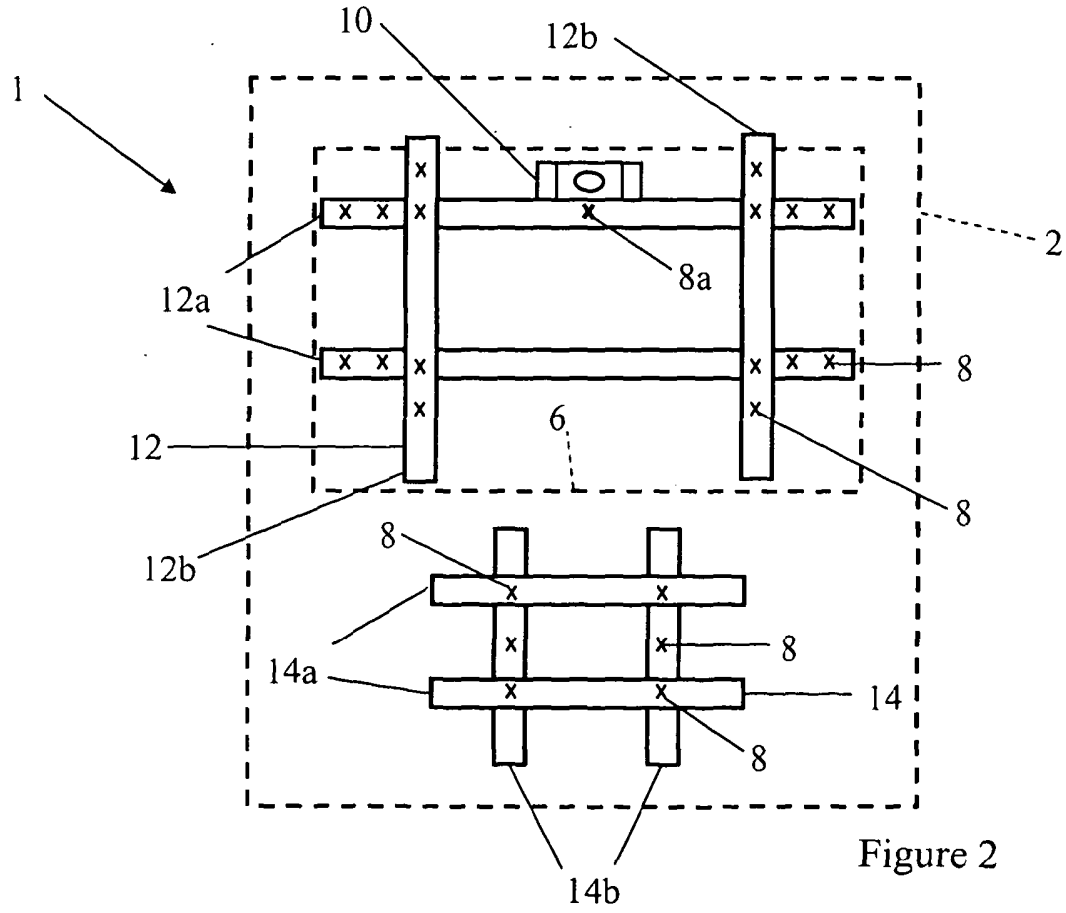

Figure 2

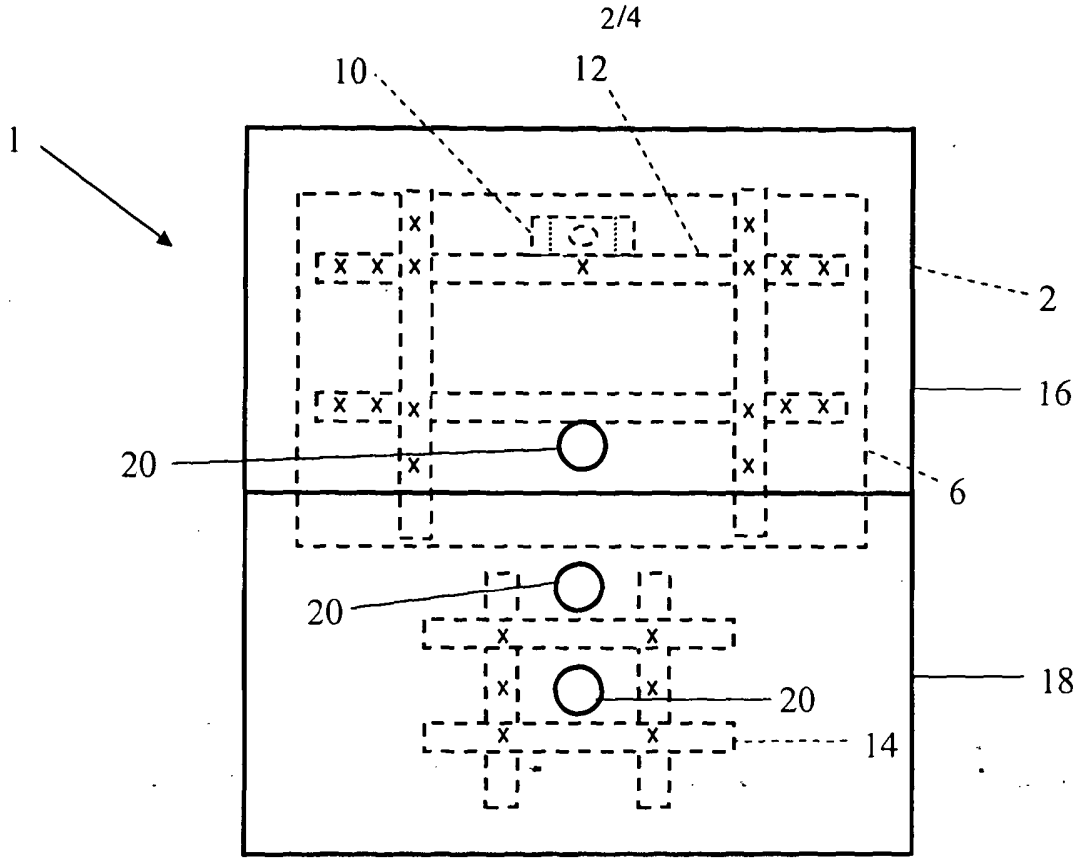

Figure 3

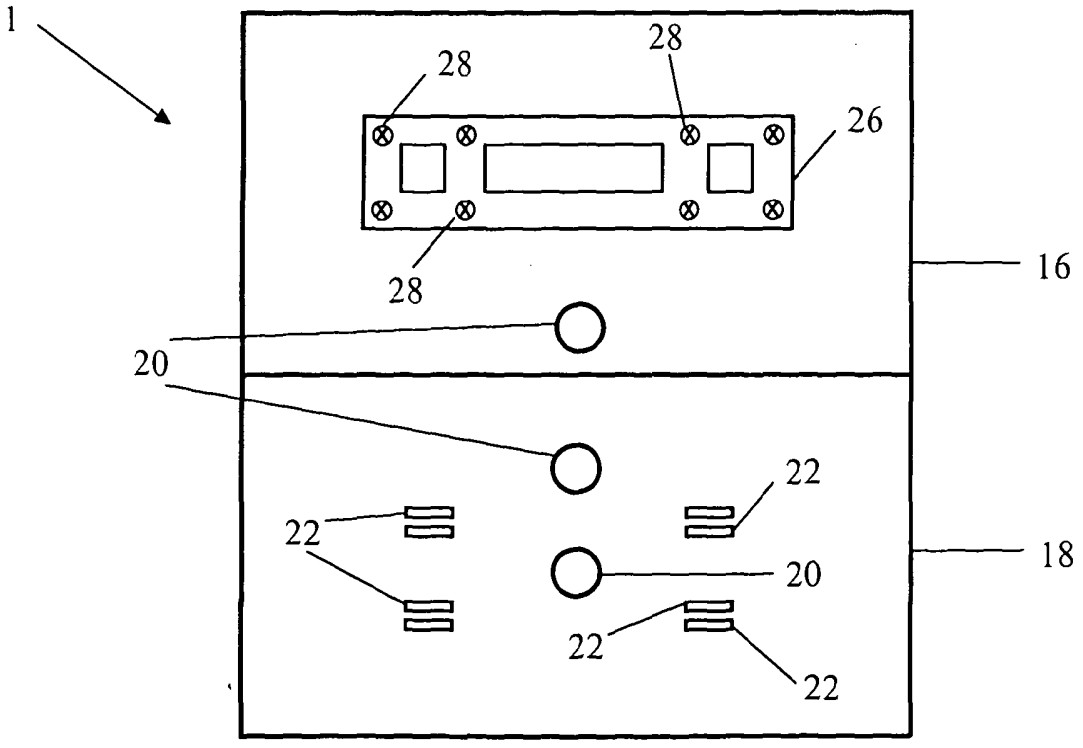

Figure 4

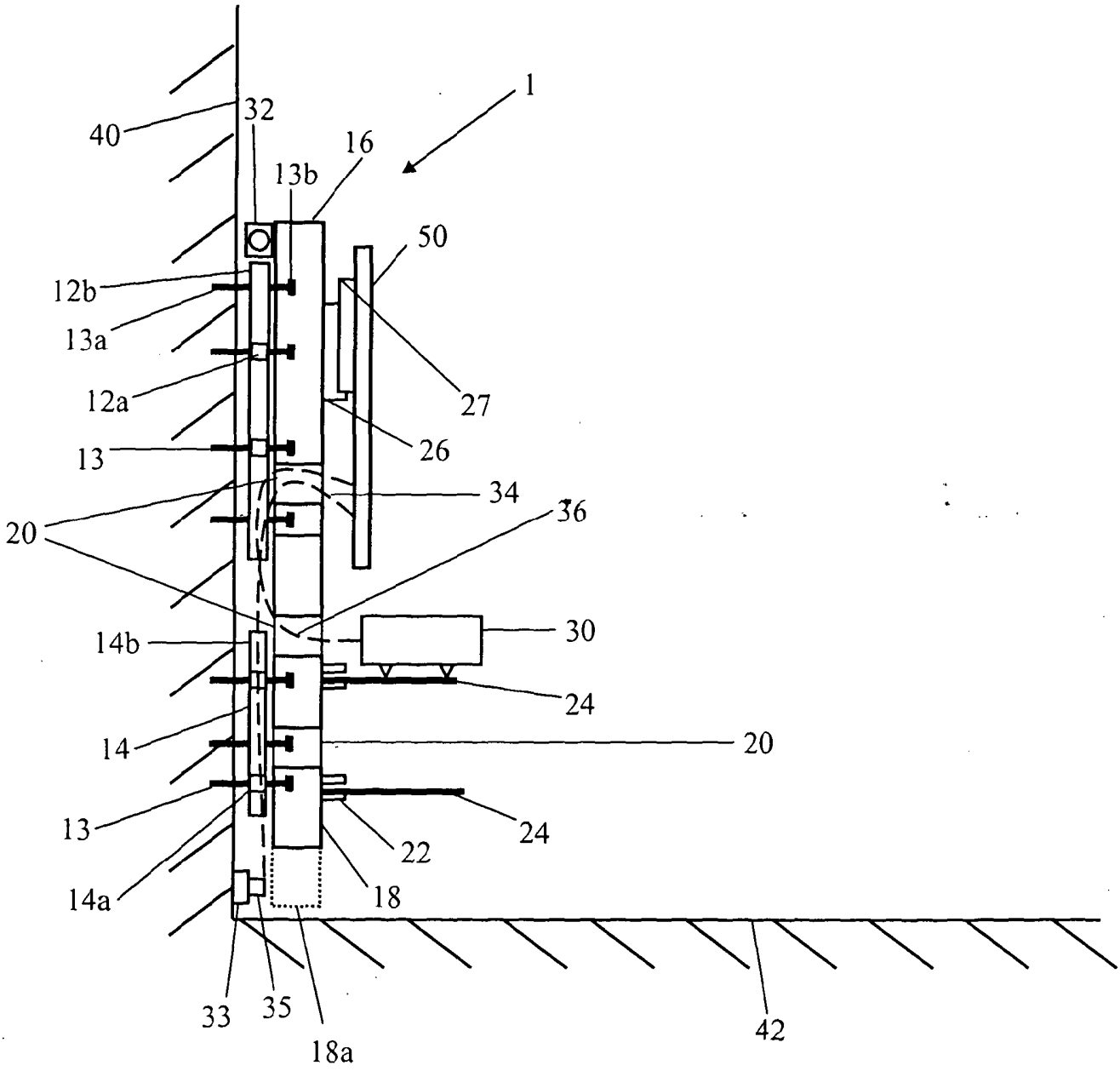
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Figure 5

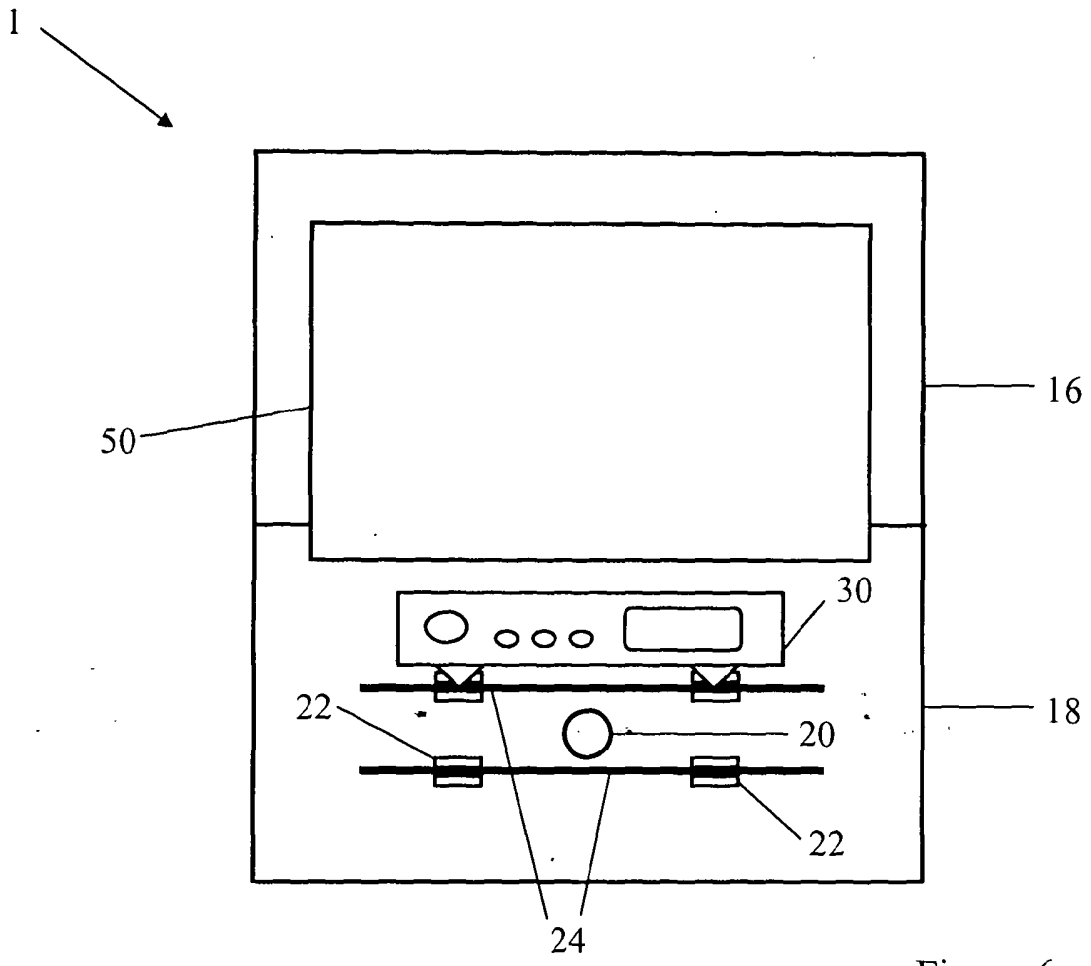

Figure 6

DISPLAY MOUNT

The present invention relates to a display mount and in particular to a display screen mounting system comprising at least one frame and at least one display panel on which a display screen is mountable. The present invention further relates to a method of mounting a display screen and in particular to a method of mounting a display screen on a display panel mounted on a frame. The frame is configured for mounting on a substantially vertical surface, such as a wall.

Display screens, particularly flat panel display screens such as, e.g. plasma screens, liquid crystal displays (LCDs), or the like, are becoming increasingly popular not only for displaying information, etc., in business, industry, retail, etc., but also in the smaller or personal markets such as home cinema or the like.

A problem that is particularly prevalent for home cinema consumers relates to installation of a flat screen display in the desired place and position in the home. At present two options exist for the consumer to select between, both of which having problems associated therewith.

For example a consumer might chose to place their plasma or LCD screen, etc., on a stand such as a glass stand having one or more shelves. However it may be difficult to obtain a stand that meets all the consumer's requirements, particularly size, shape and appearance needs. If for example a consumer wishes to find a stand that has a similar appearance to other aspects of the room in which the screen is to be used (e.g. other furniture, floor or wall coverings, etc.) then it may be necessary to compromise on the shape and size of the stand. Or the consumer may be restricted to a certain size and/or shape of the stand, e.g. due to the size and shape of the area of the room where the screen is to be placed, but may not be able to obtain a stand that meets their criteria.

Still further, one advantage of flat panel screens is that they are slim relative to older style displays (such as cathode-ray tube (CRT) televisions), but the consumer may not be able to take advantage of this benefit if the stand is inappropriately designed (e.g. a flat-backed stand to fit a corner

space). Still further, as is common in the art, the foot or base attached to the underside of the flat panel necessarily has a much larger footprint compared with the screen depth, and spaces the flat panel a significant distance away from, e.g., the wall that the stand is placed against or the corner that the stand is placed in. This is particularly undesirable in rooms or spaces having a limited depth in the area where it is desired to place the screen. Furthermore the stand protruding into the limited depth further restricts the space available for the consumer and may restrict further their choice of stand. If the space is very limited, the consumer may undesirably injure themselves on the protruding stand and/or screen and/or cause damage thereto.

Still further, placing a flat panel display on its (typical custom) display foot or base and onto a stand does not enable the consumer any freedom to adjust the height of the display. It is important with many flat panel screens for the consumer to view the screen at an optimum angle and therefore there is an optimum height for the screen defined by the configuration of the furniture from which the screen will be viewed. As the furniture is typically not adjustable for height either, the consumer may not be able to achieve the optimum viewing angle for a particular screen.

An alternative option to resting a display screen on a floor stand is to attach it directly to a wall or the like. This addresses the problem of the display screen and/or any stand protruding undesirably into the room and of obtaining a stand having an optimised size and shape. However flat panel display screens are heavy (typically at least 20 kg and often significantly more, particularly for larger screens) and therefore mounting such a heavy device to a wall, particularly an internal wall, requires specialist skills as well as tools and fixings, all of which can be costly. In some cases the wall is simply unsuitable for such a weighty item to be mounted in the standard manner.

Furthermore, correctly mounting a flat panel display screen can be complex and errors are easy to make, e.g., in placement and alignment of the screen, such that the consumer may be dissatisfied with the mounted position and aspect of the flat screen once completed and indeed even discouraged from attempting to wall-mount the screen at all.

Still further, in order to provide the flat panel screen with power for operation and to connect the screen to one or more devices for providing a signal thereto at least one and typically several cables must be connected to the screen and to the devices, as well as to each other and to a power socket. Thus cables that run from the wall mounted screen are visible and untidy and this can only be rectified by covering them with a cable cover, which undesirably protrudes from the wall and is unattractive, or by cutting a channel in the wall and plastering over the cables, which is time consuming and difficult for the average consumer to achieve. Furthermore once plastered into the wall the cables are difficult or even impossible to replace if, for example, a device fails or a new device replaces an existing one, etc. Still further it is often necessary to additionally provide a stand anyway to support the devices connected to the flat panel display screen and so the space problems, etc., discussed above are then also encountered even with a wall mounted display screen.

There exists therefore a need for an improved display screen mount and a method for mounting a display screen.

In accordance with the present invention, from a first broad aspect, there is provided a display screen mounting system comprising a first mounting frame for attachment to a substantially vertical surface, and a first display panel for receiving a display screen thereon, the first display panel mountable to the first mounting frame.

There is therefore provided a display screen mounting system that is easy to install as the mounting frame is separately attachable to a vertical surface, e.g. a wall or the like. A display panel is mountable on the mounting frame after attachment to the wall. A display screen such as an LCD or plasma display screen can be hung, or otherwise attached to, the display panel thus mounting the screen to the wall in a simple and reliable manner. The display panel provides a background to the screen and preferably is configured such that when mounted to the mounting frame, the mounting frame is not visible.

Preferably the first display panel comprises at least one opening therein. This is advantageous because access to the mounting frame is

provided even when the display panel is mounted to the mounting frame. Therefore in preferred embodiments one or more, e.g., cables of a screen attached to the display panel can be passed through the opening and behind the display panel into the spacing provided between the wall and the display panel by the mounting frame. This is particularly advantageous because, e.g., the power supply cable for the display screen can be connected to the screen and to a power source and yet the cable will not be visible to the consumer viewing the screen from in front of the display panel. This is also the case for any other cables passed through the opening, e.g. for connecting devices to the screen such as a DVD player, satellite decoder, set-top box, video recorder, amplifier, games console, speaker(s), etc.

Preferably the first display panel further comprises bracket means configured for receiving a display screen such that the display screen is mountable to the substantially vertical surface by the bracket means of the first display panel when mounted to the first mounting frame. This enables the display screen to be easily mounted to, and supported on, the display panel and it is not necessary, for example, to attach the display screen using other means such as screwing or otherwise attaching the screen to the panel, which can be awkward and difficult, not least due to the weight of the screen which would need to be held in place whilst mounting, and may introduce alignment errors during attachment.

Preferably the system comprises co-operating bracket means mountable to a display screen, the co-operating bracket means configured for mating with the bracket means of the first display panel. This is particularly advantageous because the bracket means can be attached to the display panel (either before or after mounting the panel to the mounting frame), the co-operating bracket means can be attached to the display screen and the screen can then be easily and quickly hung, or otherwise attached, by co-operation of the bracket components. This not only enables a consumer to mount the screen without assistance (whereas in the prior art it may be necessary for at least a first person to hold the screen in place whilst a different person attaches it to the wall) but also alignment of the bracket

components is simple and easy because the components are light and can be attached to the panel and to the screen independently.

Preferably the display screen mounting system comprises at least a second display panel. In other embodiments, three or more panels are be provided.

Having at least two panels is advantageous because the display panel will necessarily be large (due at least in part to the size of the screen that is mounted to the panel) and therefore separating the panel into at least two segments provides panels that are more manageable to handle and to mount. Furthermore if it is desired to pass, e.g., cables or the like from the screen to the rear of the display panel, this can be achieved by passing them between the two panels which is particularly helpful when assembling the display mount.

The display panel or panels can be any suitable shape and or size and can be selected for appearance and/or for fit, e.g., into the area and/or onto the wall where the screen is to be mounted. For example on many walls, it may be desirable to have rectangular or square panels to provide a rectangular or square backdrop to a screen mounted thereon. However in, e.g., a corner and/or in a room that for example has a sloping roof, other shapes, e.g. at least partially triangular shaped panels may be desirable.

The second (and in some embodiments, third or more) panel can be mounted to the display mount in any suitable manner. In a preferred embodiment, the second display panel is mountable (at least partially, and in some embodiments, entirely) to the first mounting frame. Thus a single frame is provided on which both panels are mountable thereby providing a simple system for wall mounting display panels for receiving a screen.

In some embodiments, the display screen mounting system further comprises at least a second mounting frame. Preferably the second display panel is at least partially, and in some embodiments, entirely, mountable to the second mounting frame.

Therefore a modular system is provided for attaching two or more mounting frames to a surface, e.g. a wall, and for mounting at least two panels thereto for receiving a screen. Each panel may entirely or partially be

mountable to each of one or more frames. Therefore it is possible for a panel to be partially mounted to a first frame and also partially mounted to a second frame if desired.

Having multiple components provides a flexible system that can be constructed in any desired size and shape and that may be easier to assemble than, for example, a system comprising only a single panel and/or mounting frame. Still further each panel and/or frame can be tailored for the desired configuration and may be interchangeable with other frames/panels to customise and/or modify the finished display mount.

In a particularly preferred embodiment the display mount comprises a first display panel and a second display panel, the first display panel for mounting on the first mounting frame and the second display panel for mounting on the second mounting frame. Preferably the second display panel is configured for mounting such that the second display panel abuts, and is aligned substantially immediately beneath, the first display panel.

Thus there is provided a two panel display system for receiving a display screen having only a single, horizontal join between the panels which can be mostly or entirely located behind a screen when mounted to the display mount. In the embodiments of the present invention, the screen may be mountable to any one or more of the plurality of display panels comprising the display mount. Preferably in the two panel embodiments, the screen is mountable to the first or upper display panel.

Preferably the second display panel comprises at least one, preferably two openings, and preferably more than two openings therein. This advantageously allows components, such as cables, to pass from the front of the second panel to the rear and thus to the spacing between the wall and the panel as provided by the presence of the mounting frame, as discussed above in relation to the first panel. In particularly preferred embodiments having two (or more) panels, the first and second panels comprise at least one opening each, such that, for example, cables passing from a component or device can pass through the opening in the, e.g. second (lower) panel, behind the panel(s) as discussed before and back through the opening in the first (upper panel) for connection, e.g., to the display screen. This is particularly

useful for component cables such as SCART, HDMI, IR, audio, component, S-Video, USB leads or the like.

In particularly preferred embodiments the opening (or openings) in the display panel (or panels) comprises a throughbore, hole or channel for receiving one or more cables or wires such that the cables or wires pass through the display panel from a front surface to an opposing back surface thereof.

As discussed above, the display mount enables a screen to be received on the display panel which is mounted to a wall by a mounting frame. It is typically desirable to connect the screen with other devices as set out above and although these could also be mounted directly onto the display panel where appropriate, in preferred embodiments the display screen mounting system further comprises at least one plate configured for attachment in a substantially perpendicular alignment to the display panel such that when attached the plate forms a (substantially horizontal) shelf for supporting one or more devices thereon. This is advantageous because one or more shelves is provided for placing devices such as a DVD player, satellite decoder, set-top box, video recorder, amplifier, games console, speaker(s), etc., and the shelf can be customised for size and shape to avoid protruding from the display panel any further than is necessary for supporting a particular device. Thus a display mount with minimised depth is provided.

The opening in the (or both) display panel(s) can be provided at any suitable location on the panel. Preferably the opening in the display panel (in preferred embodiments the second or lower panel) is located such that when a plate is attached to the display panel, the opening is proximate the at least one plate. This advantageously provides support means (e.g. a shelf) for at least one device and an opening near the device, when resting on the support means, for receiving one or more cables or wires from the device.

In particularly preferred embodiments, the opening in the display panel is located such that when the plate is attached to the display panel, the opening is substantially immediately above, and preferably centrally located relative to, the plate. This provides shelves with a conveniently placed

opening in the display panel that will not be visible when the device supported on the shelf is in place as the hole will be behind the device.

The above embodiments describe one plate provided on the display panel but of course two (or more) plates could be provided, preferably substantially vertically aligned above each other, to provide a plurality of shelves. Preferably each shelf has an associated opening. In a particularly preferred embodiment, the display mount comprises two plates and two openings in the lower portion of the or a panel or in the second, lower panel in the two panel embodiments or the like.

The plate or plates can be attached to the display panel in any suitable manner. In a particularly preferred embodiment, the display screen mounting system further comprises plate attachment means, mountable to the display panel, for receiving the (or each) plate. Preferably the plate attachment means comprises one, or more preferably a pair or more, plate receiving means such as clips, shelf supports or the like. Preferably the plate attachment means are provided on the display panel prior to assembly such that when mounted on the wall, the display panel immediately provides means for easily mounting the shelf simply by introducing the plate into the clips or onto the supports, etc., without needing any additional fixing means or alignment.

The plate may be formed of any suitable material or materials and can, for example, be configured for a particular purpose and/or a particular appearance or the like. In preferred embodiments, the at least one plate comprises a glass sheet thereby providing shelves that are durable, strong and easy to clean. Glass furthermore is neutral in appearance and will visually blend with any other items or components, etc.

The display panels may comprise any suitable material and construction. In particularly preferred embodiments a display panel is configured to have a similar appearance to one or more other aspects of, e.g., the room in which the screen is to be mounted, or to other components of the display mount itself, or to the particular display screen to be mounted on the display mount, etc. This can be achieved in any suitable manner. In a particularly preferred embodiment, the display panel comprises at least one

wood panel or a plurality of wood panels, and preferably further comprises an outer cover covering the wood panel(s) and preferably also padding means between the wood panel(s) and the outer cover. This provides a soft display panel that is strong, visually appealing, and on which it is easy to mount a screen or a bracket or the like for receiving a screen. The outer cover in particular can be selected for compatibility with other components of a room, or for contrast, etc. Preferably the outer cover comprises material comprising at least one of: cloth, leather, suede, or the like.

As discussed above, the display panel(s) is mounted on at least one mounting frame. Preferably the mounting frame is configured for ease of attachment to a substantially vertical surface such that the frame can be quickly and easily mounted before the display panel(s) is mounted thereto. In preferred embodiments, the mounting frame further comprises levelling means for enabling alignment of the mounting frame about an axis substantially perpendicular to a substantially vertical surface to which the mounting frame is to be mounted. Preferably the levelling means comprises one or more spirit levels such that the frame can be attached to the wall and the alignment corrected with reference to the spirit level(s) to ensure an accurate alignment of the frame and thus of the display panel and preferably thus also of the screen itself.

In preferred embodiments, the mounting frame comprises at least one hole or bore for allowing attachment means, for attaching the mounting frame to a substantially vertical surface, to pass therethrough and into the substantially vertical surface. This allows the frame to be attached, preferably only partially and rotatably, to a wall such that the frame can be aligned as set out above. For example the attachment means preferably comprises a nail, bolt, screw, or the like that passes through the frame and becomes embedded in the wall, but only to a depth sufficient to partially secure the frame whilst still allowing rotation of the frame about the nail, bolt, screw, or the like. The frame can then be rotated until level (with reference to levelling means for example) and then the attachment means tightened to firmly secure the frame in place and to prevent any movement, even rotational.

Preferably the frame comprises at least one further hole or bore for further securement of the frame to the wall by additional attachment means, thereby further preventing movement of the frame and attaching it securely to the wall. Preferably the further hole(s) or bore(s) are located laterally and/or longitudinally distant from the first alignment hole, for improved stability of the attached mounting frame. For example if the first alignment hole is positioned centrally and at the top of the mounting frame, further alignment holes are preferably provided at the bottom of the mounting frame and toward the lateral extremities of the mounting frame.

In particularly preferred embodiments the frame comprises a plurality of holes or bores, preferably 4 or more, more preferably 6, or 8 or 10 or more. This enables multiple fixing or attachment means to be used to secure the frame to a wall which is advantageous particularly for internal walls, which are generally weaker than external walls, as the frame is secured and any weight applied thereto (from the screen, e.g., via the display panel) is distributed across the fixings and thus a heavy screen may still be mountable even on a weak wall.

In preferred embodiments, the display mount further comprises at least one peripheral device attachable to at least one of the display panel and the mounting frame. This advantageously enables additional components to be provided to the mount. For example, one or more lighting means, such as a strip light, neon light, LED device, etc., can be provided on the mount to illuminate aspects of the mount. In a particularly preferred embodiment, one or more lighting means is provided that is attachable to the mounting frame and/or to the rear of the display panel(s) for providing backlighting behind the display panel.

Further examples of peripheral devices include a speaker system comprising one or more loudspeakers that are attachable to the display panel and/or to the mounting frame thereby providing a sound system for use with the display screen; and a power providing means such as one or more power sockets, or the like. In particularly preferred embodiments, at least one and preferably a plurality (preferably 2, 3, 4, 6, 8, etc.,) of sockets are provided in a single component that is attachable to the mounting frame and/or the

display panel, preferably the rear face of the display panel that faces the wall to which the display mount is attached. Thus only a single power point is required to power the, e.g. four-way extension lead or the like, and yet four (or more or less) power points are thereby provided for the screen and the other devices associated with the display mount. This not only prevents overloading of a single power point but also ensures that the number of cables running from the display mount to the power supply (which may be visible to the consumer and may also be hazardous to movement of the consumer particularly in a restricted space) is minimised.

As discussed above, the mounting frame is attachable to a substantially vertical surface such as a wall. Mounting of the frame can be achieved by, e.g., measuring the size and shape of the screen and predicting where it should be placed and then determining a suitable position for the frame. However this may lead to placement errors from, e.g., the measurements or the consumer incorrectly visualising where the mounted screen will be.

Preferably therefore the display screen mounting system further comprises at least one template comprising at least one alignment means for aligning the mounting frame with the substantially vertical surface prior to attachment thereto. For example the template may comprise an outline of the completed display mount, preferably to scale and preferably with an image of the screen when mounted, that the consumer can place against the wall to which the display mount is to be attached. Once the desired position is determined with reference to the template, the alignment means enables the mounting frame to be correctly and accurately placed. Preferably the alignment means comprises one or more pilot holes in the template through which, e.g., a mark or indentation can be made on the wall for aligning, e.g., the or a bore hole of the mounting frame. Other alignment means are envisaged such as a pointed objected for marking guide points or lines through the template onto the wall, etc.

Other components of the mounting system are preferably provided for further ease of instalment of the system. For example, instructions means are preferably provided for providing instructions to the consumer for at least some and preferably all of the installation steps. The instructions means may

comprise visual and/or audio instructions and preferably comprises a DVD or other information storage means having video and audio instructions thereon. Furthermore the display screen mounting system further comprises at least some, and preferably all of the attachment means and tools for mounting the components of the system. For example there are preferably provided a sufficient number of each necessary attachment mean (screws, bolts, nuts, etc.), and also the requisite tools, e.g. drill bits, ratchets, hexagonal/allen keys, etc., thus providing the consumer with everything necessary for mounting the display screen mounting system.

As discussed above, the present invention in its preferred embodiments provides a display mount for mounting a screen that is easy to assemble, correctly position and align. The present invention further provides a method of mounting a screen and thus from a further broad aspect, there is provided a display screen mounting method comprising attaching a mounting frame to a substantially vertical surface, and mounting a first display panel to the first mounting frame, the first display panel for receiving a display screen thereon.

Therefore there is provided an improved method for mounting a screen on a substantially vertical surface, such as a wall or the like, which enables a frame to be mounted to the wall prior to mounting a display panel thereto, the display panel being configured for receiving a display screen thereby simplifying the process of mounting a display screen to a wall compared with known arrangements such as, e.g. bespoke or universal brackets. Furthermore the mounting frame serves to space the display panel away from the wall by a distance equivalent to the thickness of the mounting frame and thus provides one or more areas behind the display panel for receiving, e.g. cables and wires, and/or mounting peripheral devices, etc., as discussed in the above preferred embodiments of the present invention, such that the cables, wires, peripheral devices, etc., are hidden from view behind the display panel and any screen received thereon.

In preferred embodiments, the display screen mounting method further comprises attaching bracket means to the first display panel, the bracket means configured for receiving a display screen. This enables the display screen to be mounted or otherwise received on the display panel,

preferably after attachment of the display panel to the mounting frame, in a quick, reliable and easily alignable manner. This is particularly advantageous for flat screen displays such as plasma or LCD screens because these devices are heavy and difficult to manoeuvre, particularly for one person.

Preferably the display screen mounting method further comprises providing co-operating bracket means for mounting to a display screen, the co-operating bracket means configured for mating with the bracket means of the first display panel. Thus in preferred embodiments the screen is effectively pre-prepared with co-operating means such that the screen can be lifted into place and received by the bracket of the display panel quickly, easily and without the need for fixing the screen directly to the panel using, e.g., screws or bolts as in the art. Furthermore in this manner alignment of the screen is also simplified as this is affected by attaching the bracket to the display panel, which is lighter and easier to align than the screen itself.

In preferred embodiments, the display screen mounting method further comprises mounting a second display panel, at least partially, to the first mounting frame. As discussed above, this embodiment provides a display mount that is easier to handle and install.

Preferably the display screen mounting method comprises providing a second mounting frame and mounting a or the second display panel, at least partially, to the second mounting frame. As discussed above, providing the mounting frame as two or more separate components simplifies handling and installation of the display mount.

In particularly preferred embodiments, the step of mounting a or the second display panel comprises mounting the second display panel such that the second display panel abuts, and is aligned substantially immediately beneath, the first display panel. Therefore there is advantageously provided a two panel display system for receiving a display screen having only a single, horizontal join between the panels which can be mostly or entirely located behind a screen when mounted to the display mount, but that is easy to manipulate when installing.

The above embodiments of the present invention provide methods of mounting a display screen to a substantially vertical surface having a spaced

display panel relative to the surface, and this may comprises the complete system. However it is often desirable to connect one or more devices to the screen and thus to provide means for supporting these devices. Therefore in particularly preferred embodiments the display screen mounting method further comprises providing at least one plate and attaching the plate substantially perpendicularly to the display panel such that when attached the plate forms a shelf for supporting one or more devices thereon. Therefore there is advantageously provided one or more shelves for supporting one or more devices and the shelves can be selected and/or configured for suitability for the device they are to support (e.g. weight, size, appearance, etc.).

The plate(s) can be attached to (one or more of) the display panel(s) at any appropriate location. In particularly preferred embodiments the method comprises the step of attaching at least one plate substantially centrally about a vertical axis at the centre of the display panel when mounted to a wall, and at a height such that the plate is a sufficient distance away from the base of a screen when attached to the display panel. Preferably an additional plate or plates are further provided aligned with and a suitable distance beneath the first plate thereby forming a plurality of shelves for receiving devices thereon.

In particularly preferred embodiments, the method comprises the step of attaching at least one plate proximate an opening in the display panel. As discussed above, such openings are capable of receiving, e.g., cables, wires and the like for provision behind the display panel(s) and to another terminal, e.g. at the back of the screen (via an additional opening in the display panel(s)) or to a power socket or the like. Locating an opening proximate a plate is advantageous because the devices to be supported on the plate will typically have at least one cable or wire attached thereto that is to be fed into the opening as discussed above.

In particularly preferred embodiments, the step of attaching at least one plate comprises attaching the plate substantially immediately below, and preferably centrally located relative to, an opening in the display panel. Thus cables from devices supported on the shelf can be fed into the opening and furthermore the device itself should block the opening from view when viewing the screen in situ.

As discussed above, the display screen mounting method comprises mounting a frame to a substantially vertical surface. In preferred embodiments the display screen mounting method comprises levelling the mounting frame, with levelling means provided thereon, such that the mounting frame is aligned about an axis substantially perpendicular to the substantially vertical surface, prior to the step of attaching a mounting frame to the substantially vertical surface. Thus an improved method of mounting the frame is provided whereby the frame is levelled and correctly aligned prior to attachment of the display panel, thus ensuring that the panel and the screen to be attached thereto can be accurately aligned as well.

Preferably the step of levelling the mounting frame comprises partially attaching the mounting frame to the substantially vertical surface by passing attachment means through at least one hole or bore in the mounting frame and into the substantially vertical surface, such that the mounting frame is free to rotate about the axis substantially perpendicular to the substantially vertical surface aligning the mounting frame about the axis. Thus the frame can be easily mounted partially to the wall and aligned about the attachment means before fully securing the frame to the wall. This provides a mounting method that is simple and effective and requires little or no skill and thus a typical consumer will readily be able to achieve excellent alignment of their display screen mount with the means provided.

In preferred embodiments, it is desired to enhance the display mount with one or more peripheral devices. Thus the display screen mounting method preferably comprises attaching at least one peripheral device to at least one of the display panel and the mounting frame. As discussed above the peripheral device(s) can be any suitable device, such as a light, a (multiple) power supply, loudspeakers, etc.

Although the above method provides a simple and easy to install display mount, it may be that the consumer has difficulty initially positioning the mounting frame. For example the consumer may not be able to visualise exactly where the screen will be mounted (e.g. at what height and precise position the screen will be placed once mounted) before attempting to attach the frame to a wall.

Therefore in particularly preferred embodiments the display screen mounting method comprises providing at least one template comprising at least one alignment means for aligning the mounting frame with the substantially vertical surface prior to the step of attaching the mounting frame to the substantially vertical surface. Thus the consumer is provided with means for illustrating the position in which the screen will be mounted and the position(s) at which the mounting frame (or any alignment bores or markers thereon) should be placed. This further simplifies mounting of the display screen mount and further ensures correct alignment and positioning of the mount.

As discussed above the display screen mount receives a display screen thereon and therefore in preferred embodiments the display screen mounting method further comprises mounting or otherwise attaching a display screen on or to the display panel.

The above embodiments of the display mount system are also embodiments of the method of mounting a display system and vice versa. Furthermore, other improvements are envisaged as embodiments of the aspects of the present invention.

For example in embodiments in which at least one bracket is provided for mounting a screen to the display panel, the bracket is preferably configured such that the screen can be tilted and/or rotated relative to the display panel.

In preferred embodiments, the fixings for attaching the mounting frame(s) to the substantially vertical surface are configured to also secure the display panel(s) to the mounting frame(s), and/or to secure a bracket for receiving a screen thereon to the display panel, and/or to secure one or more plates or shelves to the display panel.

Thus in accordance with the above aspects and embodiments of the present invention there is provided an improved system and method for mounting a display screen to a substantially vertical surface such as a wall. The system and methods enables a consumer to quickly and easily assemble the system and to mount a screen thereto in the exact position desired and at the desired height, the system in preferred embodiments further comprising

shelves that are supported by the display panel and can be configured for an overall depth of the system when mounted that is significantly less than generic available stands or the like. Still further the display panel(s) has one or more holes or channels for receiving cables or the like from the screen and from devices on the shelves and connecting them together (and/or to the necessary power supply) such that the cables are hidden behind the display panel and thus are not visible to the consumer. Still further the system is easy to disassemble and reassemble at a different position if desired with only minimal damage to the original supporting wall from a small number of fixings, whereas in prior art a cable track must be cut into the wall causing significant damage. Still further the method and system can be assembled by one person, with basic tools and no specialist skills required, unlike for mounting a screen directly on a wall using prior art brackets.

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

Figure 1 shows schematically a front view of a template for aligning and placement of the display mount in accordance with preferred embodiments of the present invention;

Figure 2 shows schematically a front view of a pair of mounting frames relative to the template of figure 1 in accordance with preferred embodiments of the present invention;

Figure 3 shows schematically a front view of a pair of display panels relative to the template and the mounting frames of figure 2 in accordance with preferred embodiments of the present invention;

Figure 4 shows schematically a front view of the display panels of figure 3 with means for supporting a pair of plates and bracket means for receiving a co-operating bracket means and/or a screen attached thereto in accordance with preferred embodiments of the present invention;

Figure 5 shows schematically a side view of a display mount mounted on a wall and with a display screen mounted thereon in accordance with preferred embodiments of the present invention; and

Figure 6 shows schematically a front view of the display mount and display screen of figure 5.

The figures show embodiments of a display screen mounting system 1 and mounting method in accordance with embodiments of the present invention. Figure 1 shows a template 2 which enables a consumer or installer of the display screen mounting system 1 to determine the position of a screen 50 and of the visible components of the display screen mounting system 1 (such as the display panels 16 and 18, the plates or shelves 24, etc.). The template 2 comprises a screen position indicator 6 which shows where a screen 50 mounted to the display screen mounting system 1 will be positioned, and guide markings 4 (which in some embodiments may comprise holes in or through the template 2 for enabling the installer to make alignment marks on a vertical surface, e.g. a wall 40, to which the display screen mounting system 1 is to be attached (as shown in figure 5 for example)). Thus the installer can place the template 2 against a surface 40 to which it is desired to attach the display screen mounting system 1 and determine the optimum position and placement of the display screen mounting system 1 and in particular the display screen 50.

In the embodiment of figure 1, guide hole 4a is associated with a first mounting frame 12 (which preferably comprises wood, or any other suitable material(s)) as shown in figure 2, and in particular with fixing guide mark 8a (which is preferably also a hole or bore through the frame) of the upper cross-bar 12a of frame 12. Therefore initial placement of the first mounting frame 12 is advantageously simplified by the template 2, because the installer is able to mark on the wall 40 the position at which the frame 12 should be placed whilst the template 2 is in situ and then align the fixing guide mark 8a of the frame 12 with the mark to accurately position the frame 12 in the desired position. Of course it is within the scope of the present invention that (additionally or alternatively) any one or more other guide holes 4 may be provided in the template that correspond with any fixing guide holes 8 of the first frame 12 and/or of a second (or further) mounting frame 14.

Therefore to mount the display screen mounting system 1 of embodiments of the present invention, mounting frame 12 is at least partially

attached to the wall 40 by means of a fixing 13a (as shown in figure 5) that passes through fixing guide hole 8a into the wall. The fixing 13a may comprise any suitable fixing such as a bolt, screw, nail, or other fixing. By only partially attaching the frame 12 to the wall 40 via the through hole 8a, the height and lateral position of the frame 12 relative to the wall 40 are fixed, but the angle about the fixing 13a is not. Therefore it is possible to rotate the frame 12 about the fixing 13a until it is determined that the frame is accurately aligned and to thereby ensure that the display panel 16 (shown in figure 3) when mounted on the frame 12 is also level (and thus also any screen 50 mounted thereon as described below in more detail).

In order to determine whether the frame 12 is level (and in particular in the embodiment of figure 2 to determine when the upper and lower cross-bars 12a of first mounting frame 12 are substantially parallel with floor 42 (as shown in figure 5) and when the upright bars 12b of the frame 12 are substantially perpendicular to floor 42), levelling means comprising, in this embodiment, a spirit level 10 is provided adjacent, and generally centrally located and above, upper cross-bar 12a. Thus the installer is able to rotate the frame 12 about fixing 13a until the spirit level 10 indicates that the upper cross-bar 12a of frame 12 is substantially horizontal. Thereafter the fixing means 13a can be tightened or further inserted into the wall 40 until the frame 12 is held securely in place and further fixing means 13 further secure frame 12 to the wall 40 by passing the fixings 13 through additional fixing guide holes 8 and into the wall 40.

Therefore in the embodiment of the invention shown in figure 2, first mounting frame 12 is secured in a desired and level position for mounting further components of the display screen mounting system 1 thereto. Furthermore, in this embodiment a second mounting frame 14 (comprising upper and lower cross-bars 14a and upright bars 14b), which preferably comprises wood or any other suitable material(s), is also provided for attachment to the wall 40, in a position beneath the first mounting frame 12. The second mounting frame 14 is preferably mounted in a similar manner to the first mounting frame 12, for example by marking one or more guide holes 4 on the wall 40 using the template 2 and fixing the frame 14 to the wall 40

by fixing means 13 through fixing guide holes 8 in the frame 14. Furthermore the second mounting frame 14 may also comprise levelling means (not shown).

In accordance with the embodiment of the present invention shown in the figures, a first display panel 16 is provided as shown in figure 3. The display panel 16 is configured for mounting on the first mounting frame 12, which is illustrated by the dotted lines. In alternative embodiments, each of the display panels disclosed herein can be mounted on one or more of any mounting frames of a display screen mounting system. For example in some embodiments, a display panel may be mountable partially on a first frame and partially on a second frame, etc.

Mounting of the first display panel 16 can be achieved in any suitable manner. For example the display panel 16 might be configured such that one or more fixing means can pass therethrough (either through a pre-existing bore or by making a bore through the panel 16 using the fixing means or another suitable means) and into at least the mounting frame 12 and in some embodiments also into the wall 40. In other embodiments, the fixings attaching the mounting frame to the wall may also attach the display panel to the mounting frame. For example the display panel and the mounting frame can be configured such that they are mounted concurrently by passing one (or more) fixings through both the panel and the mounting frame into the wall. In the embodiment of figure 3, the fixings 13, 13a attaching the mounting frame 12 to the wall 40 also attach the display panel 16 to the mounting frame 12 (as shown in figure 5), but the mounting frame 12 is first aligned and secured to the wall 40 by the fixings 13, 13a and then the display panel 16 is attached by hanging or otherwise engaging the panel 16 on the protruding portions 13b of the fixings 13, 13a.

The display panel 16 in the embodiment of figure 3 comprises an opening 20 therein. Of course it is within the scope of the invention for the display panel 16 to comprise two or more openings, or to comprise no opening. The opening 20 of this embodiment is configured to receive one or more cables, wires or the like such that the cable 34, 36 passes entirely through the display panel 16 towards the mounting frame 12 and into the

space between the display panel 16 and the wall 40, that is provided by the mounting frame 12. Preferably, as in the present embodiment, the opening 20 is situated such that a channel or other space from the exit of the opening 20 to, e.g. other openings in this or other display panels, and/or a power socket or the like, is provided such that cables can run from the opening 20 to the other opening(s) 20 and/or socket 33 behind the display panel 16 as shown in figure 5. In some embodiments, as is the case in the embodiments shown in the figures, the frame(s) 12, 14 are configured such that at least a portion of the channel or space is provided (e.g. the frame(s) 12, 14 are not planar sheets of a constant depth and for example may comprise bars 12a, 12b, 14a, 14b with spaces therebetween for forming the channels or spaces and/or may not have a consistent depth forming spaces or channels in front of, and/or behind the portions of the frame(s) 12, 14 having a depth less than the maximum frame depth.

Furthermore in the embodiment of figure 3, a second display panel 18 is provided for mounting on the second mounting frame 14 in a similar manner as set out above for the first display panel 16, the second display panel 18 comprising two openings 20 therethrough for the same reasons as given above in relation to the first display panel 16.

The display panels(s) 16, 18 are formed in any suitable manner and of any suitable material(s). In preferred embodiments, the display panels 16, 18 comprise a wooden core panel having a, e.g., cloth outer covering or wrap covering at least the front face thereof and preferably substantially all of the wooden core panel. Furthermore padding means may be provided between the panel and the outer cover across the entirety of the core panel or only over certain portions of the core panel, etc. In this manner display panels 16, 18 are provided that are lightweight, easy to mount (particularly as fixings means are generally simple to pass therethrough and openings are easy to form therein) and can be customised for finish and appearance by selection of appropriate outer cover material(s). Furthermore the selected materials of the display panels 16, 18 can be configured for, e.g., dissipating heat from a screen 50 that is attached or otherwise mounted to the display panel 16, 18 in use, as shown in figure 5.

Turning now to figure 4, there is shown schematically the display panels 16, 18 of the present embodiment having the openings 20 therein. Furthermore upper display panel 16 is provided with bracket means 26 for receiving a screen, or for receiving a co-operating bracket means 27 that is attachable to a screen 50 (as shown in figure 5) such that co-operation of the bracket means 26, 27 enables mounting of the screen 50 to the display panel 16. The bracket means 26 is attached to the display panel 16 by a plurality of fixing means, which in this embodiment comprise screws 28 but could of course comprise any other suitable means (and may, for example, comprise the fixing means 13, 13a that attach the display panel 16 to the mounting frame 12). The bracket means 26, 27 preferably is configured such that the screen 50 when mounted can tilt relative to the display panel 16 (e.g. tilt upwards and/or downwards and/or left and/or right (i.e. about an axis parallel to the wall 40 and to the floor 42, and about an axis perpendicular to the floor 42 and parallel to the wall).

Figure 4 also shows schematically two pairs of shelf supports 22, each pair aligned horizontally across the display panel 18 for supporting a plate or shelf 24 (as shown in figure 5). In this embodiment the shelf supports comprise a pair of members for receiving a plate therebetween, preferably in a gripping manner, but of course any suitable shelf supports can be used within the scope of the embodiments of the present invention. In the figure 5 embodiment showing the fully assembled display screen mounting system 1, each shelf 24 comprises a (preferably reinforced) glass plate and the shelf supports 22 comprise a pair of horizontally aligned members (which may be mutually joined, e.g. form a U-shaped member, particularly for ease of attachment to the display panel 18) having gripping means therebetween such that the shelf 24 is gripped between a pair of gripping means (not shown). The gripping means preferably comprise rubber for gripping the glass shelf 24.

Figure 5 shows the assembled display screen mounting system 1 of the embodiment of the present invention, with a screen 50 mounted to the bracket 26 of the display panel 16, and a device 30 (e.g. a set-top box, satellite decoder, video or hard-disk recorder, amplifier, DVD or hard-disk player,

games console, etc.) provided on the top shelf 24 and connected to the screen 50 by cable 36 which passes through upper opening 20 of the lower display panel 18, behind the panels 16, 18 and through the opening 20 of the upper display panel 16 for connection with an appropriate socket at the back of screen 50. Thus the connections cables of the device 30 are hidden from the view of the installer behind the panels 16, 18, and the openings are also obscured from view by the screen 50 and the device 30, which is clearly advantageous. Furthermore, power supply cable 34 for powering screen 50 passes through the opening 20 in the upper display panel 16 and passes beyond the panels 16, 18 to reach a power supply socket 33 connected to the mains power of the house in which the wall 40 is situated, by plug 35 at the end of cable 34. In preferred embodiments, at least one and preferably a plurality of sockets are provided on the display screen mounting system 1 (for example on the back of display panel 18, or on the lower mounting frame 14, etc.) and thus the plug 35 (and any other plugs 35 requiring mains power) can connect to the display screen mounting system 1 and be hidden from view. A cable is therefore provided connecting the plurality of sockets to the mains power socket 33 and this can also be hidden from view, for example by having a lower display panel 18 that of a height sufficient to obscure the socket (as shown by the dotted line 18a of figure 5).

Other peripheral devices may be provided in addition to, or instead of the plurality of sockets as discussed above. In the figure 5 embodiment, a light 32 is provided which may, for example comprise a strip light such as a neon light for providing backlighting behind the display screen mounting system 1. One or more loudspeakers could also be provided at any position on the display screen mounting system 1, such as for example on the front of one or more of the display panels, 16, 18 or behind the panels 16,18 or even on the sides thereof.

As shown in figure 6, when viewed from the front (i.e. the position from which the installer wishes to view the screen 50) the display screen mounting system 1 of the embodiment of the present invention provides an attractive backdrop to the screen that also obscures any cables, etc., from view and further provides supports (i.e. shelves 24) for supporting devices 30

thereon that are connected to the screen (and/or each other) and to a power supply all without any cables being visible. Thus an improved display screen mounting system is provided that is quick and simple to install, even for a person with no assistance or relevant skills, and that provides a compact, practical and desirable assembled mount for a display screen.

CLAIMS

1. A display screen mounting system comprising:

a first mounting frame for attachment to a substantially vertical surface; and

a first display panel for receiving a display screen thereon, the first display panel mountable to the first mounting frame.

2. The display screen mounting system of claim 1, wherein the first display panel comprises at least one opening therein.

3. The display screen mounting system of claim 1 or 2, wherein the first display panel further comprises bracket means configured for receiving a display screen such that the display screen is mountable to the substantially vertical surface by the bracket means of the first display panel when mounted to the first mounting frame.

4. The display screen mounting system of claim 3, further comprising co-operating bracket means mountable to a display screen, the co-operating bracket means configured for mating with the bracket means of the first display panel.

5. The display screen mounting system of any preceding claim, further comprising a second display panel.

6. The display screen mounting system of claim 5, wherein the second display panel is mountable to the first mounting frame.

7. The display screen mounting system of claim 5 or 6, further comprising a second mounting frame and wherein the second display panel is mountable to the second mounting frame.

8. The display screen mounting system of claim 5, 6 or 7, wherein the second display panel is configured for mounting to the mounting frame such that the second display panel abuts, and is aligned substantially immediately beneath, the first display panel.

9. The display screen mounting system of any of claims 5 to 8, wherein the second display panel comprises at least one, preferably two openings, and preferably more than two openings therein.

10. The display screen mounting system of any preceding claim, further comprising at least one plate configured for attachment substantially perpendicularly to the display panel such that when attached the plate forms a shelf for supporting one or more devices thereon.

11. The display screen mounting system of claim 10, wherein the or an opening in the display panel is located such that when the plate is attached to the display panel, the opening is proximate the at least one plate.

12. The display screen mounting system of claim 10 or 11, wherein the or an opening in the display panel is located such that when the plate is attached to the display panel, the opening is substantially immediately above, and preferably centrally located relative to, the plate.

13. The display screen mounting system of claim 10, 11 or 12, further comprising plate attachment means, mountable to the display panel, for receiving the at least one plate.

14. The display screen mounting system of any of claims 10 to 13, wherein the at least one plate comprises a glass sheet.

15. The display screen mounting system of any preceding claim, wherein the opening or openings in the display panel or panels comprise a throughbore for receiving one or more cables or wires such that the cables or

wires pass through the display panel from a front surface to an opposing back surface thereof.

16. The display screen mounting system of any preceding claim, wherein the display panel comprises at least one wood panel and preferably further comprises an outer cover covering the wood panel and padding means between the wood panel and the outer cover.

17. The display screen mounting system of claim 16, wherein the outer cover comprises material comprising at least one of: cloth, leather, suede, or the like.

18. The display screen mounting system of any preceding claim, wherein the mounting frame comprises levelling means for enabling alignment of the mounting frame about an axis substantially perpendicular to a substantially vertical surface to which the mounting frame is to be mounted.

19. The display screen mounting system of any preceding claim, wherein the mounting frame comprises at least one hole or bore for allowing attachment means for attaching the mounting frame to a substantially vertical surface to pass therethrough and into the substantially vertical surface.

20. The display screen mounting system of any preceding claim, further comprising at least one peripheral device attachable to at least one of the display panel and the mounting frame.

21. The display screen mounting system of claim 18, where the peripheral device comprises at least one of: lighting means, one or more loudspeakers, power providing means such as one or more power sockets, or the like.

22. The display screen mounting system of any preceding claim, further comprising at least one template comprising at least one alignment means for

aligning the mounting frame with the substantially vertical surface prior to attachment thereto.

23. A display screen mounting method comprising:

attaching a mounting frame to a substantially vertical surface; and

mounting a first display panel to the first mounting frame, the first display panel for receiving a display screen thereon.

24. The display screen mounting method of claim 23, further comprising:

attaching bracket means to the first display panel, the bracket means configured for receiving a display screen.

25. The display screen mounting method of claim 24, further comprising:

providing co-operating bracket means for mounting to a display screen, the co-operating bracket means configured for mating with the bracket means of the first display panel.

26. The display screen mounting method of claim 23, 24 or 25, further comprising:

mounting a second display panel to the first mounting frame.

27. The display screen mounting method of any of claims 23 to 26, further comprising:

providing a second mounting frame; and

mounting a or the second display panel to the second mounting frame.

28. The display screen mounting method of claim 26 or 27, wherein the step of mounting a or the second display panel comprises mounting the second display panel such that the second display panel abuts, and is aligned substantially immediately beneath, the first display panel.

29. The display screen mounting method of any preceding claim, further comprising:

attaching at least one plate substantially perpendicularly to the display panel such that when attached the plate forms a shelf for supporting one or more devices thereon.

30. The display screen mounting method of claim 29, wherein the step of attaching at least one plate comprises attaching the plate proximate an opening in the display panel.

31. The display screen mounting method of claim 29 or 30, the step of attaching at least one plate comprises attaching the plate substantially immediately below, and preferably centrally located relative to, an opening in the display panel.

32. The display screen mounting method of any preceding claim, comprising:

levelling the mounting frame, with levelling means provided thereon, such that the mounting frame is aligned about an axis substantially perpendicular to the substantially vertical surface, prior to the step of attaching a mounting frame to the substantially vertical surface.

33. The display screen mounting method of claim 32, wherein the step of levelling the mounting frame comprises:

partially attaching the mounting frame to the substantially vertical surface by passing attachment means through at least one hole or bore in the mounting frame and into the substantially vertical surface, such that the mounting frame is free to rotate about the axis substantially perpendicular to the substantially vertical surface; and

aligning the mounting frame about the axis.

34. The display screen mounting method of any of claims 23 to 33, comprising:

attaching at least one peripheral device to at least one of the display panel and the mounting frame.

35. The display screen mounting method of any of claims 23 to 34, comprising:

providing at least one template comprising at least one alignment means for aligning the mounting frame with the substantially vertical surface prior to the step of attaching the mounting frame to the substantially vertical surface.

36. The display screen mounting method of any of claims 23 to 35, comprising:

mounting or otherwise attaching a display screen on or to the display panel.

37. The display screen mounting system substantially as hereinbefore described with reference to any one of the accompanying drawings.

38. The display screen mounting method substantially as hereinbefore described with reference to any one of the accompanying drawings.

Amendments to the claims have been filed as follows :-

CLAIMS

1. A display screen mounting system comprising:

a first mounting frame for attachment to a substantially vertical surface; and

a first display panel for receiving a display screen thereon, the first display panel mountable to the first mounting frame;

wherein the display panel is configured such that when mounted to the mounting frame the mounting frame is not visible; and

wherein the first display panel further comprises bracket means configured for receiving a display screen such that the display screen is mountable to the substantially vertical surface by the bracket means of the first display panel when mounted to the first mounting frame.

2. The display screen mounting system of claim 1, wherein the first display panel comprises at least one opening therein.

3. The display screen mounting system of claim 1 or 2, further comprising co-operating bracket means mountable to a display screen, the co-operating bracket means configured for mating with the bracket means of the first display panel.

4. The display screen mounting system of any preceding claim, further comprising a second display panel.

5. The display screen mounting system of claim 4, wherein the second display panel is mountable to the first mounting frame.

6. The display screen mounting system of claim 4 or 5, further comprising a second mounting frame and wherein the second display panel is mountable to the second mounting frame.

7. The display screen mounting system of claim 4, 5 or 6, wherein the second display panel is configured for mounting to the mounting frame such that the second display panel abuts, and is aligned substantially immediately beneath, the first display panel.

8. The display screen mounting system of any of claims 4 to 7, wherein the second display panel comprises at least one, preferably two openings, and preferably more than two openings therein.

9. The display screen mounting system of any preceding claim, further comprising at least one plate configured for attachment substantially perpendicularly to the display panel such that when attached the plate forms a shelf for supporting one or more devices thereon.

10. The display screen mounting system of claim 9, wherein the or an opening in the display panel is located such that when the plate is attached to the display panel, the opening is proximate the at least one plate.

11. The display screen mounting system of claim 9 or 10, wherein the or an opening in the display panel is located such that when the plate is attached to the display panel, the opening is substantially immediately above, and preferably centrally located relative to, the plate.

12. The display screen mounting system of claim 9, 10 or 11, further comprising plate attachment means, mountable to the display panel, for receiving the at least one plate.

13. The display screen mounting system of any of claims 9 to 12, wherein the at least one plate comprises a glass sheet.

14. The display screen mounting system of any preceding claim, wherein the opening or openings in the display panel or panels comprise a throughbore for receiving one or more cables or wires such that the cables or

wires pass through the display panel from a front surface to an opposing back surface thereof.

15. The display screen mounting system of any preceding claim, wherein the display panel comprises at least one wood panel and preferably further comprises an outer cover covering the wood panel and padding means between the wood panel and the outer cover.

16. The display screen mounting system of claim 15, wherein the outer cover comprises material comprising at least one of: cloth, leather, suede, or the like.

17. The display screen mounting system of any preceding claim, wherein the mounting frame comprises levelling means for enabling alignment of the mounting frame about an axis substantially perpendicular to a substantially vertical surface to which the mounting frame is to be mounted.

18. The display screen mounting system of any preceding claim, wherein the mounting frame comprises at least one hole or bore for allowing attachment means for attaching the mounting frame to a substantially vertical surface to pass therethrough and into the substantially vertical surface.

19. The display screen mounting system of any preceding claim, further comprising at least one peripheral device attachable to at least one of the display panel and the mounting frame.

20. The display screen mounting system of claim 19, where the peripheral device comprises at least one of: lighting means, one or more loudspeakers, power providing means such as one or more power sockets, or the like.

21. The display screen mounting system of any preceding claim, further comprising at least one template comprising at least one alignment means for

aligning the mounting frame with the substantially vertical surface prior to attachment thereto.

22. A display screen mounting method comprising:

attaching a mounting frame to a substantially vertical surface; and

mounting a first display panel to the first mounting frame, the first display panel for receiving a display screen thereon;

wherein the display panel is configured such that when mounted to the mounting frame the mounting frame is not visible;

said method further comprising attaching bracket means to the first display panel, the bracket means configured for receiving a display screen.

23. The display screen mounting method of claim 22, further comprising:

providing co-operating bracket means for mounting to a display screen, the co-operating bracket means configured for mating with the bracket means of the first display panel.

24. The display screen mounting method of claim 22 or 23, further comprising:

mounting a second display panel to the first mounting frame.

25. The display screen mounting method of any of claims 22, 23 or 24, further comprising:

providing a second mounting frame; and

mounting a or the second display panel to the second mounting frame.

26. The display screen mounting method of claim 24 or 25, wherein the step of mounting a or the second display panel comprises mounting the second display panel such that the second display panel abuts, and is aligned substantially immediately beneath, the first display panel.

27. The display screen mounting method of any preceding claim, further comprising:

attaching at least one plate substantially perpendicularly to the display panel such that when attached the plate forms a shelf for supporting one or more devices thereon.

28. The display screen mounting method of claim 27, wherein the step of attaching at least one plate comprises attaching the plate proximate an opening in the display panel.

29. The display screen mounting method of claim 27 or 28, the step of attaching at least one plate comprises attaching the plate substantially immediately below, and preferably centrally located relative to, an opening in the display panel.

30. The display screen mounting method of any preceding claim, comprising:

levelling the mounting frame, with levelling means provided thereon, such that the mounting frame is aligned about an axis substantially perpendicular to the substantially vertical surface, prior to the step of attaching a mounting frame to the substantially vertical surface.

31. The display screen mounting method of claim 30, wherein the step of levelling the mounting frame comprises:

partially attaching the mounting frame to the substantially vertical surface by passing attachment means through at least one hole or bore in the mounting frame and into the substantially vertical surface, such that the mounting frame is free to rotate about the axis substantially perpendicular to the substantially vertical surface; and

aligning the mounting frame about the axis.

32. The display screen mounting method of any of claims 22 to 31, comprising:

attaching at least one peripheral device to at least one of the display panel and the mounting frame.

33. The display screen mounting method of any of claims 22 to 32, comprising:

providing at least one template comprising at least one alignment means for aligning the mounting frame with the substantially vertical surface prior to the step of attaching the mounting frame to the substantially vertical surface.

34. The display screen mounting method of any of claims 22 to 33, comprising:

mounting or otherwise attaching a display screen on or to the display panel.

35. The display screen mounting system substantially as hereinbefore described with reference to any one of the accompanying drawings.

36. The display screen mounting method substantially as hereinbefore described with reference to any one of the accompanying drawings.

Application No: GB0814275.4 **Examiner:** Gabrielle Cowcill

Claims searched: 1-38 **Date of search:** 23 September 2008

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1-4, 23-25 and 36 at least	US 2008/035813 A1 (O'KEENE et al) See the figures
X	1-3, 15, 23, 24 and 36 at least	US 2008/105633 A1 (DOZIER et al) See the figures and paragraph 28
X	1, 2, 10, 13, 14, 29, 36 at least	WO 2007/086002 A1 (KONINKL PHILIPS ELECTRONICS) See the figures and paragraphs 30, 31 and 38
X	1, 2, 23 and 36 at least	WO 2008/054720 A2 (CSAV, INC) See the figures
X	1, 2, 23 and 36 at least	WO 2007/130374 A2 (McPHERSON) See the figures
X	1, 2, 23 and 36 at least	US 2007/252056 A1 (NOVIN) See the figures

Categories:

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.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^{X} :

Worldwide search of patent documents classified in the following areas of the IPC

F16M

The following online and other databases have been used in the preparation of this search report

EPODOC, WPI, INTERNET

International Classification:

Subclass	Subgroup	Valid From
F16M	0013/02	01/01/2006
F16M	0011/00	01/01/2006
G06F	0001/16	01/01/2006