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(54) **UNIVERSAL WALL MOUNT BRACKET FOR DISPLAYS**

(52) **U.S. Cl. .... 248/220.21**

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(57) **ABSTRACT**

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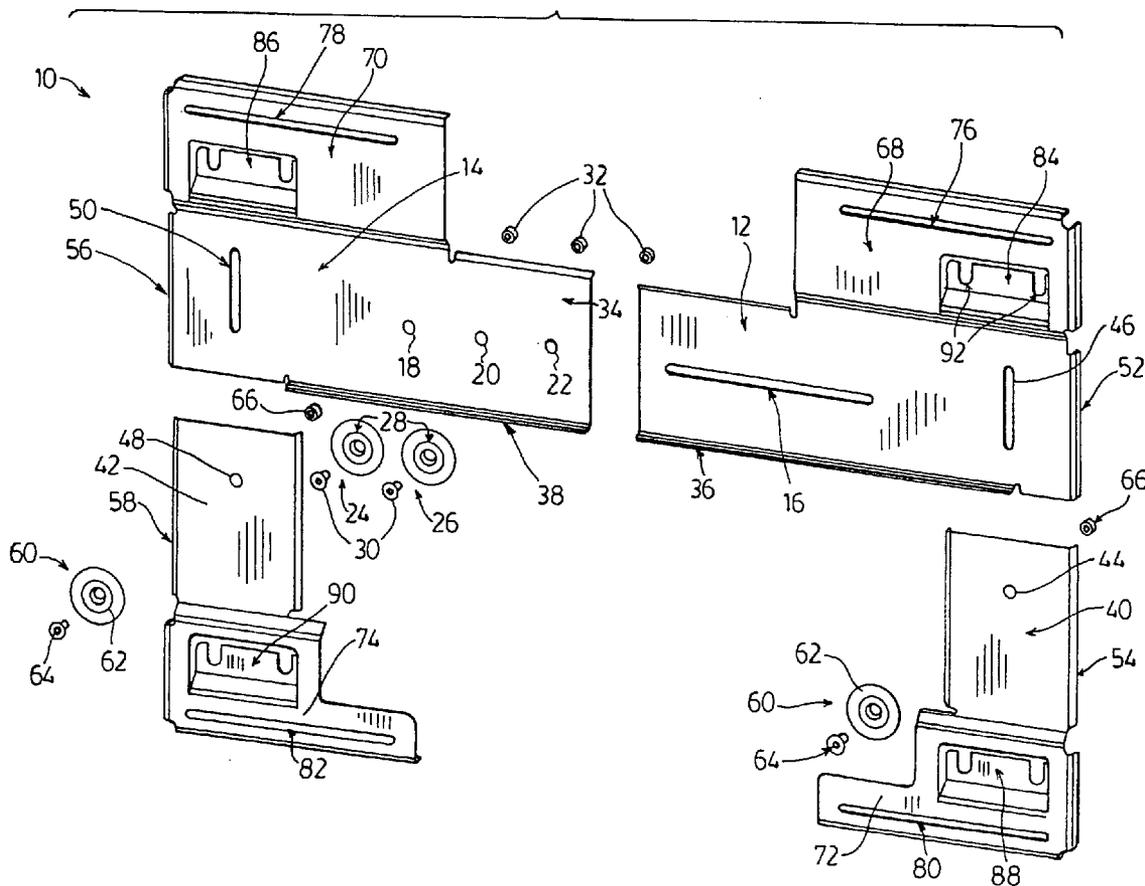
A universal display bracket suitable for mounting one of a variety of displays on a surface. The display bracket comprises a plurality of bracket portions slidable relative to one another permitting adjustment of the bracket in both horizontal and vertical directions. The bracket portions are lockable so as to maintain fixed relative positions. The bracket is adapted to mount using suitable fasteners upon a surface and each of the bracket portions are dimensioned to support the display to be mounted. The bracket may be provided with capture locks to prevent accidental dislodgement of the display, and the bracket may be further provided with a tilt assembly allowing a display to be tilted up to 15° from vertical.

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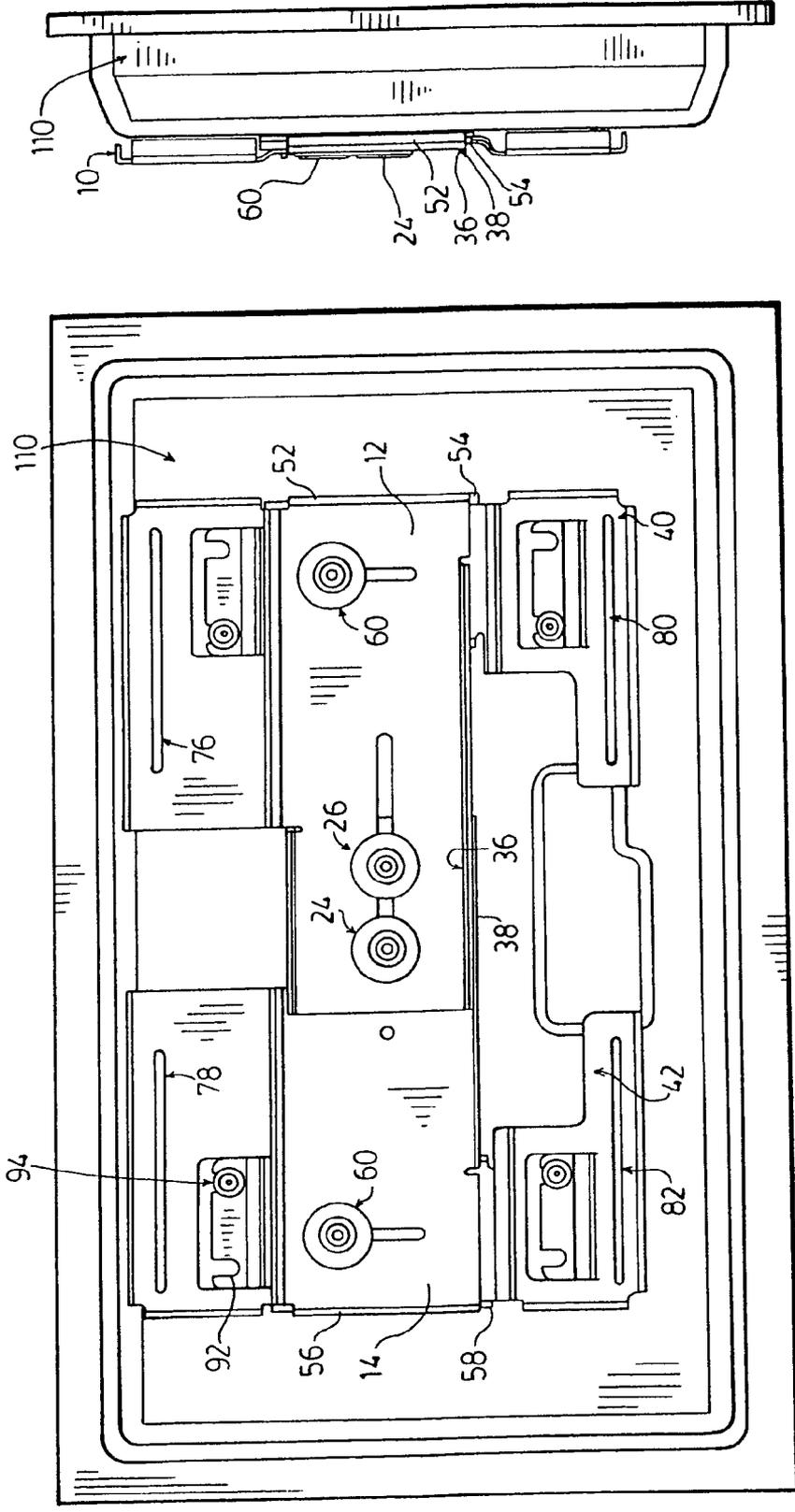


FIG. 3

FIG. 2

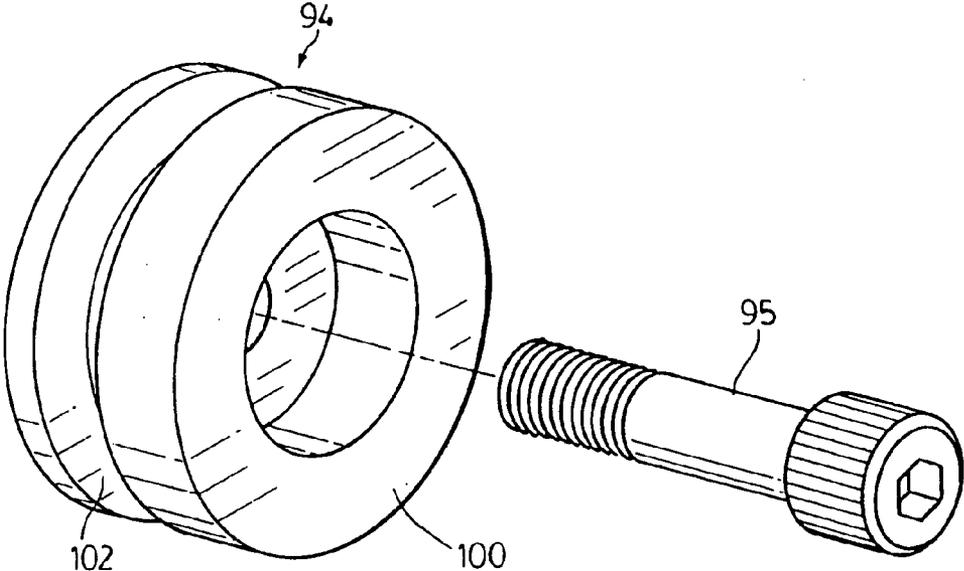


FIG.4b

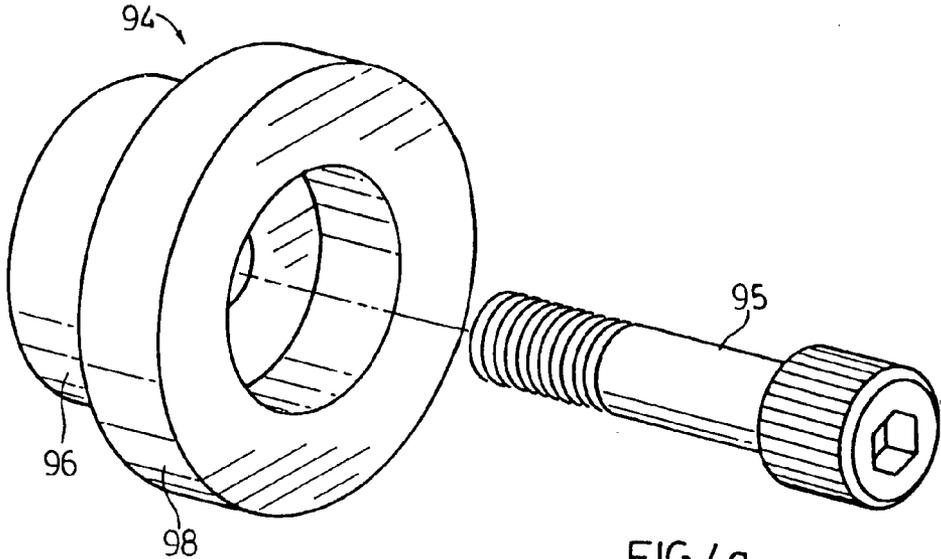


FIG.4a

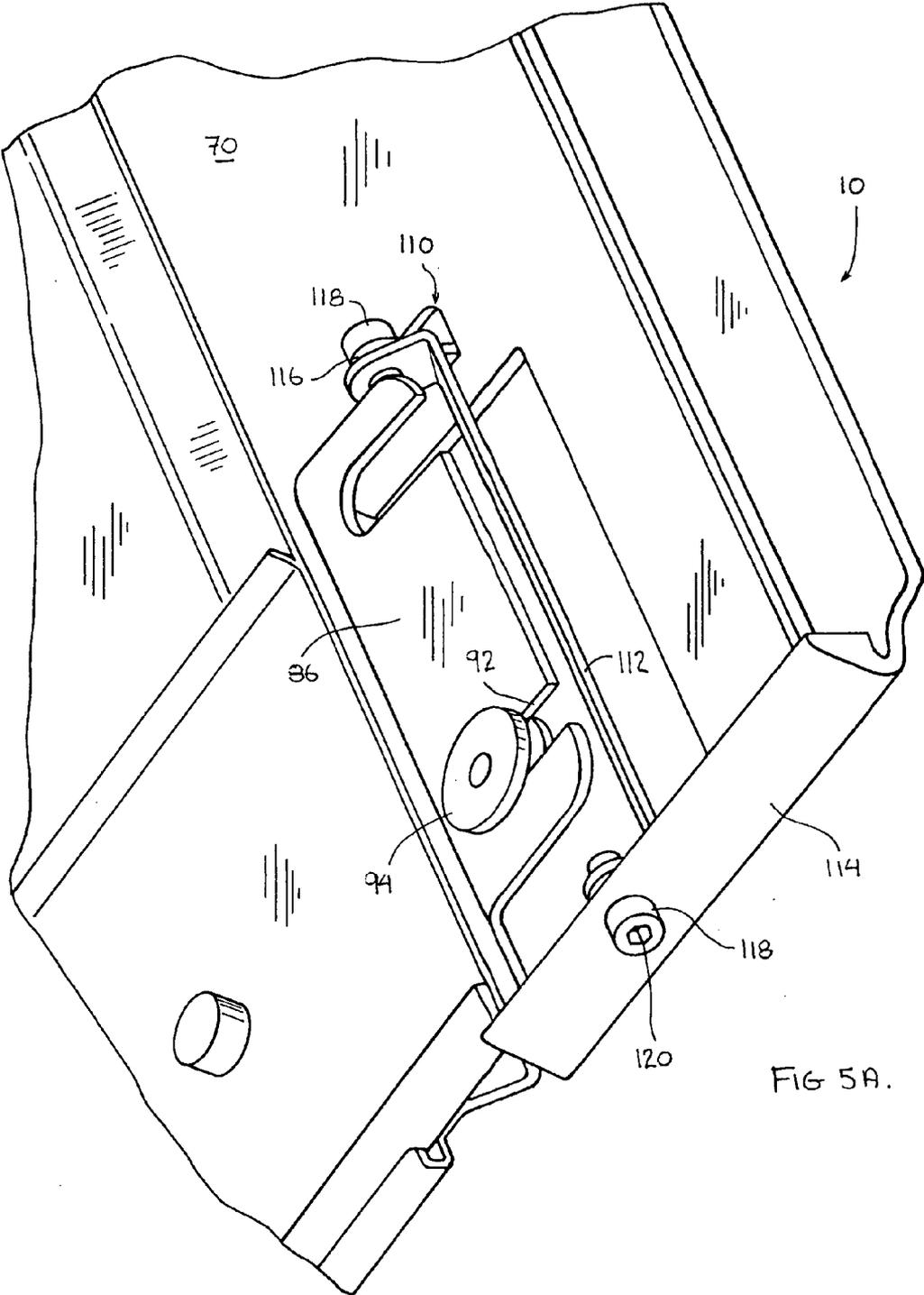


FIG 5A.

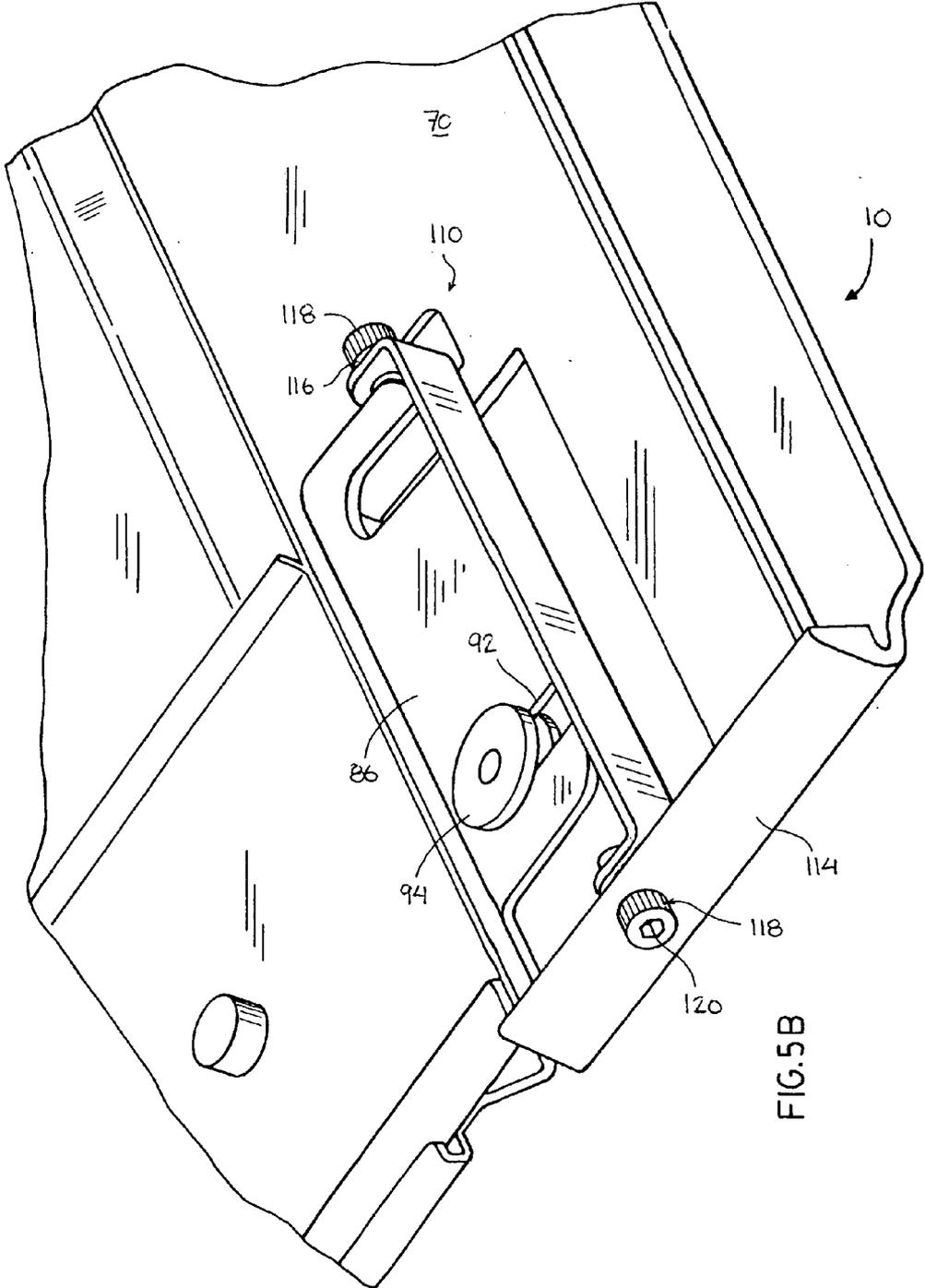


FIG. 5B

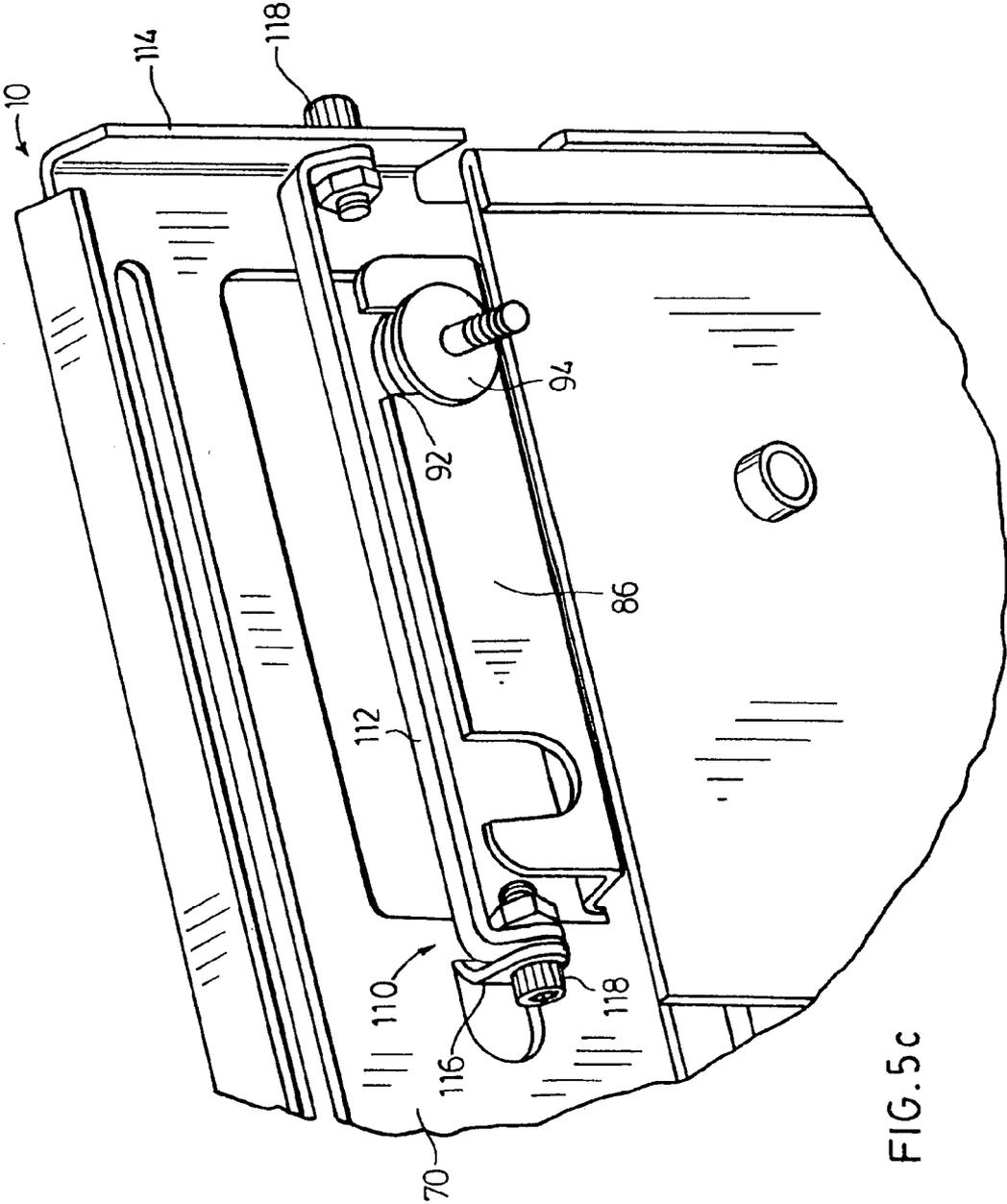


FIG. 5c

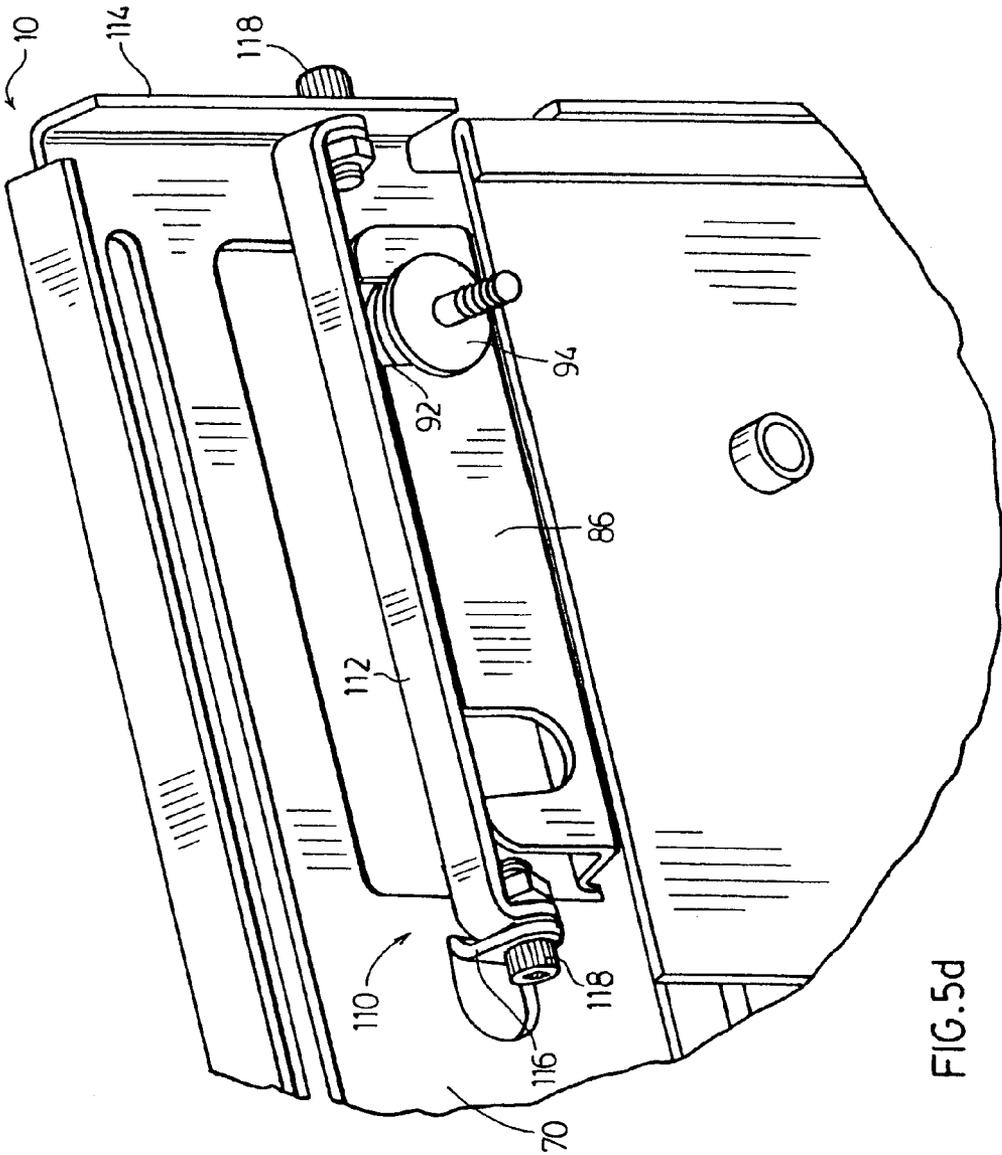
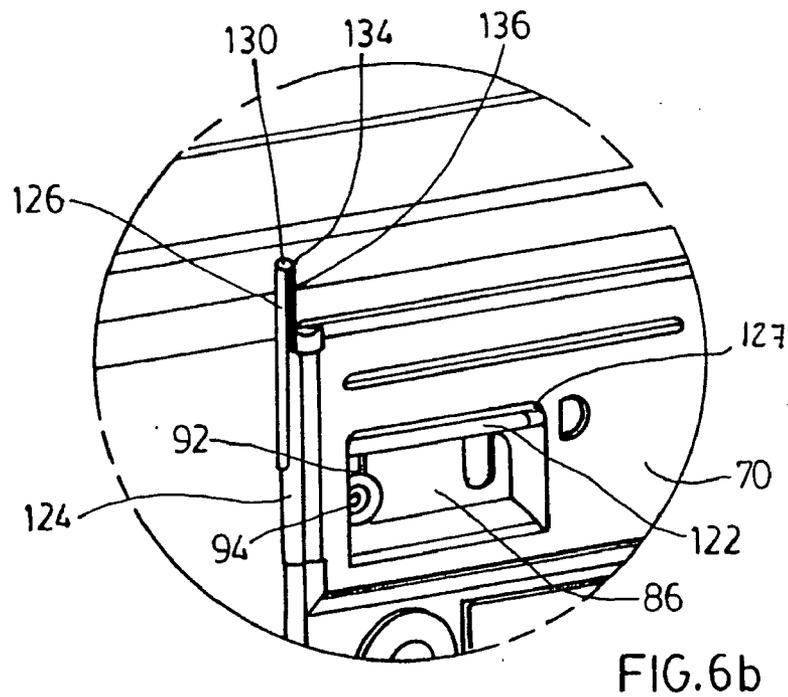
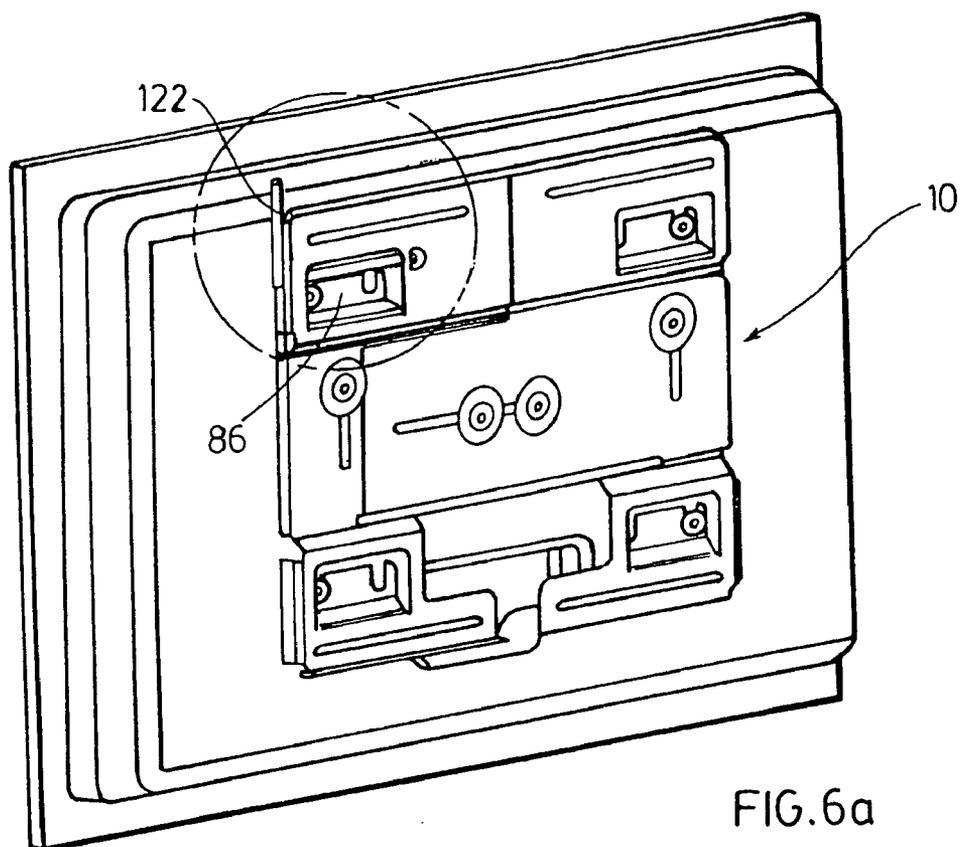


FIG. 5d



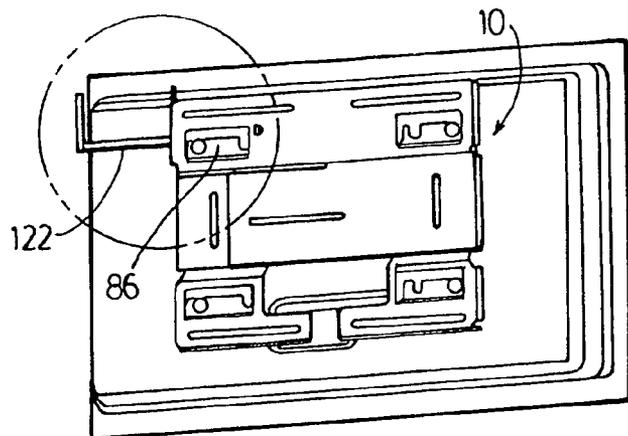


FIG. 6c

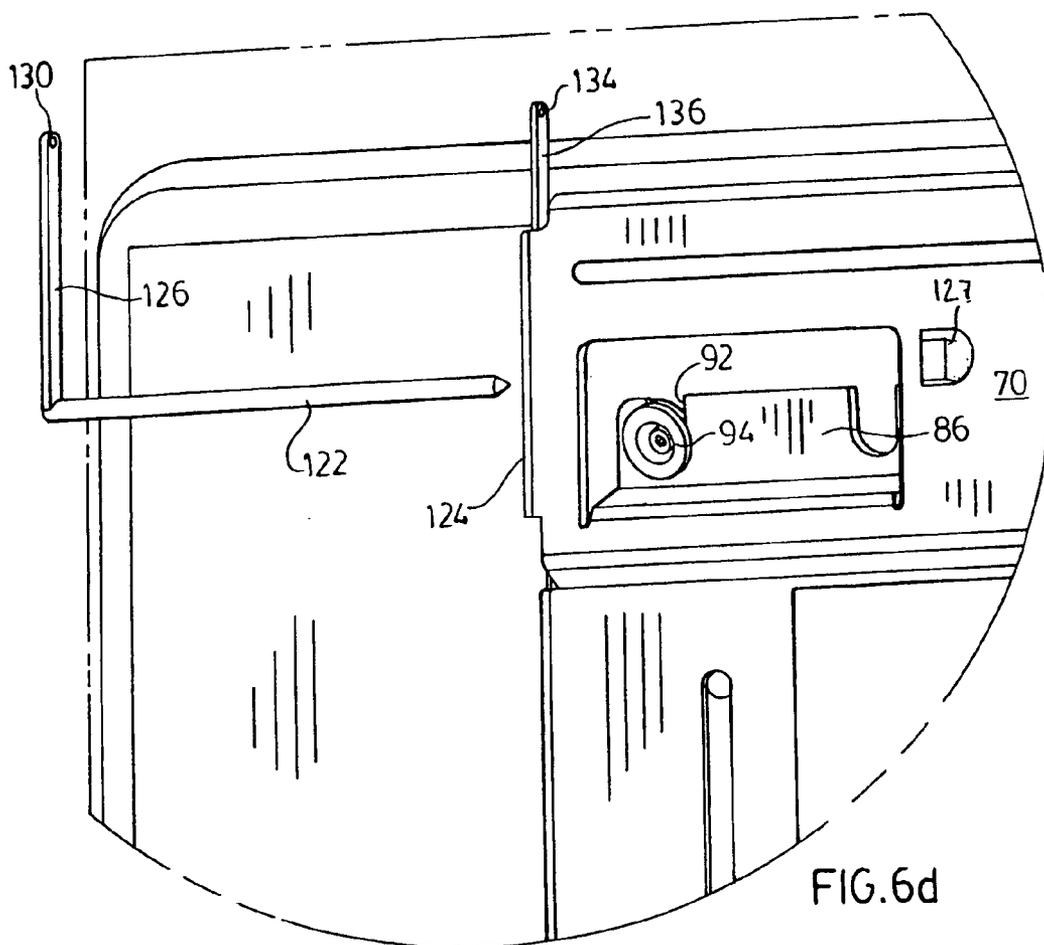


FIG. 6d

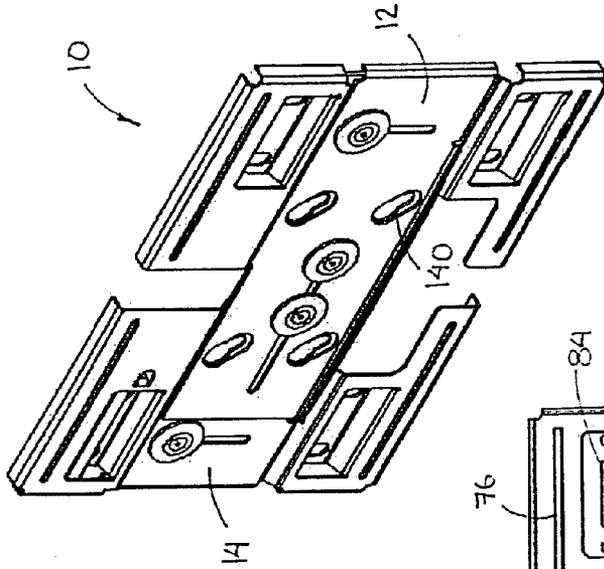


FIGURE 7a

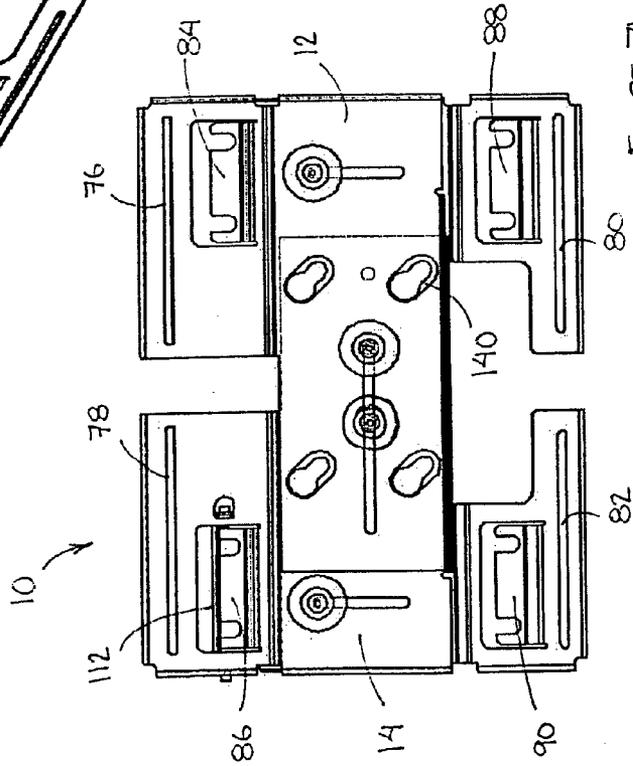


FIGURE 7b

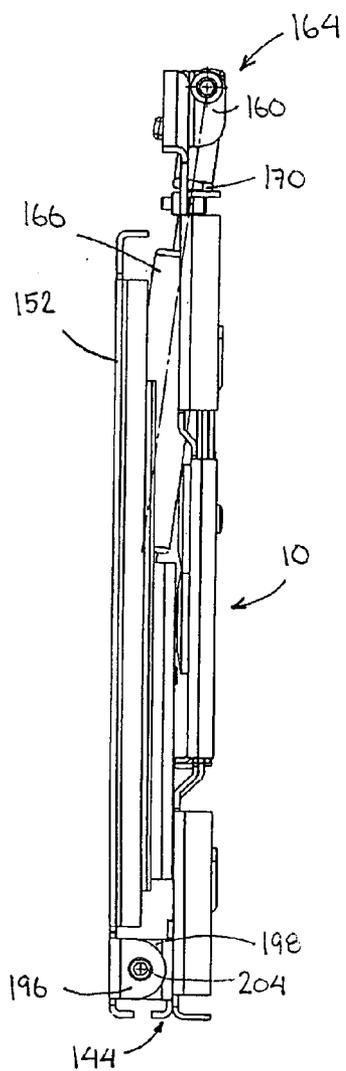


FIGURE 8a

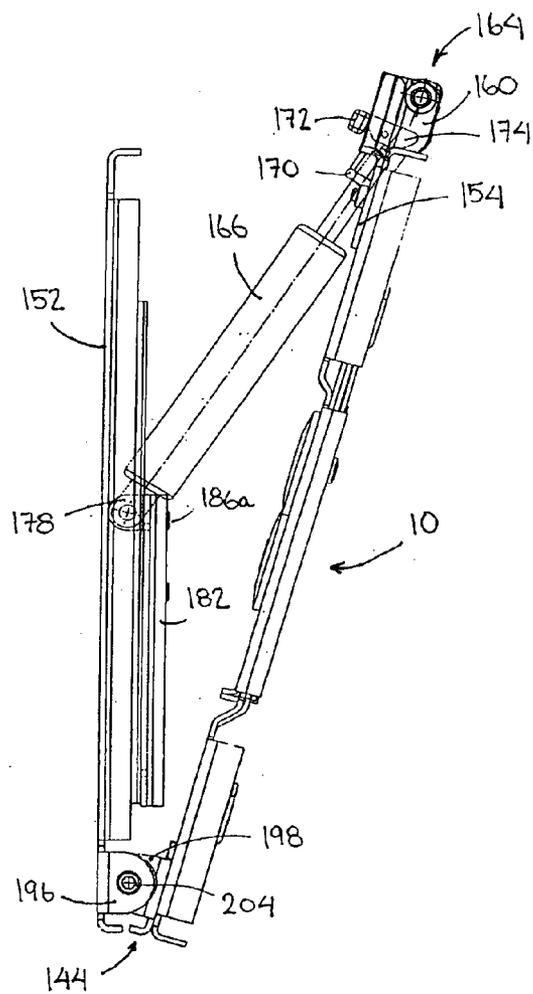


FIGURE 8b

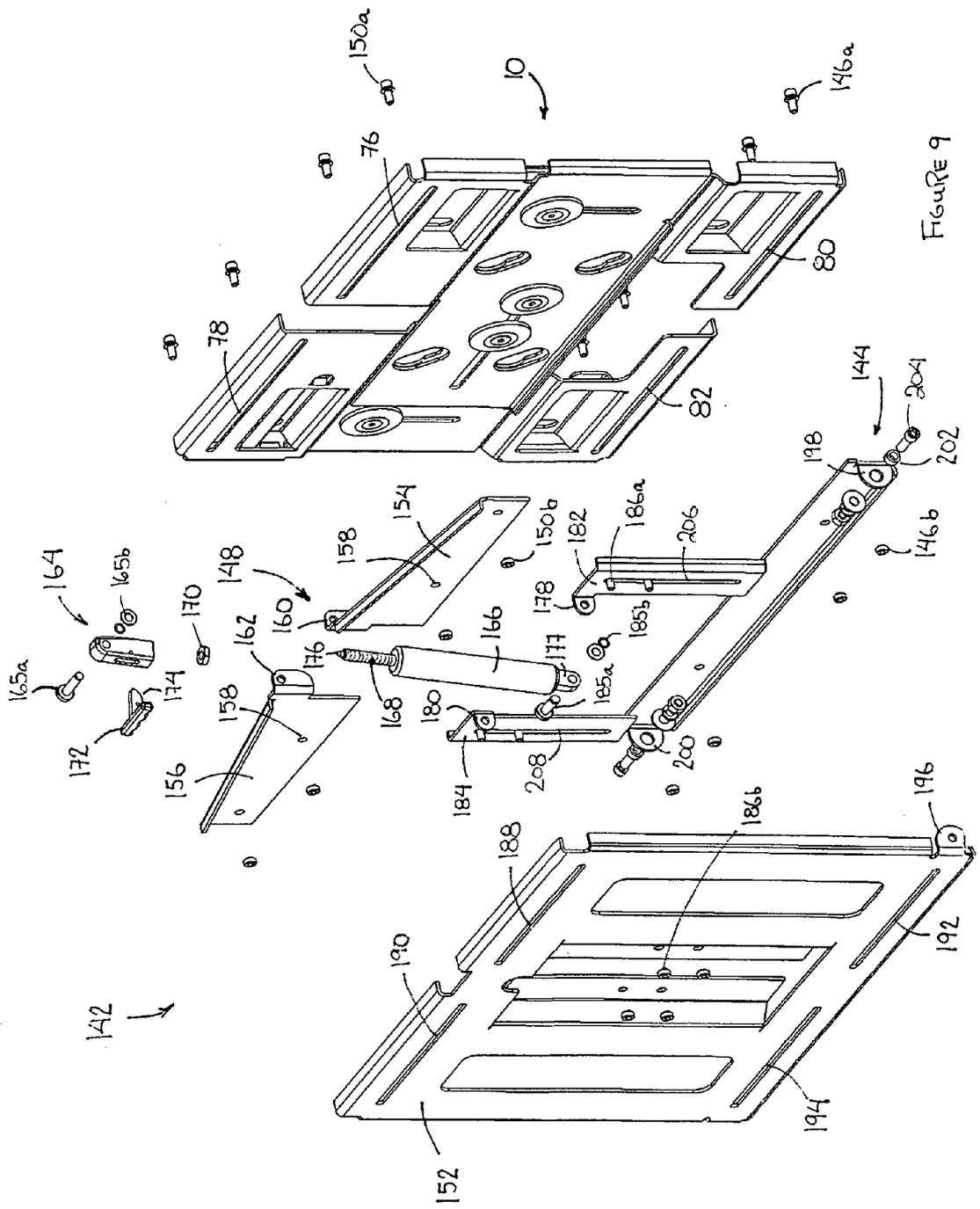


FIGURE 9

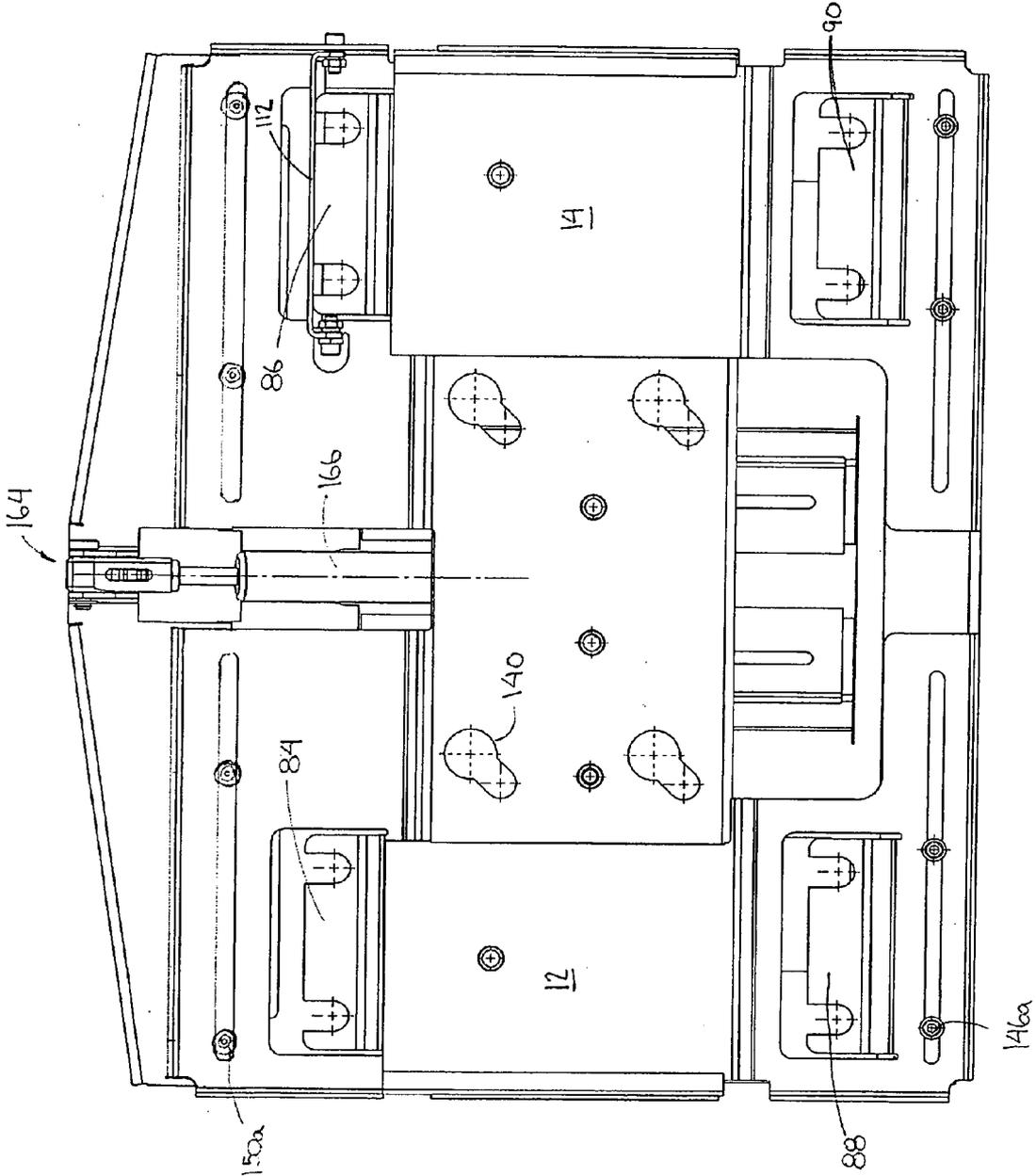


FIGURE 10

**UNIVERSAL WALL MOUNT BRACKET FOR DISPLAYS**

**FIELD OF THE INVENTION**

[0001] This invention relates generally to the field of mounting brackets for mounting plasma or LCD display technologies onto walls or other appropriate receiving or supporting surfaces.

**BACKGROUND OF THE INVENTION**

[0002] Plasma and Liquid Crystal Display (LCD) display technologies have become very popular for both commercial and residential use. These technologies offer a low-profile configuration that has the particular advantage of occupying minimal space, this being particularly desirable in space restricted locations. Generally, these display units are mounted on a wall, a display stand or within a display cabinet. As such, suitable mounting brackets are necessary to securely mount these display units to a receiving or supporting surface.

[0003] A variety of mounting brackets for mounting plasma and LCD displays are known. Examples include U.S. Patent Application No. 2003/0141425 to Obdeijn, U.S. Patent Application No. 2004/0262474 to Boks et al, and U.S. Patent Application No. 2005/0092890. While a number of the available products are deemed universal, meaning they are usable with a variety of plasma and LCD display technologies from different manufacturers, these products are limited to mounting formats known at the time of manufacture. With an increase in the number of manufacturers that are providing plasma and LCD technologies, compatibility problems of a particular manufacturer with a particular display bracket may arise. New models may also exhibit variations in the mounting holes from previous models, possibly rendering obsolete a bracket relying on multiple hole patterns for known mounting formats.

[0004] In view of the above, there is clearly a need for a truly universal mounting bracket that is infinitely adjustable in two dimensions to securely accommodate without difficulty plasma and LCD displays.

**SUMMARY OF THE INVENTION**

[0005] The present invention is directed to a universal display bracket suitable for mounting one of a variety of displays on a surface. The displays suitable for use with this bracket are generally thin-profile displays, as encountered in the plasma and LCD technologies. The present invention provides a low-profile mount that provides a clean, professional look. The present invention also provides an option to lock the display on the bracket, so as to provide added security. The bracket may also be attached to a tilt assembly to allow the display to be tilted up to 15° from vertical.

[0006] In accordance with an aspect of the present invention, provided is a universal display bracket suitable for mounting one of a variety of displays on a surface, said bracket comprising a plurality of bracket portions slidable relative to one another permitting adjustment of said bracket in both horizontal and vertical directions, said bracket portions being lockable so as to maintain fixed relative positions, said bracket being adapted to mount using suitable fasteners upon a surface, and wherein said bracket portions are dimensioned to support said display.

[0007] In accordance with another aspect of the present invention, provided is a universal display bracket suitable for mounting one of a variety of displays on a surface, said bracket comprising a plurality of bracket portions slidable relative to one another permitting adjustment of said bracket to accommodate a display of a particular size, said bracket portions being lockable so as to maintain a preselected relative position, said bracket being adapted to mount using suitable fasteners upon a surface, and wherein said bracket portions are dimensioned to support said display.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0008] FIG. 1 is an exploded perspective view of an embodiment of the current invention.

[0009] FIG. 2 is a rear view of the embodiment of FIG. 1 having a plasma or LCD display in mounted position.

[0010] FIG. 3 is a side view of the embodiment of FIG. 2 having a plasma or LCD display in mounted position.

[0011] FIG. 4a is a perspective view of a mounting button for use with the current invention.

[0012] FIG. 4b is an alternate embodiment of a mounting button for use with the current invention.

[0013] FIG. 5a is a partial perspective end view of an embodiment of the present invention comprising a bridge lock in an open position.

[0014] FIG. 5b is a partial perspective end view of the embodiment shown in FIG. 5a, the bridge lock shown in a locked position.

[0015] FIG. 5c is an alternate partial perspective view of the embodiment shown in FIG. 5a, showing the bridge lock in an open position.

[0016] FIG. 5d is an alternate partial perspective view of the embodiment shown in FIG. 5a, showing the bridge lock in a locked position.

[0017] FIG. 6a is a perspective view of an embodiment of the present invention comprising a pin lock in the locked position.

[0018] FIG. 6b is a detailed partial perspective view of the pin lock arrangement of the embodiment shown in FIG. 6a.

[0019] FIG. 6c is a perspective view of an embodiment of the present invention comprising a pin lock in the unlocked position.

[0020] FIG. 6d is a detailed partial perspective view of the pin lock arrangement of the embodiment shown in FIG. 6c.

[0021] FIG. 7a is a perspective view of an alternate embodiment comprising keyhole slots compliant with VESA mounting standards.

[0022] FIG. 7b is a rear view of the embodiment shown in FIG. 7a.

[0023] FIG. 8a is a side view of an alternate embodiment comprising a tilting assembly, the mounting assembly being shown in the upright vertical position.

[0024] FIG. 8b is a side view of the embodiment shown in FIG. 8a with the mounting assembly shown at 15° from vertical.

[0025] FIG. 9 is an exploded view of the embodiment shown in FIG. 8a.

[0026] FIG. 10 is a front view of the embodiment shown in FIG. 8a.

#### DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0027] Various aspects of the present invention are described in detail where it is appreciated that the principles may find application for use in mounting plasma and LCD display technologies to a receiving or supporting surface such as a wall or a display stand/cabinet. It is preferable to be able to mount a plasma or LCD display closely to a wall or other receiving or supporting structure, thereby taking advantage of the low-profile configuration these technologies offer. This minimizes the room occupied by the display and offers a professional, clean look to the mounted product.

[0028] The present invention provides a universal, infinitely adjustable mounting bracket for use with plasma or LCD technologies. As shown in FIG. 1, the invention generally comprises four primary bracket portions that together form the infinitely adjustable mounting bracket 10 capable of supporting a plasma or LCD display. First bracket portion 12 and second bracket portion 14 are configured to slidably engage one another so as to allow the bracket to adjust horizontally for different widths of displays. Second bracket portion 14 provides at least two holes through which a suitable lock is positioned, the lock being slidably received by slot 16 on first bracket portion 12, allowing second bracket portion 14 to slide relative to first bracket portion 12. In the embodiment shown in FIG. 1, three holes 18, 20, 22 are provided in second bracket portion 14 and locks 24, 26 comprise oversized washers 28 releasably fastened into position using suitable threaded fasteners 30. It can be appreciated that fasteners 30 engage either threads machined or rolled into second bracket portion 14, or may be received by suitable threaded nuts 32. It can be appreciated that while FIG. 1 shows the threaded nuts as separate, in a preferred embodiment, the nuts are suitably affixed (i.e. welded, self clinching) to the bracket. It can be further appreciated that in alternate embodiments, threaded nuts 32 may be separate from the bracket structure. By providing multiple holes in second bracket portion 14, a greater range of widths are possible as holes closer to the end 34 engaging the first bracket portion 12 provide for wider display formats. While a single lock may be sufficient to fix the first and second bracket portions relative to one another, in preferred embodiments, as shown in FIG. 2, two locks 24, 26 may be used. To facilitate the sliding relationship between first bracket portion 12 and second bracket portion 14, the bracket portions may be configured with angled or curved edges 36, 38 dimensioned to seat in sliding relationship relative to one another. As shown in FIG. 2, angled or curved edge 36 of first bracket portion 12 nests within angled or curved edge 38 of second bracket portion 14.

[0029] To slidably affix the third and fourth bracket portions 40, 42, first and second bracket portions 12, 14 are each configured with slots dimensioned to allow the third and fourth bracket portions 40, 42 to slide in the vertical direction relative to the first and second bracket portions 12, 14. As shown in FIG. 1, third bracket portion 40 is configured with hole 44 through which a suitable lock is positioned, the

lock being slidably received by slot 46 on first bracket portion 12. Similarly, fourth bracket portion 42 is configured with hole 48 through which a suitable lock is positioned, the lock being slidably received by slot 50 on second bracket portion 14. To facilitate the sliding relationship between first bracket portion 12 and third bracket portion 40, the bracket portions may be configured with angled or curved edges 52, 54 dimensioned to seat in sliding relationship relative to one another. As shown in FIG. 2, angled or curved edge 54 of third bracket portion 40 preferably nests within angled or curved edge 52 of first bracket portion 12. Similarly, to facilitate the sliding relationship between second bracket portion 14 and fourth bracket portion 42, the bracket portions may be configured with angled or curved edges 56, 58 dimensioned to seat in sliding relationship relative to one another. As shown in FIG. 2, angled or curved edge 58 of fourth bracket portion 42 preferably nests within angled or curved edge 56 of second bracket portion 14. As indicated above with respect to locks 24, 26 (See FIG. 1), the locks 60 comprise oversized washers 62 releasably fastened into position using suitable threaded fasteners 64. It can be appreciated that fasteners 64 engage either threads machined or rolled into respective third and fourth bracket portions 40, 42, or may be received by suitable threaded nuts 66. It can be appreciated that while FIG. 1 shows the threaded nuts as separate, in a preferred embodiment, the nuts are suitably affixed (i.e. welded, self clinching) to the bracket. It can also be appreciated that the threaded nuts may be separate from the bracket structure.

[0030] To fasten the bracket to a wall or other suitable receiving or supporting surface, each of the bracket portions is provided with an offset portion comprising a mounting slot, through which suitable fasteners may be positioned, depending on the nature of the receiving or supporting surface. First and second bracket portions 12, 14 have offset portions 68, 70, each being sufficiently offset so as to allow the offset portions to sit flat upon a wall without interference from the sliding mechanism permitting horizontal adjustment. Similarly, third and fourth bracket portions 40, 42 each have offset portions 72, 74, each again being sufficiently offset so as to allow the offset portions to sit flat upon a wall without interference from the sliding mechanism permitting vertical adjustment. To ensure vertical alignment with the receiving or supporting surface (i.e. wall), offset portions 68, 70, 72, 74 are coplanar, thus ensuring that each of the mounting slots 76, 78, 80, 82, respectively, are coplanar, as shown in FIG. 3. The universal mounting bracket is provided with mounting slots 76, 78, 80, 82 to provide an installer with flexibility with respect to mounting the bracket in locations having variable or spaced support beams or studs (i.e. framed homes having studs every 16").

[0031] As shown in FIG. 1, first bracket portion 12 provides an offset mounting means 84, adapted to engage a mounting button fixed to the rear of the display. Similarly, the second, third and fourth bracket portions 14, 40, 42 also provide offset mounting means 86, 88, 90, respectively. Each of the offset mounting means 84, 86, 88, 90 are offset in a direction towards the display unit to be mounted, enabling engagement with the appropriate mounting button 94, as shown in FIG. 2. Offset mounting means 84 of first bracket portion 12 is provided with two U-shaped cutouts 92 for receiving the mounting button by drop-placement into the appropriate cutout; each of the remaining offset mounting means 86, 88, 90 being similarly configured. To ensure

vertical alignment, each of the offset mounting means **84**, **86**, **88**, **90** are coplanar. To enable capture of a mounting button **94** by the respective U-shaped cutout, the mounting button may be configured as shown in FIG. **4a**, the mounting button comprising a stem portion **96** proportioned to fit within the U-shaped cutout and where also provided is a head portion **98** being substantially larger than the width of the cutout provided on the offset mounting means. The mounting button **94** may also be configured as shown in FIG. **4b**, the mounting button comprising a short cylinder **100** having a circumferential groove **102** that fits within the U-shaped cutout.

[0032] To provide added security and to prevent accidental dislodgement of the mounted display, at least one of the offset portions (**68**, **70**, **72**, **74**) may be configured with a capture lock. The capture lock ensures retainment of the mounting button **94** by the complementary U-shaped cutout **92**. While a variety of locks may be implemented, FIGS. **5a** through **5d** show a bridge lock **110** comprising a retainment bar **112** that is rotatable from a first open position, to a second locked position. In the locked position (see FIGS. **5b** and **5d**), the retainment bar **112** is located above the respective offset mounting means (shown as **86** in the figures), preventing the mounting button **94** captured by the U-shaped cutout **92** from being dislodged. In the open position (see FIGS. **5a** and **5c**), the retainment bar **112** is rotated away from the display, towards the wall, thus allowing unobstructed insertion or removal of the mounting button **94** from the U-shaped cutout **92**. The bridge lock **110** is rotatably mounted on the bracket between the curved edge **114** on the respective offset portion (shown as **70**) and a cooperating tab **116**, with suitable fasteners **118** being used to maintain the bridge lock in this configuration. Rotation of the bridge lock is achieved by rotating the fastener **118** accessible on the outer side of the curved edge **114**, the fastener **118** having a keyed surface **120** for receiving an appropriate tool for actuating the lock. For example, the fastener may be configured with a recess of hexagonal configuration, suitable for engagement with a hex key. The bridge lock **110** may be fitted with rubber washers or equivalent to create a friction fit, preventing rotation of the bridge lock without intentional rotational force being applied to the lock.

[0033] FIGS. **6a** through **6d** show an alternate embodiment of a capture lock which may be used to ensure retainment of the mounting button **94** within the complementary U-shaped cutout **92**. Shown is a removable pin lock **122** insertable through the outer side of the curved edge **124**, the pin lock **122** being configured to reside above the U-shaped cutouts **92**, engaging a suitable tab **127** opposite the curved edge **124** so as to lock a mounting button **94** within the cutout **92**. FIG. **6a** and detailed view FIG. **6b** show the pin lock in the locked position; FIG. **6c** and detailed view FIG. **6d** show the pin lock withdrawn from the bracket assembly. The embodiment shown in the figure also incorporates an arm **126** substantially perpendicular to the insertable portion of the pin, the arm **126** extending upwardly and adjacent the outer curved edge **124**. This arm **126** is provided with a hole **130** near its upper terminus that aligns with a corresponding hole **134** in the outer curved edge **124**, or an upwardly extending portion **136** as specifically shown in the figure, allowing for the insertion of a pad lock or other suitable alternative (not shown).

[0034] In use, the mounting bracket is first loosened by releasing the locks **24**, **26**, **60** (see FIG. **1**). The mounting buttons **94** are securely attached to display **110** with fasteners **95** in accordance with instructions provided. The loosened mounting bracket is then adjusted both horizontally and vertically to fit upon the rear of the display, the mounting buttons sliding into the appropriate U-shaped cutouts of the offset mounting means. In a particularly preferred embodiment, the mounting bracket is suited to fit displays having a diagonal in the range of about 32" to about 61". It can be appreciated, however, that the mounting bracket of the current invention can be configured to fit larger or smaller displays by scaling the invention accordingly. Lock **24**, may be moved as necessary to attain a wider or narrower configuration. Each of the locks are then tightened so as to spatially fix the four bracket portions relative to one another. The mounting bracket is then removed from the rear of the display and mounted using suitable fasteners or hardware positioned through mounting slots **76**, **78**, **80**, **82** to the receiving or supporting surface (i.e. wall, display stand, cabinet, etc . . .). Once the mounting bracket is securely fastened, the capture locks, if provided, are set to the open position. The display is then drop-placed onto the bracket, each of the mounting buttons being retained by the respective U-shaped cutout of the respective offset mounting means. If provided with capture locks, the locks are moved to the locked position, or in the case of pin locks, the pin are inserted, preventing accidental dislodgement of the display. With this bracket, the display can be mounted with less than 1 inch between the rear of the display and the receiving or supporting surface. In a preferred embodiment, this distance is  $\frac{7}{8}$ ", or less. In a particularly preferred embodiment, this distance is 0.84".

[0035] In an alternate embodiment, the offset mounting means is provided with a single cutout, or possibly a plurality of cutouts for receiving the mounting buttons. In a further embodiment, the cutout may be shaped to prevent accidental disengagement. For example, the slot may be L-shaped, S-shaped or Z-shaped.

[0036] In an alternate embodiment, first bracket portion **12** and second bracket portion **14** are configured with keyhole slots that accord to the VESA 100/200 mounting standard, as shown in FIGS. **7a** and **7b**. The VESA 100/200 mounting standard is set by the Video Electronics Standards Association and defines set placement of the mounting interface (i.e. holes, taps, etc . . .) on the rear of the display unit. VESA 100/200 refers to a configuration having a 200 mm horizontal distance and a 100 mm vertical distance. As shown, first bracket portion **12** is configured with the angled keyhole slots **140**, while the second bracket portion **14** is configured with the necessary clearance holes (not shown). The keyhole slots **140** and the corresponding clearance holes align when the mounting bracket **10** is adjusted to its smallest configuration, thereby allowing the mounting bracket **10** to receive a display conforming to the VESA 100/200 standard. In this way, the mounting bracket **10** is universal for both larger display technologies which will generally use the offset mounting means **84**, **86**, **88**, **90**, as well as smaller displays that conform to the VESA 100/200 mounting standard. It can be appreciated that while the above noted alternate embodiment has incorporated keyhole slots that conform to the VESA 100/200 standard, the mounting bracket can be suitably modified to accommodate other mounting standards adopted by the industry (i.e. VESA 100 and VESA 200);

such modifications remain within the scope of the present invention. It can be further appreciated that in order to mount displays using the VESA standard on the present wall mount bracket, it may be necessary to use spacers or extensions that allow the mounting buttons to be captured by the keyhole slots provided.

[0037] In a further alternate embodiment, the universal mounting bracket **10** is configured with a tilting assembly **142** that allows the mounting bracket **10** to tilt from the vertical position (see FIG. **8a**) to **150** (see FIG. **8b**). Referring to FIG. **9**, the mounting bracket **10** is affixed to the tilting assembly **142** using mounting slots **76, 78, 80, 82**. The tilting mechanism generally comprises a pivot assembly **144** attached to mounting slots **80, 82** using suitable fasteners **146a/b**, a gas spring assembly **148** attached to mounting slots **76, 78** using suitable fasteners **150a/b**, and mounting plate **152** for attachment to a wall. As shown, gas spring assembly **148** is comprised of a first anchor plate **154** and a second anchor plate **156**, each anchor plate having holes **158** dimensioned to receive the suitable fasteners **150a/b** for affixing the anchor plates **154, 156** to the mounting bracket **10**. Each anchor plate **154, 156** further provides tabs **160, 162**, respectively for pivotally mounting actuator **164** using suitable fasteners **165a/b**, actuator **164** serving to control extension of the slow-speed lockable gas traction spring **166**. In the embodiment shown, actuator **164** is adapted to thread onto rod **168** of traction spring **166** and is locked in place with lock nut **170**. Actuator **164** is provided with a pivotable actuator lever **172** which comprises a cam surface **174** for engaging pin **176** on the traction spring **166**. Depression of pin **176** serves to unlock the traction spring **166** and effect extension/retraction of rod **168** relative to the traction spring housing. While the actuator is shown comprising a lever, it can be appreciated that alternate suitable actuators are also possible for use in controlling the traction spring **166**.

[0038] The other end **177** of the traction spring **166** is pivotally mounted between tabs **178, 180** of vertical anchor plates **182, 184**, respectively, using suitable fasteners **185a/b**. Vertical anchor plates **182, 184** are affixed to mounting plate **152** using suitable fasteners **186a/b**. Mounting plate **152** is generally configured with mounting slots **188, 190, 192, 194** to allow the mounting plate **152** to be securely fastened to a wall or other suitable support surface. The mounting plate **152** provides towards each end of the plate tabs **196** (far tab not shown) to allow pivotal mounting of pivot assembly **144** attached to mounting slots **80, 82** on mounting bracket **10**. As shown, pivot assembly **144** comprises tabs **198, 200** at each end of the structure. These tabs **198, 200** of the pivot assembly **144** are positioned between the corresponding tabs **196** (far tab not shown), with a suitable bushing **202** (i.e. urethane, bronze, etc . . . ) being placed between adjacent tabs (i.e. between tab **196** of the mounting plate **152** and tab **198** of pivot assembly **144**). A suitable fastener **204** is positioned through the adjacent tabs to maintain the aforementioned pivotal relationship.

[0039] To facilitate the tilt action of the tilting assembly **142**, as mentioned above, a slow-speed lockable gas traction spring **166** is used. In the embodiment shown in FIGS. **8a/b** and **9**, lifting vertically the pivotable actuator lever **172** unlocks the traction spring **166**, allowing the mounting bracket, and thus the mounted display to be pivoted away from the wall to the desired tilt. When the desired position

is achieved, the actuator lever **172** is released, thereby locking the traction spring in position. In a preferred embodiment, lifting of the actuator lever **172** causes the tilting assembly to return to the vertical position (i.e. the mechanism is biased towards the vertical position). While the extension of the gas spring limits the tilting action of the tilting assembly, the tilting assembly can be configured with a physical stop to limit the extent of tilt at both vertical and maximal tilt, so as to ensure added safety and protection of the mounted display unit.

[0040] As detailed above, the mounting bracket is adjustable in both the horizontal and vertical directions, so as to accommodate a variety of display sizes. The pivot assembly **144** and gas spring assembly **148** are configured to affix to the mounting bracket **10** over a wide range of selected horizontal configurations (widths) due to attachment via mounting slots **76, 78, 80, 82**. To accommodate the variety of available vertical configurations, vertical anchor plates **182, 184** are configured with vertical slots **206, 208** so as to permit proper placement of the pivot point defined between tabs **178, 180** of vertical anchor plates **182, 184**, respectively. As can be appreciated, the placement of this pivot point is dependent upon the vertical configuration of the mounting bracket **10**. Once positioned, fasteners **186a/b** are used to maintain this configuration.

[0041] In use, the mounting bracket with tilting assembly, as shown assembled in FIG. **10**, is prepared in much the same manner as described above for the static wall mount. The mounting bracket is fitted to the display unit prior to mounting the bracket to the wall. The primary difference between the static wall mount and the tilt mount is that mounting slots **188, 190, 192, 194** on mounting plate **152** are used to mount the assembly to the wall, instead of the corresponding slots on the mounting bracket **10**. Once the tilting assembly and affixed mounting bracket is securely fastened, the capture locks, if provided, are set to the open position. The display is then drop-placed onto the bracket, each of the mounting buttons being retained by the respective U-shaped cutout of the respective offset mounting means, or the respective keyhole slot if the VESA 100/200 convention is used. If provided with capture locks, the locks are moved to the locked position, or in the case of pin locks, the pin are inserted, preventing accidental dislodgement of the display. To adjust to the desired tilt position, the actuator **164** is hand actuated, and the mounting bracket/tilt assembly is tilted. The tilt is infinitely adjustable between 0 to 15° since the release of actuator **164** serves to lock the gas spring in the desired extended position. With the tilt assembly, the spacing between the rear of the display and the wall or support surface is 2½ inch.

[0042] It can be appreciated that while the tilt assembly discussed above can be provided integrated into the mount bracket, it is preferable to provide the tilt assembly as a kit or option available for addition to the mount bracket **10**.

[0043] In an alternate embodiment, the bracket portions may incorporate curved or angled edging to provide increased structural rigidity to the overall mounting bracket.

[0044] In an alternate embodiment, one or more of the offset mounting means are configured to support said display without capturing a mounting button or similar structure. It can be appreciated that one or more of the offset mounting means may provide a ledge or similar structure to provide support to the mounted display.

[0045] It can be appreciated that while the current invention has been discussed with respect to plasma and LCD technologies, the invention may find further application for mounting artwork, conference-room presentation boards, advertisement signs, etc. In essence, the invention may be used in any application where an infinitely adjustable low profile bracket mechanism is required.

[0046] Although a preferred embodiment of the present invention has been described, those of skill in the art will appreciate that variations and modifications may be made without departing from the spirit and scope thereof.

1. A universal display bracket suitable for mounting one of a variety of displays on a surface, said bracket comprising a plurality of bracket portions slidable relative to one another permitting adjustment of said bracket in both horizontal and vertical directions, said bracket portions being lockable so as to maintain fixed relative positions, said bracket being adapted to mount using suitable fasteners upon a surface, and wherein said bracket portions are dimensioned to support said display.

2. The universal display bracket according to claim 1, wherein said plurality of bracket portions comprises a first and second bracket portion slidable and lockable relative to one another in the horizontal direction, and wherein also provided are third and fourth bracket portions, said third bracket portion being slidable and lockable in the vertical direction relative to said second bracket portion, and wherein said fourth bracket portion is slidable and lockable in the vertical direction relative to said first bracket portion.

3. The universal display bracket according to claim 2, wherein said first, second, third and fourth bracket portions each comprise mounting slots for mounting said bracket to a receiving or supporting surface.

4. The universal display bracket according to claim 3, wherein said first, second, third and fourth bracket portions each comprise an offset mount for mounting a display.

5. The universal display bracket according to claim 4, wherein said offset mount on each of said first, second, third and fourth bracket portions comprises at least one U-shaped cutout for receiving a mounting button installed on the rear of a display to be mounted.

6. The universal display bracket according to claim 5, wherein at least one of said offset mount comprises a capture lock to prevent removal of said display from said bracket.

7. The universal display bracket according to claim 6, wherein said capture lock comprises a rotatable bridge lock

that rotates from a first open position, allowing said mounting button to be inserted into said U-shaped cutout, to a second locked position, wherein said bridge lock in the second locked position presents an obstruction that prevents removal of said mounting button from said U-shaped cutout.

8. The universal display bracket according to claim 6, wherein said capture lock comprises an insertable pin lock that obstructs removal of said mounting button from said U-shaped cutout on said offset mount.

9. The universal display bracket according to claim 2, wherein said first and second bracket portions are configured with keyhole slots that conform to VESA mounting standards.

10. The universal display bracket according to claim 1, wherein further provided is a tilting assembly, said tilting assembly comprising a mounting plate for attaching said tilting assembly to a surface, a pivot assembly to allow said bracket to pivot relative to said mounting plate, and a gas spring assembly extending between said mounting plate and said bracket to effect a tilt action about said pivot assembly, thereby allowing said bracket to be tilted through a range of angles between a first vertical position and a second tilted position.

11. The universal display bracket according to claim 10, wherein said second tilted position is approximately 15° from vertical.

12. The universal display bracket according to claim 10, wherein said gas spring assembly comprises a slow-speed lockable gas traction spring to facilitate and effect a tilting and lock action to the tilt assembly.

13. The universal display bracket according to claim 10, wherein said gas spring assembly is hand actuated.

14. The universal display bracket according to claim 10, wherein said tilt assembly is provided as a separate kit and wherein mounting slots provided on said bracket are used to affix said bracket to said tilt assembly.

15. A universal display bracket suitable for mounting one of a variety of displays on a surface, said bracket comprising a plurality of bracket portions slidable relative to one another permitting adjustment of said bracket to accommodate a display of a particular size, said bracket portions being lockable so as to maintain a preselected relative position, said bracket being adapted to mount using suitable fasteners upon a surface, and wherein said bracket portions are dimensioned to support said display.

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