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(54) WALL MOUNTED WORKSTATION

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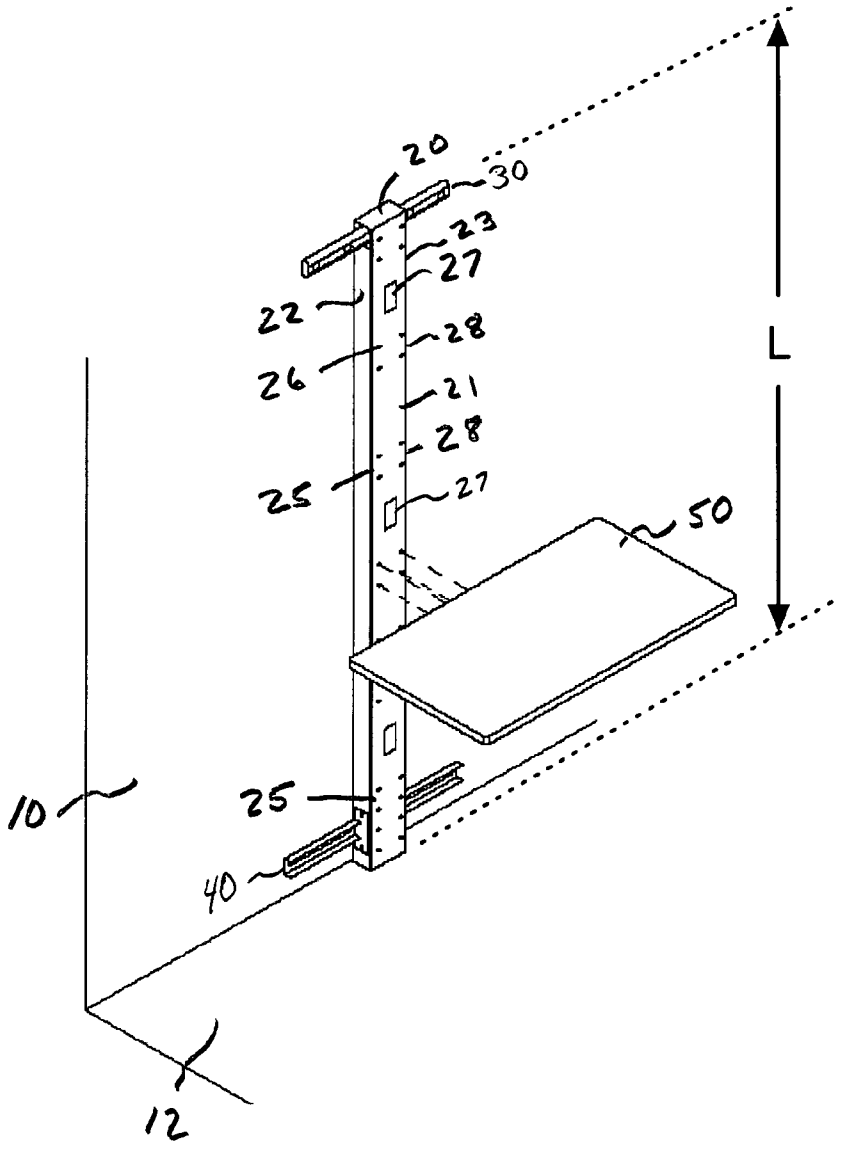
(57) **ABSTRACT**

A wall mounted workstation having a wall mounted post. One or more accessories are secured to the post in order to configure the workstation for a particular application. The post has at least one mounting surface having a plurality of accessory mounting locations. One or more accessory, such as work surface, or footrest, or equipment holder and the like, are coupled to the post at one of the accessory mounting locations. The mounting surface generally faces outward away from the wall. Each of the plurality of accessory mounting locations are generally associated with at least one mounting hole. The mounting hole(s) can optionally be threaded. In general the equipment holder is configured to accept at least one piece of equipment, such as a computer, portable computer, keyboard, display or the like.



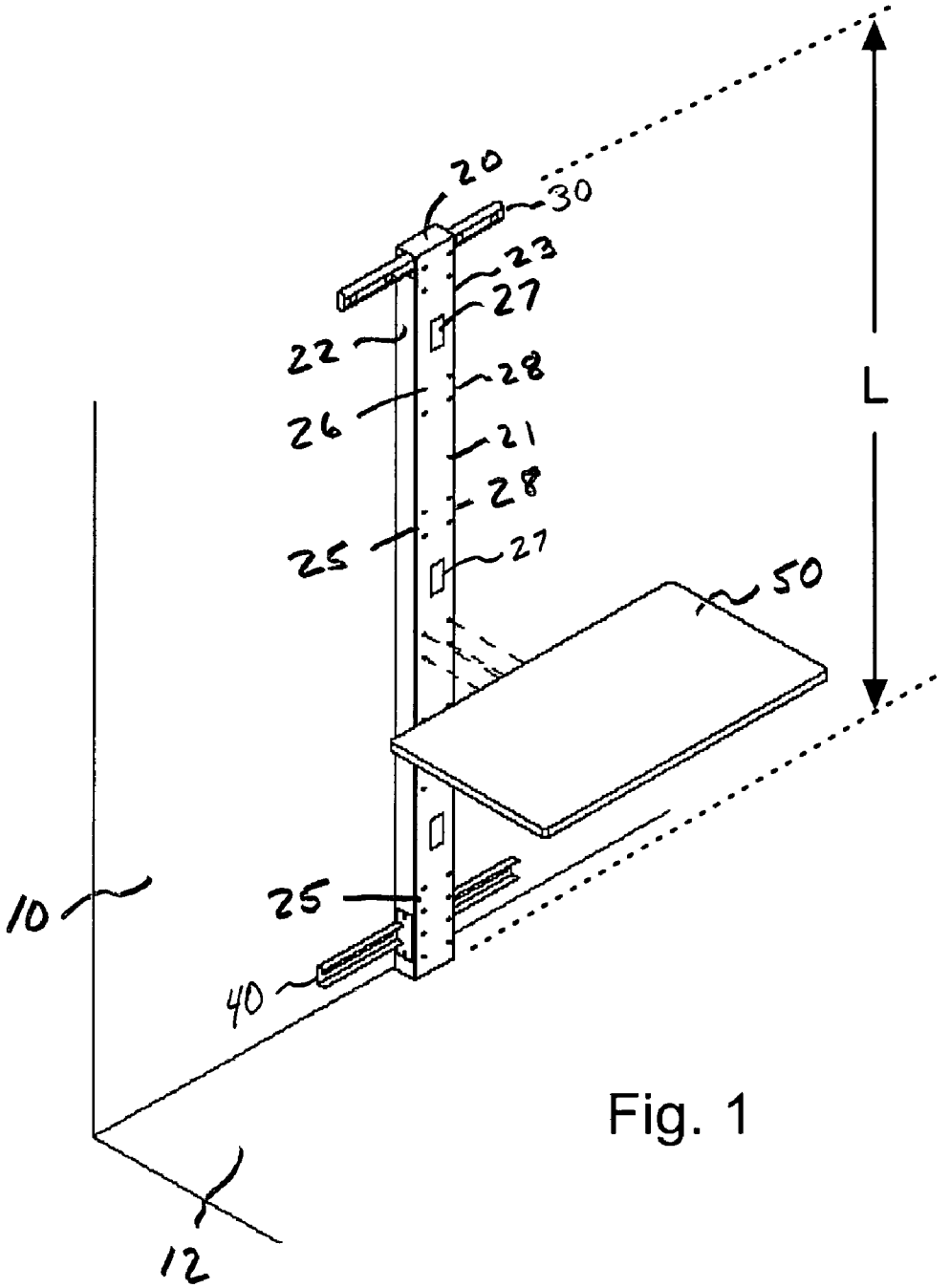


Fig. 1

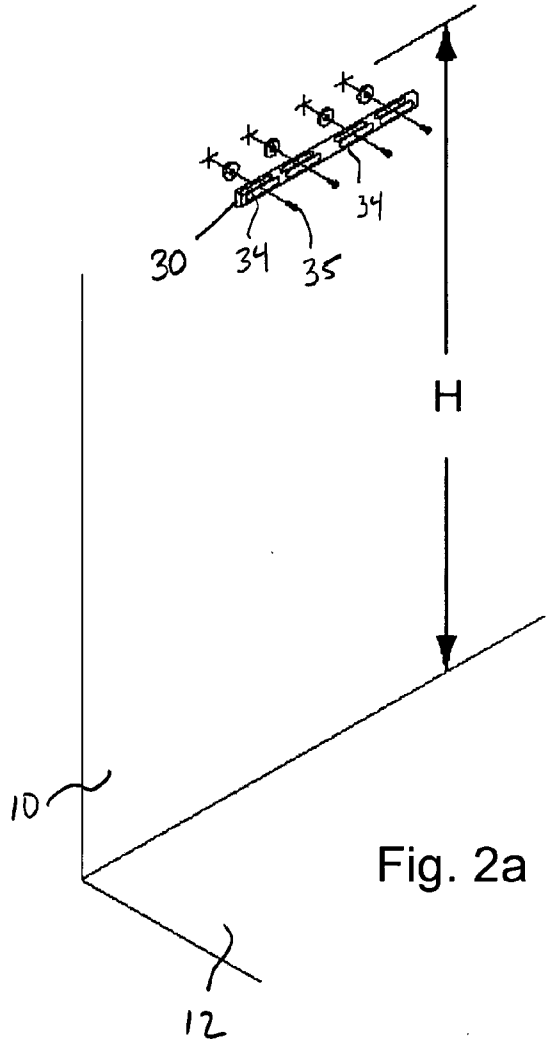


Fig. 2a

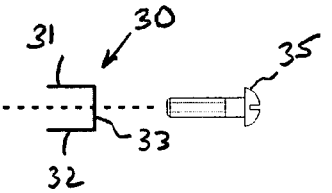


Fig. 2b

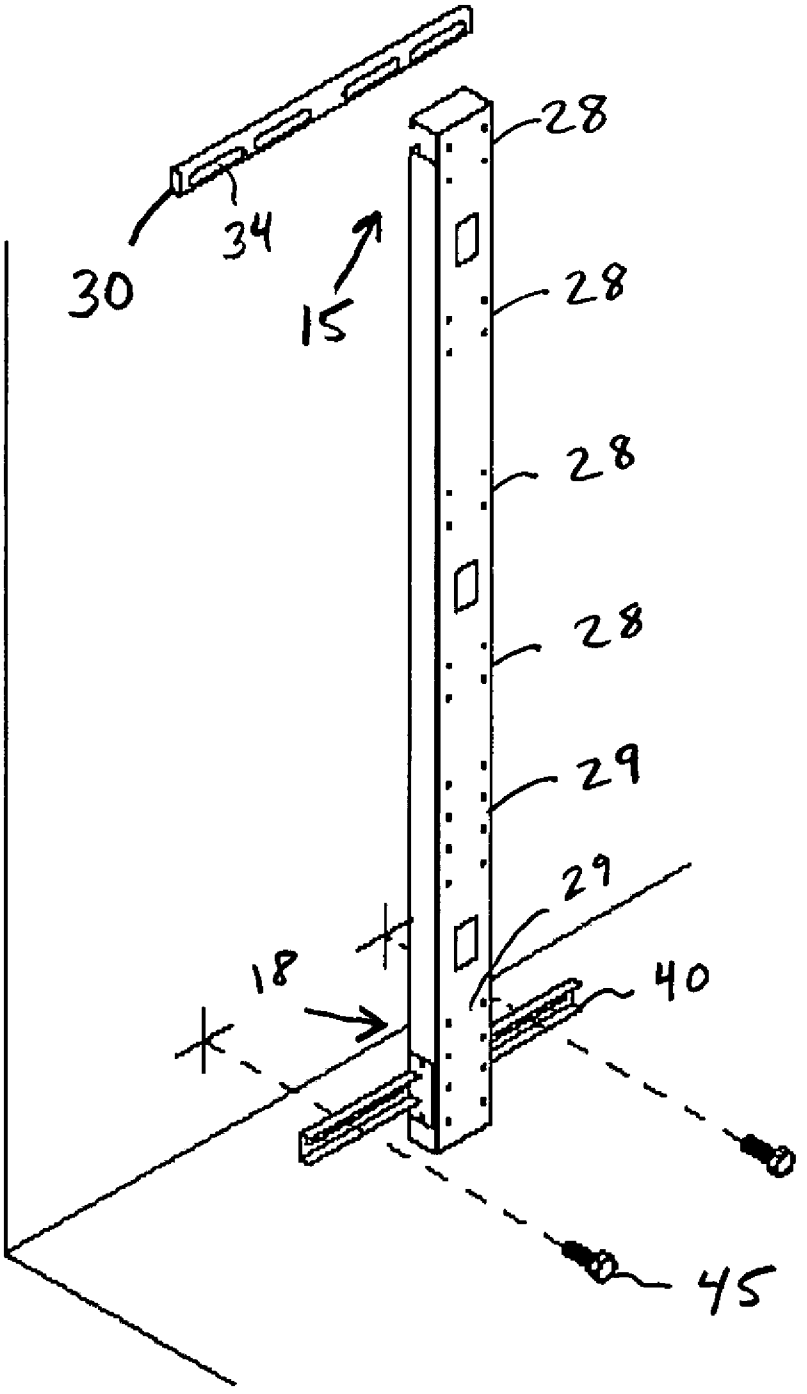


Fig. 3

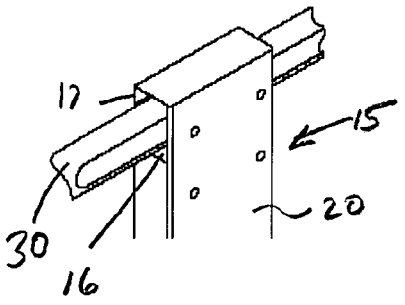


Fig. 4a

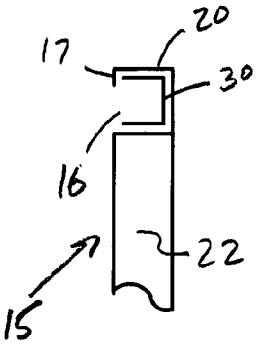


Fig. 4c

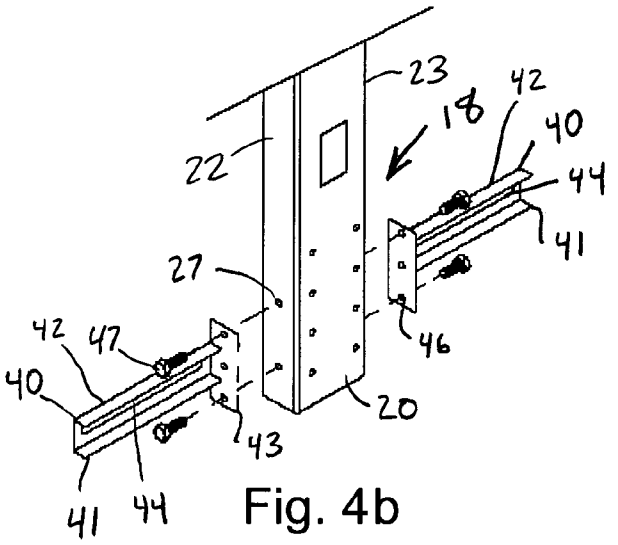


Fig. 4b

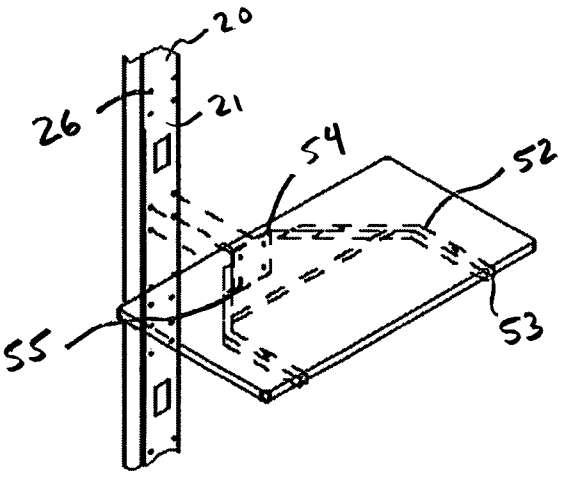


Fig. 5a

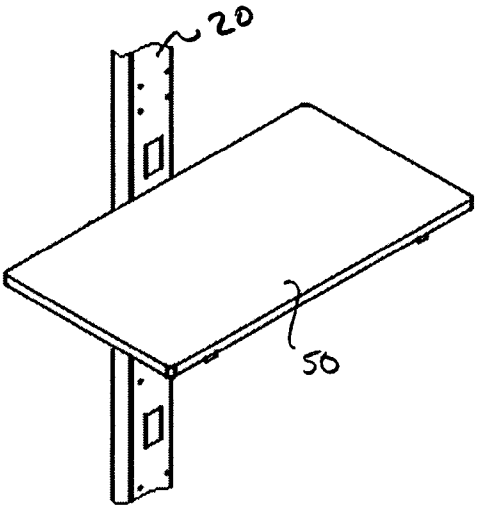


Fig. 5b

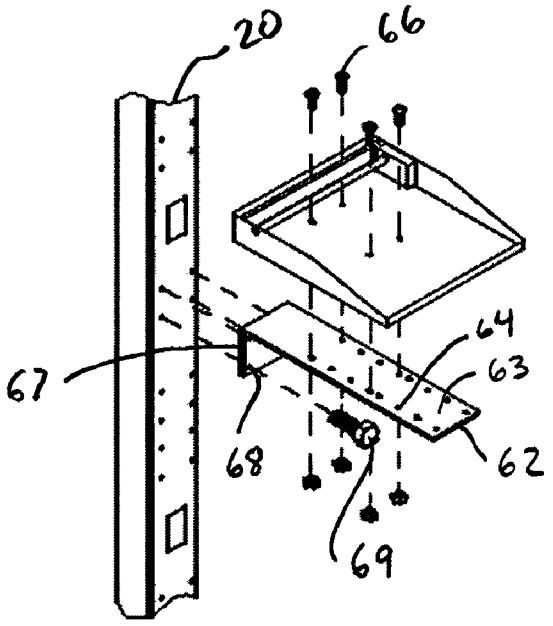


Fig. 6a

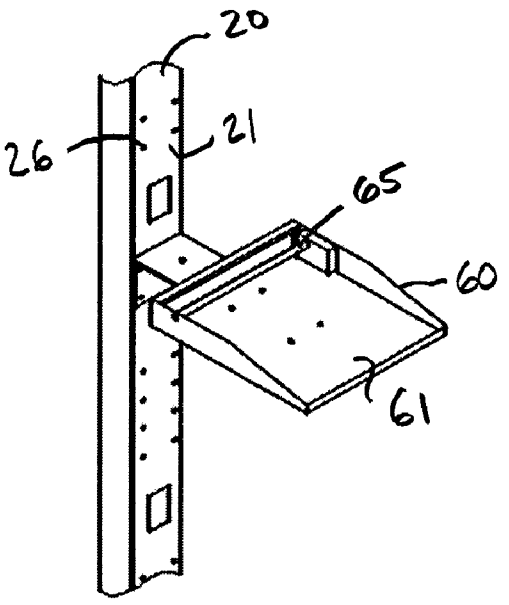


Fig. 6b

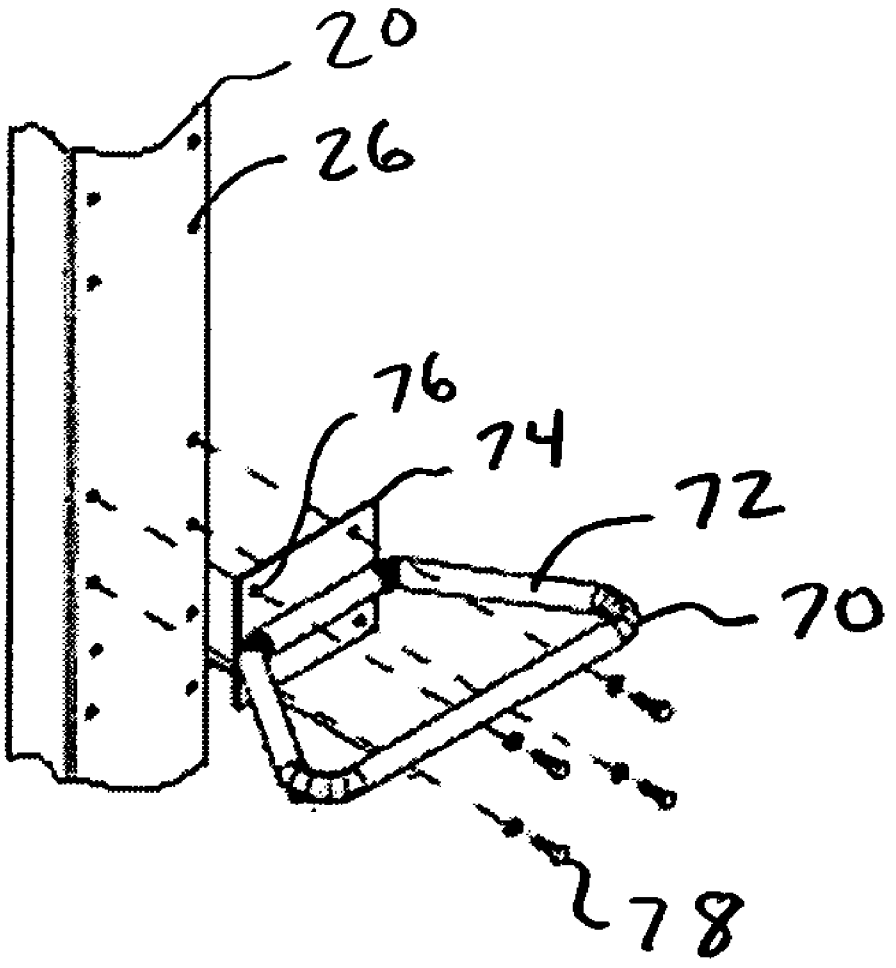


Fig. 7

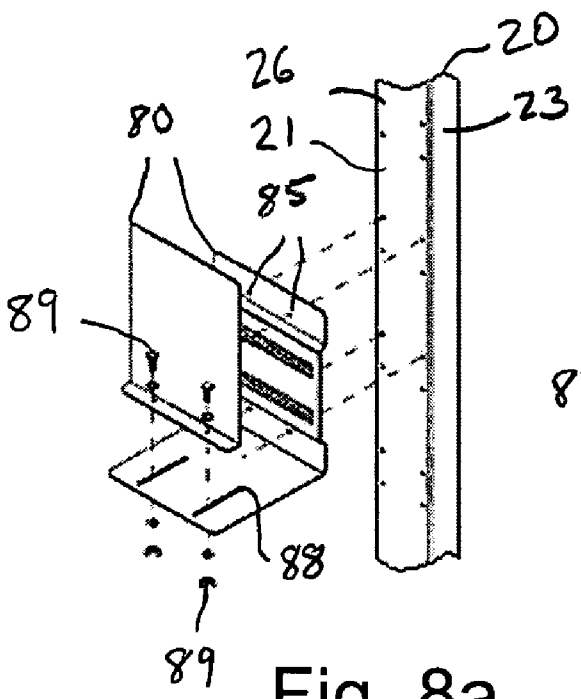


Fig. 8a

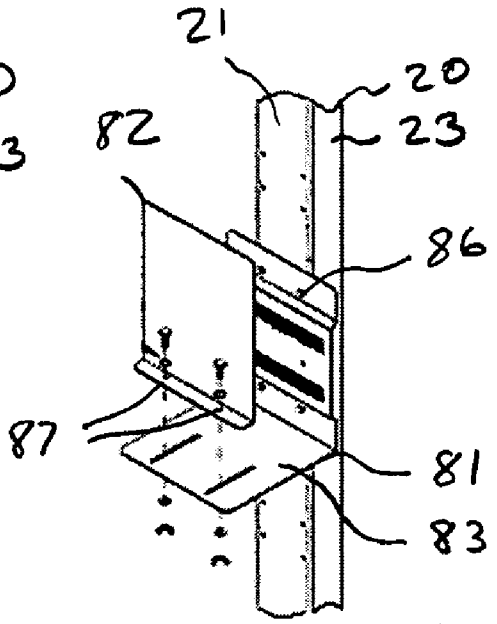


Fig. 8b

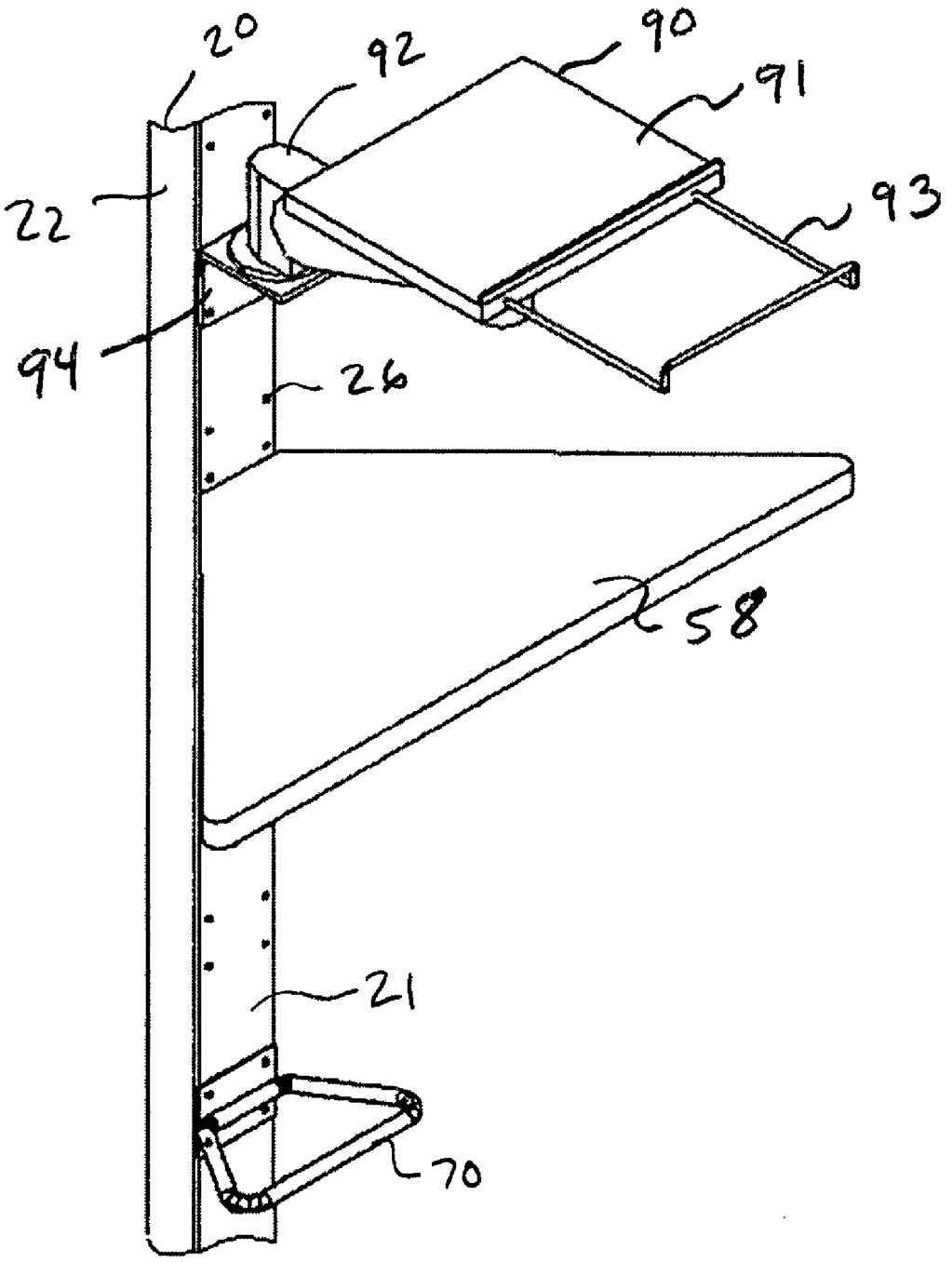


Fig. 9

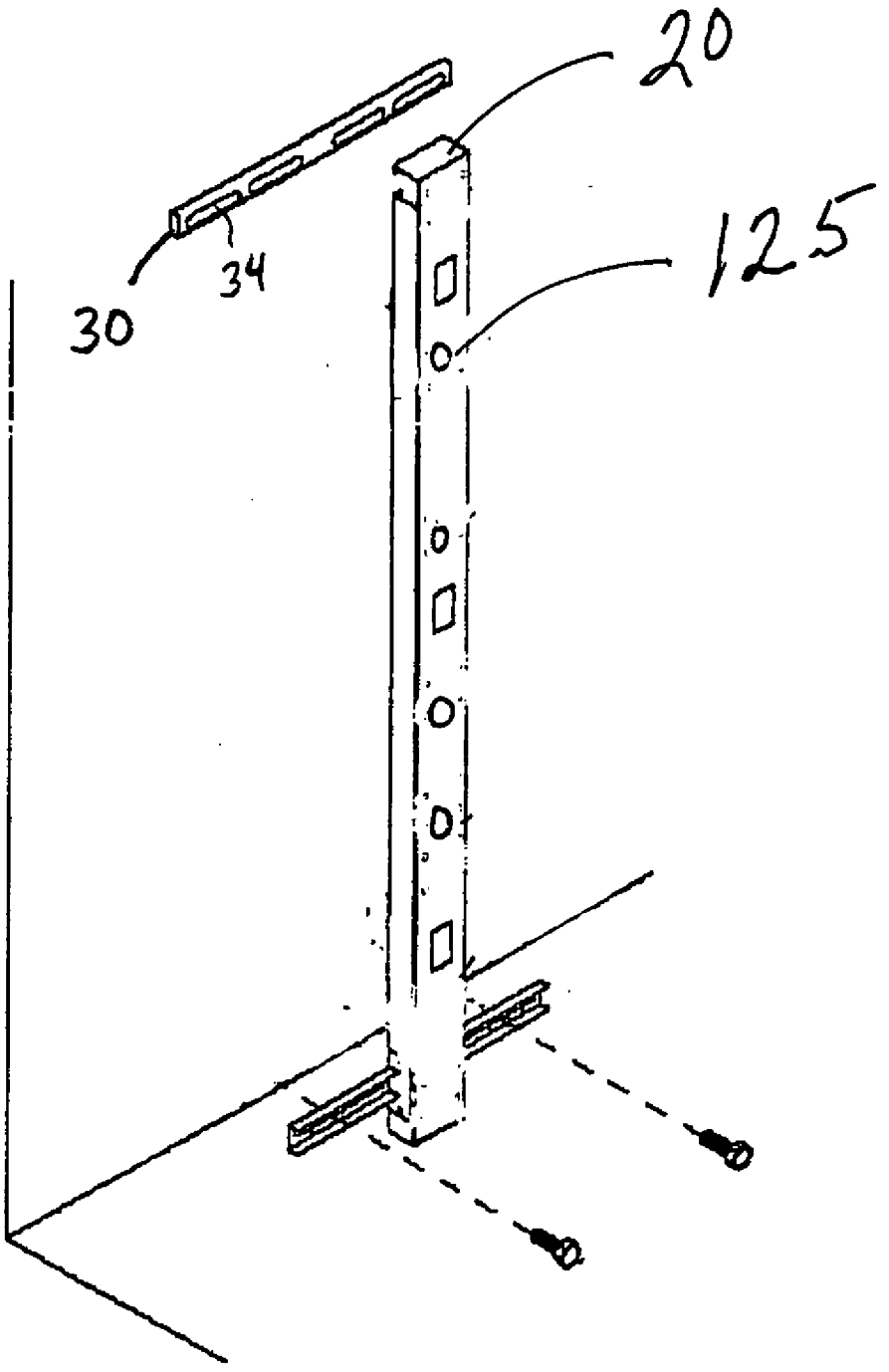


FIG. 10

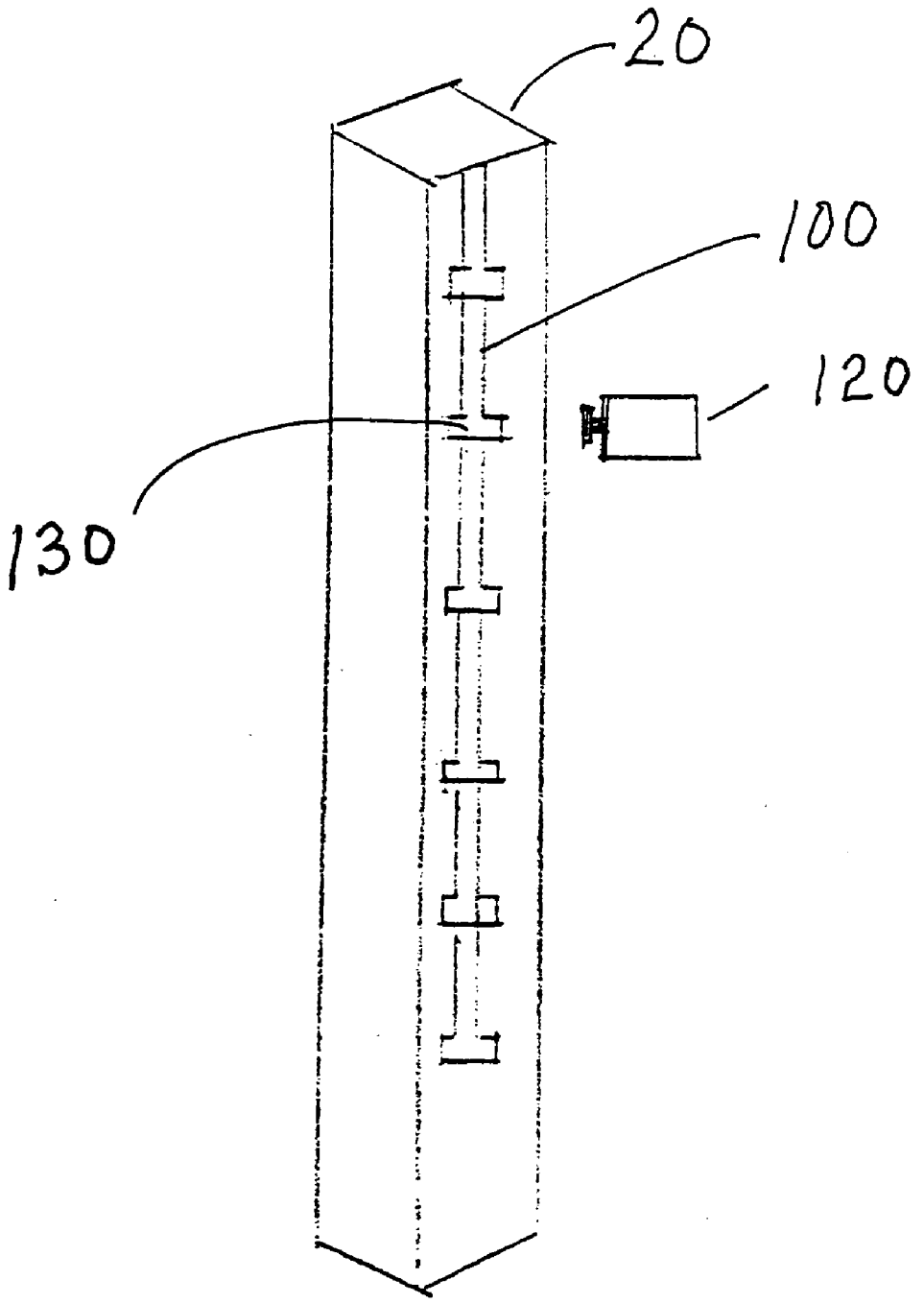


FIG. 11

WALL MOUNTED WORKSTATION

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a wall mounted workstation for electronic equipment such as computers, multimedia components and the like.

[0002] Typical workstations include various storage and work surfaces to position computers, monitors, various electronic components and the like at desired locations. Various adjustments are provided to tailor the workstation to the type of equipment used as well as user preferences. Some workstations are better suited for portable computer equipment. Other workstations are better suited for desktop computer equipment. Some workstations provide security and storage functions. It is desirable to provide a wall mounted workstation that is simple to configure and flexible in its configuration options.

BRIEF SUMMARY OF THE INVENTION

[0003] The invention is directed to a wall mounted workstation having a wall mounted post. One or more accessories are secured to the post in order to configure the workstation for a particular application. The post has at least one mounting surface having a plurality of accessory mounting locations. One or more accessories (e.g., work surface, footrest or equipment holder) can be coupled to the post at an appropriate accessory mounting location. The equipment holder can be configured to accept various types of equipment such as a computer, portable computer, keyboard, display or the like. The mounting surface generally faces outward, away from the wall. In one example, each of the plurality of accessory mounting locations are generally associated with a mounting hole. In another example, the plurality of accessory mounting locations are associated with at least two mounting holes having a first spacing (vertical and horizontal), and the accessory (or accessories) have at least two mounting holes with a second spacing that generally corresponds to the first spacing. The mounting holes can optionally be threaded.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] For a better understanding of the present invention, reference is made to the following description and accompanying drawings, while the scope of the invention is set forth in the appended claims.

[0005] FIG. **1** is an exemplary partially exploded view of a wall mounted workstation in accordance with the invention.

[0006] FIG. **2***a* is a pictorial view of an exemplary upper mount in accordance with the invention.

[0007] FIG. **2***b* is a side sectional view of an exemplary upper mount in accordance with the invention.

[0008] FIG. **3** is an exemplary partially exploded view of a wall mounted post, upper mount and lower mount in accordance with the invention.

[0009] FIG. **4***a* is a pictorial view of a wall mounted post and upper mount in accordance with the invention.

[0010] FIG. **4***b* is a pictorial view of a wall mounted post and lower mount in accordance with the invention.

[0011] FIG. **4***c* is a partial side view of the upper end of a post, with a side sectional view of an upper mount in accordance with the invention.

[0012] FIG. **5***a* is a pictorial view of a wall mounted workstation with a post and a horizontal work surface, shown with mounting details, in accordance with the invention.

[0013] FIG. **5***b* is a pictorial view of a wall mounted with a post and a horizontal work surface in accordance with the invention.

[0014] FIG. **6***a* is a pictorial view of a wall mounted workstation with a post and a portable computer platform, shown with mounting details, in accordance with the invention.

[0015] FIG. **6***b* is a pictorial view of a wall mounted workstation with a post and a portable computer platform in accordance with the invention.

[0016] FIG. **7** is a pictorial view of a footrest in accordance with the invention.

[0017] FIGS. **8***a* and **8***b* are pictorial views of a computer holder(s) in accordance with the invention.

[0018] FIG. **9** is a pictorial view of a workstation with a post, a footrest, a work surface and a display support in accordance with the invention.

[0019] FIG. **10** is a pictorial view of an alternative embodiment of the wall mounted workstation.

[0020] FIG. **11** is a pictorial view of an alternative embodiment of the post.

DETAILED DESCRIPTION OF THE INVENTION

[0021] Turning to the drawings, FIG. **1** shows an exemplary exploded view of a wall mounted workstation in accordance with the invention. The workstation has a wall mountable post **20** and one or more accessories such as a work surface **50**. The post **20** has a length L and is generally oriented vertically with respect to the plane of the floor **12**. In this example the post **20** is manufactured from metal. However, the post **20** can be manufactured from a variety of other materials such as wood, plastics, laminated structures, composites and the like. The post **20** has a planar mounting surface **21**, and two side surfaces **22**, **23**. In this example the post **20** is generally rectangular in cross section and mounting surface **21** faces away from the wall **10**. It is understood that posts with other geometric cross sections are possible without departing from the scope of the invention. It is also understood that side surfaces **22** and **23** can function as mounting surfaces for use in connection with one or more accessory.

[0022] The mounting surface **21** has a plurality of accessory mounting locations **25**. The mounting locations **25** are generally configured to receive one or more accessories, as discussed in detail below. Each mounting location **25** is generally associated with one or more mounting holes **26**. Mounting holes **26** can be arranged in one or more groups (e.g., two or more mounting holes) with pre-determined vertical and horizontal spacing between the various mounting holes **26**. In this example, four upper groups **28** are provided with four mounting holes and two lower groups **29** are provided with eight mounting holes (see FIG. **3**). It is understood that additional spacing configurations are possible without departing from the scope of the invention. As discussed above, one or more mounting locations can be provided on side surfaces **22** and **23**.

[0023] In this example, mounting holes **26** are threaded to receive threaded fasteners for securing one or more accessories to the post **20**. It is understood that a variety of fastener types can be utilized (e.g., fasteners that do not required threaded mounting holes) without departing from the scope of the invention. Also in this example, the post **20** is generally hollow. On or more openings **27** are provided in the mounting surface **21**. Openings **27** provide access to the interior of the post **20** and can be used for cable management. It is under-

stood that additional openings can be provided on any surface, and can be arranged in a variety of configurations.

[0024] Referring to FIGS. **2***a* and **3**, post **20** is coupled to the wall **10** via upper mount **30** and lower mount **40**. In this example, the upper mount **30** is generally a wall mountable bar that supports the post. FIG. **2***b* shows the upper mount **30** in cross section. In this example, the upper mount **30** has a generally three sided rectangular cross section. The upper mount **30** has a top surface **31**, bottom surface **32** and a front surface **33**. The front surface **33** is formed with a plurality of slots **34**, generally arranged to accept one or more fasteners **35**. The upper mount **30** is secured to the wall **10** at a height H above the floor **12**, where H is generally greater then the post length L. The upper mount **30** is secured to the wall **10** with one or more fasteners **35**, as generally shown in FIG. **2***a*. For example, attaching the upper mount **30** to dry wall surfaces can be accomplished by aligning the threaded fasteners with one or more wall studs. In the alternative, wall anchors or the like can be utilized. Similarly, attaching the upper mount **30** to masonry walls can be accomplished with masonry screws, wall anchors or the like. It is well within the grasp of those skilled in the art to select appropriate fasteners to secure the upper mount **30** to a given wall surface. It is also understood that adhesives can be used in place of mechanical fasteners. In this example the upper mount **30** is manufactured from metal. However, the upper mount **30** can be manufactured from a variety of other materials such as wood, plastics, laminated structures, composites and the like. It is also appreciated that the upper mount **30** can be formed with other geometric profiles without departing from the scope of the invention.

[0025] In order to simplify installation, the upper mount **30** can be somewhat loosely secured to the wall **10**, thereby leaving a small gap between the upper mount **30** and the wall **10**. The post **20** can then be temporarily hung from the upper mount **30** until the lower mount **40** is secured. Post **20**, generally has an upper end **15** and a lower end **18**. The upper end **15** is generally formed with a slot **16** that is appropriately sized to receive the upper mount **30**. The upper end **15** is also formed with a lip **17** that generally hooks behind the upper mount **30** (i.e., between the upper mount **30** and the wall **10**), thereby retaining the post **20** until the lower mount **40** is secured (see FIG. **4***c*). It is understood that the lower end **18** of the post **20** can be secured to the wall **10** directly, thereby functioning as a lower mount without requiring additional structure. However, a bar shaped lower mount allowing the use of two or more fasteners displaced from the center line of the post **20** can provide additional stability.

[0026] FIGS. **3**, and **4***b* show an exemplary lower mount **40** in accordance with the invention. In this example, lower mount **40** is generally a wall mountable bar that supports the post **20**. The side surfaces **22** and **23** have one or more holes **27** that can be used to secure the lower mount **40** to the post **20**. Holes **27** can optionally be threaded to receive threaded fasteners. In this example, the lower mount **40** is composed of two arms **41**. Each arm **41** has a wall mounting portion **42** and a post mounting portion **43**. The wall mounting portion **42** is formed with at least one slot **44** that can accept one or more fasteners **45**. The post mounting portion **43** is formed with one or more holes **46**, that can accept threaded fasteners **47**. In this example, threaded fasteners **47** are passed through the holes **46** in the post mounting portion **43** and are threaded into the holes **27** formed side surfaces **22**, **23**. It is appreciated that once the lower mount **40** is secured, the lip **17** will effectively be locked behind the upper mount **30**. It is also appreciated that the lower mount **40** can be formed with other geometric profiles without departing from the scope of the invention.

[0027] As shown in FIG. **3**, the lower mount **40** is generally secured to the wall **10** via appropriate fasteners. For example, attaching the lower mount **40** to dry wall surfaces can be accomplished by aligning the threaded fasteners with one or more wall studs. In the alternative, wall anchors or the like can be utilized. Similarly, attaching the lower mount **40** to masonry walls can be accomplished with masonry screws, wall anchors or the like. It is well within the grasp of those skilled in the art to select appropriate fasteners to secure the lower mount **40** to a given wall surface. It is also understood that adhesives can be used in place of mechanical fasteners. In this example the lower mount **40** is manufactured from metal. However, the lower mount **40** can be manufactured from a variety of other materials such as wood, plastics, laminated structures, composites and the like.

[0028] As stated above, the workstation has a wall mounted post **20** and one or more accessories. The post **20** is generally oriented vertically with respect to the plane of the floor **12**. One or more accessories are secured to the post **20** in order to configure the workstation for a particular application. Accessories can include variously shaped work surfaces, footrests, equipment holders (such as portable computers, desktop computers, keyboards, displays and the like). The post **20** has at least one mounting surface **21** with a plurality of accessory mounting locations **25**. Accordingly, one or more accessories may be mounted to the mounting surface **21** at the desired accessory mounting location, thereby yielding numerous configuration options.

[0029] FIGS. **5***a* and **5***b* show a post **20** and a generally horizontal work surface **50** coupled to the mounting surface **21**, in accordance with the invention. In this example, the work surface **50** is generally rectangular in shape. It is appreciated that other work surface shapes are possible without departing from the scope of the invention. The work surface **50** is attached to the post **20** via support **52**. The support has a frame **53** and a mounting surface **54** formed with a plurality of post mounting holes **55** that have substantially the same vertical and horizontal spacing between holes as the mounting holes **26** formed in the post **20**. In this example, the mounting surface **54** has four mounting holes **55**. Appropriate fasteners are used to couple the frame **53** to the post **20**. In this example, threaded fasteners (not shown) can be passed through the holes **55** in the mounting surface **54** and threaded into the holes **26** formed in the post **20** to secure the frame **53** to the post **20**. Appropriate fasteners can be used to secure the mounting surface **50** to the frame **53**, as is well known in the art. The work surface **50** and frame **53** can be formed using a variety of materials such as wood, metal, plastics, laminated structures, composites and the like as is well known in the art. In this example, the work surface **50** is formed of wood with a plastic laminate surface and the frame **53** is formed of metal.

[0030] FIGS. **6***a* and **6***b* show a post **20** and a portable computer mount **60** coupled to the front mounting surface **21**, in accordance with the invention. In this example, the portable computer mount **60** is generally rectangular in shape. It is appreciated that other computer or equipment mount shapes are possible without departing from the scope of the invention. The portable computer mount **60** has a tray **61** that is attached to the post **20** via support **62**. The support **62** has a tray support surface **63** formed with a plurality of tray mounting holes **64** that have substantially the same vertical and horizontal spacing between holes as the mounting holes **64**

formed in the tray **61**. Appropriate fasteners **66** (e.g., nuts and bolts) are used to couple the tray **61** to the support **62**. It is appreciated that the provision of multiple sets of holes in the tray support surface **61** allows for tray depth adjustment (i.e., the spacing between the tray **61** and the post **20**).

[0031] The support **62** also has a post mounting surface **67** formed with mounting holes **68**. Appropriate fasteners are used to couple the support **61** to the post **20**. In this example, one or more threaded fasteners **69** can be passed through the mounting holes **68** in the post mounting surface **67** and threaded into the holes **26** formed in the post **20** to secure the support **62** to the post **20**. Portable computer mount **60** can also be equipped with security features so that a portable computer can be securely retained. For example, a security bar **65** or other security features can be provided, as is well known in the art.

[0032] FIG. **7** shows a foot support **70** in accordance with the invention. In this example, the foot support **70** has a footrest portion **72** and a mount **74**. The footrest portion **72** is generally shown as a trapezoidal shape formed of tubular material. It is appreciated that other footrests shapes are possible without departing from the scope of the invention. The foot support mount **74** is formed with a plurality of mounting holes **76**. Appropriate fasteners are used to couple the support foot support mount **74** to the post **20**. In this example, one or more threaded fasteners **78** can be passed through the holes in the foot support mount **74** and threaded into the holes **26** formed in the post to secure the frame foot support **70** to the post **20**.

[0033] FIGS. **8***a* and **8***b* show a computer holder **80** coupled to post **20** in accordance with the invention. The computer holder **80** is generally configured to hold a desktop computer or other equipment. The computer holder **80** is generally formed of two portions, namely a main body **81** and a plate **82**. The main body **81** includes a computer support surface **83** and a post mounting surface **84**. In this example the computer support surface **83** and mounting surface **84** are generally disposed at **90** degrees with respect to each other. The post mounting surface **84** is formed with a plurality of mounting holes **85**. Appropriate fasteners are used to couple the main body **81** to the post **20**. In this example, one or more threaded fasteners **86** can be passed through the mounting holes **85** in the main body **81** and threaded into the holes **26** formed in the post **20** to secure the main body **81** to the post **20**.

[0034] In this example, the plate **82** is generally disposed at a 90 degree angle with respect to the computer support surface **83**. The plate **82** is also adjustable with respect to its location relative to the post mounting surface **84** thereby providing a width adjustment for a range of equipment dimensions (i.e., the distance between the plate **82** and the post mounting surface **84**). The plate **82** has a plurality of mounting holes **87**. The computer support surface **83** has a pair of grooves **88** that have substantially the same spacing as the mounting holes **87** formed in the plate **82**. Appropriate fasteners are used to couple the plate **82** to the main body **81**. In this example, one or more threaded fasteners **89** can be passed through the mounting holes **87** in the plate **82** and the slots **88** in the main body **81**. The main body **81** can then be adjusted to the desired location and secured with washers and nuts.

[0035] FIG. **9** shows a pictorial view of a workstation with a post **20**, a footrest **70** and a work surface **58**. FIG. **9** also shows a display support **90** in accordance with the invention. Display support **90** includes a display support surface **91**, pivoting arm **92**, and keyboard support **93**. The pivoting arm **92** includes a post mounting surface **94** that is coupled to a mounting location on the post **20** via appropriate fasteners as discussed above. It is understood that other display support structures may be utilized with the invention including supports for flat panel displays such as LCD monitors, plasma displays and the like.

[0036] In an alternative embodiment of the invention, the post **20** may be composed of a plurality of accessory mounting locations such that a single mounting hole is used for mounting an accessory to the wall mounted workstation. FIG. **10** is a pictorial view of the wall mounted workstation that shows a single mounting hole **125** that is used for mounting an accessory to the wall mounted workstation in accordance with this alternative embodiment.

[0037] Another embodiment of the wall mounted workstation utilizes a channel **100** that runs vertically along the post with respect to the plane of a floor. FIG. **11** shows the alternative embodiment of the workstation with the vertical channel and locking intervals. Accessories may be slidably mounted to the channel **100** of the post via a mounting plate **120**. The mounting plate **120** may be integrally configured with the accessory or separate therefrom and is configured to lock in place **130** along the channel **100** at various intervals in order to secure the accessory to the post.

[0038] It is readily apparent that numerous configurations are possible based on the foregoing disclosure. It is also readily apparent that other accessories can be combined with the invention to provide additional configuration options without departing from the scope of the invention. While the foregoing description and drawings represent the preferred embodiments of the present invention, it will be understood that various changes and modifications may be made without departing from the spirit and scope of the present invention.

What is claimed is:

1. A wall mounted workstation, comprising:

a post having at least one mounting surface having a plurality of accessory mounting locations,

a wall mount that couples the post to the wall, and

at least one accessory coupled to the post at one of the accessory mounting locations, wherein the accessory is selected from the group consisting of a work surface, footrest, and equipment holder.

2. The workstation of claim **1**, wherein the mounting surface is substantially planar.

3. The workstation of claim **1**, wherein the wall mount comprises an upper mount and a lower mount.

4. The workstation of claim **3**, wherein the post has an upper end formed with a slot that is sized to receive the upper mount.

5. The workstation of claim **4**, wherein the upper end of the post is formed with a lip that engages between the upper mount and the wall.

6. The workstation of claim **3**, wherein the upper mount is formed with at least one slot that can accept at least one fastener.

7. The workstation of claim **3**, wherein the lower mount comprises two arms.

8. The workstation of claim **6**, wherein the each arm has a wall mounting portion and a post mounting portion.

9. The workstation of claim **6**, wherein the each arm is formed with at least one slot that can accept at least one fastener.

10. The workstation of claim **1**, wherein each of the plurality of accessory mounting locations are associated with at least one mounting hole.

11. The workstation of claim **10**, wherein each of the mounting holes are threaded.

12. The workstation of claim **1**, wherein each of the plurality of accessory mounting locations are associated with at least two mounting holes having a first spacing, the at least one accessory has at least two mounting holes having a second spacing, wherein the first spacing generally corresponds to the second spacing.

13. The workstation of claim **12**, wherein each of the mounting holes are threaded.

14. The workstation of claim **1**, wherein the post is hollow, and the at least one mounting surface is formed with an opening.

15. The workstation of claim **1**, wherein the equipment holder is configured to accept at least one piece of equipment selected from the group consisting of a computer, portable computer, keyboard and display.

16. A wall mounted workstation, comprising:

a post having at least one mounting surface having a plurality of accessory mounting locations,

a wall mount that couples the post to the wall, and

a work surface coupled to the post at one of the accessory mounting locations.

17. The workstation of claim **16**, wherein the mounting surface is substantially planar.

18. The workstation of claim **16**, wherein the wall mount comprises an upper mount and a lower mount.

19. The workstation of claim **18**, wherein the post has an upper end formed with a slot that is sized to receive the upper mount.

20. The workstation of claim **19** wherein the upper end of the post is formed with a lip that engages between the upper mount and the wall.

21. The workstation of claim **16**, wherein the upper mount is formed with at least one slot that can accept at least one fastener.

22. The workstation of claim **16**, wherein the lower mount comprises two arms.

23. The workstation of claim **22**, wherein the each arm has a wall mounting portion and a post mounting portion.

23. The workstation of claim **22**, wherein the each arm is formed with at least one slot that can accept at least one fastener.

24. The workstation of claim **16**, wherein each of the plurality of accessory mounting locations are associated with at least one mounting hole.

25. The workstation of claim **24**, wherein each of the mounting holes are threaded.

26. The workstation of claim **16**, wherein each of the plurality of accessory mounting locations are associated with at least two mounting holes having a first spacing, the at least one accessory has at least two mounting holes having a second spacing, wherein the first spacing generally corresponds to the second spacing.

27. The workstation of claim **26**, wherein each of the mounting holes are threaded.

28. The workstation of claim **16**, wherein the post is hollow.

29. The workstation of claim **16**, further comprising at least one of an equipment holder and a foot rest.

30. The workstation of claim **29**, wherein the equipment holder is configured to accept at least one piece of equipment selected from the group consisting of a computer, portable computer, keyboard and display.

31. A wall mounted workstation, comprising:

a post having at least one mounting surface having a plurality of accessory mounting locations,

a wall mount that couples the post to the wall, and

an equipment holder, wherein the equipment holder is coupled to the post at one of the accessory mounting locations.

32. The workstation of claim **31**, further comprising at least one accessory selected from the group consisting of a work surface and footrest.

33. A post for a wall mounted workstation wherein the post is configured for coupling to at least one wall mount and has at least one substantially planar mounting surface having a plurality of accessory locations for coupling an accessory to the post.

34. The wall mounted workstation of claim **1**, wherein the post contains a plurality of accessory mounting locations wherein each mounting location uses a single mounting hole configured for mounting an accessory.

35. The wall mounted workstation of claim **1**, wherein the post contains a channel configured to slideably mount an accessory to the post.

36. The wall mounted workstation of claim **35**, wherein the channel is configured to lock the accessory at selected intervals along the channel.

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