TABLE MOUNTED STORAGE CABINETS

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ABSTRACT

A storage cabinet provided adjacent a side edge of a worktable mounted to the table with a first end of the storage cabinet near a front edge of the worktable and the cabinet extending away from the front edge to a rear edge of the table. The cabinet includes a first end storage compartment provided in the cabinet near the first end accessible through a first access opening which is either at an end of the cabinet or at an inward lateral side of the cabinet open across the edge of the table towards the work surface of the table. The cabinet also includes a central storage compartment spaced from the first end by the first end storage compartment. The central cabinet compartment is accessible through a central access opening which opens either vertically upwardly or outwardly laterally away from the table.
TABLE MOUNTED STORAGE CABINETS

RELATED APPLICATION

This application is a continuation-in-part of U.S. patent application Ser. No. 13/834,489 filed Mar. 15, 2013.

SCOPE OF THE INVENTION

This invention relates to table mounted storage cabinets and to table leg assemblies and, more particularly, to table leg assemblies with a horizontal beam extending between two vertical legs; and to storage cabinets mounted to tables to provide storage easily accessible to users of the table.

BACKGROUND OF THE INVENTION

Various table leg assemblies are known for supporting a worksurface of a table. The present inventor has appreciated that previously known table leg assemblies fail to provide a simpler convenient manner for coupling of various functional elements to the table. Various storage cabinets are known for storage proximate work stations and worksurfaces. The present inventor has appreciated that previously known storage cabinets fail to provide a simple convenient manner and vehicle for mounting of storage proximate to worktables.

SUMMARY OF THE INVENTION

To at least partially overcome disadvantages of previously known table leg assemblies, the present invention provides a table leg assembly with an intermediate beam to removably support elements on the table leg assembly. In one aspect, the present invention provides a table having a tabletop worksurface, the worksurface having a downwardly directed lower surface, a leg structure supporting the tabletop under an end of the table, the leg structure having two spaced vertical legs, each leg having a top and a bottom, each leg top disposed below the lower surface, each leg having an outer end surface, the outer surfaces of both legs lying in a common flat outer end plane, an elongate horizontal intermediate beam extending between the legs intermediate the top and bottom of the legs, the intermediate beam having two ends each end joined to one of the legs, the intermediate beam spaced below the lower surface of the worksurface forming a vertical space therebetween, the intermediate beam having an outer side surface, the outer surface of the intermediate beam disposed inwardly of the outer end plane, the outer surface of the intermediate beam disposed outwardly of the beam by a hook member removably mounted to the intermediate beam and extending rearwardly over the top surface of the intermediate beam and downwardly into engagement with the inner side surface of the intermediate beam.

To at least partially overcome disadvantages of previously known storage cabinets, the present invention provides a storage cabinet arrangement with selected portions accessible at different locations relative a worksurface. In another aspect the present invention provides in combination, a worktable and a storage cabinet, the worktable having a worksurface with a front edge for access by a user, a rear edge opposite the front edge and a side edge joining the front edge and the rear edge, the storage cabinet mounted to the table extending along the side edge with a first end of the storage cabinet proximate the front edge and the storage cabinet extending away from the first edge to the rear edge of the table, a first end storage compartment provided in the storage cabinet proximate the first end accessible through a first end storage compartment access opening selected from one or more of one or more of an end access opening in the first end and a inward lateral access opening which opens across the side edge toward the worksurface, a central storage compartment provided in the storage cabinet spaced from the first end by the first end storage compartment, the central storage compartment accessible through a central storage compartment access opening selected from one or more of an upper opening vertically
upwardly from the central storage compartment and an outward lateral opening which opens away from the side edge away from the worksurface.

In another aspect, the present invention provides in combination, a first worktable, a second worktable and a storage cabinet,

each worktable having a worksurface with a front edge for access by a user, a rear edge opposite the front edge, and a side edge joining the front edge and the rear edge;

the tables secured together with their rear edges in opposition, their front edges spaced and their side edges lying a common same straight line;

the storage cabinet having a first end and a second end,

the storage cabinet mounted to the tables extending along the side edges with the first end of the storage cabinet proximate the front edge of a first table and the second end of the storage cabinet proximate the front edge of the second table,

a first end storage compartment provided in the storage cabinet proximate the first end accessible through a first end storage compartment access opening selected from one or more of one or more of a first end access opening in the first end and a first inward lateral access opening which opens across the side edge toward the worksurface of the first table,

a second end storage compartment provided in the storage cabinet proximate the second end accessible through a second end storage compartment access opening selected from one or more of one or more of a second end access opening in the second end and a second inward lateral access opening which opens across the side edge toward the worksurface of the second table,

a central storage compartment provided in the storage cabinet in between the first end storage compartment and the second end storage compartment,

the central storage compartment accessible through a central storage compartment access opening selected from one or more of an upper opening vertically upwardly from the central storage compartment and an outward lateral opening which opens away from the side edge away from the worksurface.

BRIEF DESCRIPTION OF THE DRAWINGS

Further aspects and advantages of the present invention will become apparent from the following description taken together with the accompanying drawings in which:

FIG. 1 is a pictorial view illustrating tables with leg assemblies in accordance with a first embodiment of the present invention;

FIG. 2 is an end view of the leg structure shown on one table in FIG. 1;

FIG. 3 is a cross-sectional front view of the leg assembly of FIG. 2 along section line A-A' in FIG. 2;

FIG. 4 is a pictorial view of the tables of FIG. 1 with two privacy panels attached to the end of two legs;

FIG. 5 is a cross-sectional front view along section line B-B' in FIG. 4;

FIG. 6 is a pictorial view of a hook member and fastener shown in FIG. 5;

FIG. 7 is a pictorial view of a bracket member and fastener of FIG. 5;

FIG. 8 is a bottom pictorial view of a bottom end of the leg shown in FIG. 5;

FIG. 9 is a cross-sectional view along section line C-C' in FIG. 5;

FIG. 10 is a pictorial view of the tables as in FIG. 1 with two hanging hook members secured to the end leg structures and having briefcases mounted thereto;

FIG. 11 is a pictorial view of the double hook member of FIG. 10;

FIG. 12 is a pictorial view of the tables in FIG. 1 with upstanding privacy screens mounted thereon;

FIG. 13 is a pictorial view of a mounting hook utilized in FIG. 12;

FIG. 14 is a partial cross-sectional front view similar to FIG. 5 of the leg structure and a privacy screen shown in FIG. 12;

FIG. 15 is a pictorial view of the tables of FIG. 1 with a first embodiment of a low storage cabinet mounted across the ends of two tables;

FIG. 16 is a rear view of the storage cabinet of FIG. 15 showing a hook secured thereto;

FIG. 17 is a perspective view of the tables in FIG. 1 with planters mounted across the ends of two tables;

FIG. 18 is a pictorial view of the table in FIG. 17 additionally showing a shelf mounted to the ends of the tables underneath one planter;

FIG. 19 is a schematic front cross-sectional view similar to FIG. 5 but through the planter and shelf of FIG. 17;

FIG. 20 is a pictorial view of the tables of FIG. 4 with an extension worksurface mounted at the ends of the tables;

FIG. 21 is a schematic front cross-sectional view similar to FIG. 5 but through the tables and extension worksurface of FIG. 20;

FIG. 22 is a pictorial view of the tables as in FIG. 1 with a first embodiment of an elevated storage bin mounted at the ends of the tables;

FIG. 23 is a cross-sectional front view similar to FIG. 5 but of another embodiment of the present invention;

FIG. 24 is a pictorial view of the tables of FIG. 1 similar to that shown in FIG. 15 but with a second embodiment of a low storage cabinet mounted across the ends of two tables;

FIG. 25 is a vertical cross-sectional of the low storage cabinet shown in FIG. 24 along section line X-X';

FIG. 26 is a pictorial view of the tables of FIG. 1 similar to that shown in FIG. 15 but with a third embodiment of a low storage cabinet mounted across the ends of two tables;

FIG. 27 is a pictorial view of the tables of FIG. 1 similar to that shown in FIG. 15 but with a fourth embodiment of a low storage cabinet mounted across the ends of two tables;

FIG. 28 is a pictorial view of the tables as in FIG. 1 similar to that shown in FIG. 22 with a second embodiment of an elevated storage bin mounted at the ends of the tables; and

FIG. 29 is a vertical cross-sectional of the low storage cabinet shown in FIG. 28 along section line Y-Y';

FIG. 30 is a pictorial view of the tables as in FIG. 1 similar to that shown in FIG. 22 with a third embodiment of an elevated storage bin mounted at the ends of the tables.

DETAILED DESCRIPTION OF THE DRAWINGS

FIG. 1 shows two tables 10. Each table 10 has a worksurface 12 which is supported at each end 11 of the table
by leg structures 8. The worksurface 12 has an upper surface 14, a lower surface 15, a front 16, a rear 17, a right end 18 and a left end 19.

[0086] The leg structure 8 is best seen in FIGS. 2 and 3 and includes a right leg 20 and a left leg 21, each having a top 22 and a bottom 24. Each of an upper beam 34 and an intermediate beam 50 extend between the right leg 20 and the left leg 21.

[0087] The right leg 20 and the left leg 21 are identical and mirror images of each other. Each of the legs has an outer end surface 26, an inner end surface 28 and an interior surface 30. A foot 32 is secured to the bottom 24 of each leg to support the leg on a floor surface.

[0088] As can be seen in the bottom view of FIG. 8, each leg has a rectangular profile.

[0089] The upper beam 34 similarly has a rectangular profile with an outer surface 46, an inner surface 47, a bottom surface 49 and a top surface 99. The outer end surface 26 of the right leg 20 and of the left leg 21 lies in a flat common outer end plane. The outer surface 46 of the upper beam 34 also lies in this same common flat outer end plane. The inner end surface 28 of each of the right leg 20 and left leg 21, lie in a common flat inner end plane which is parallel to the outer end plane. The inner surface 47 of the upper beam 34 also lies in the inner end plane.

[0090] The intermediate beam 50 has a first end rigidly coupled to the right leg 20 and a second end rigidly coupled to the left leg 21. The intermediate beam 50 is also rectangular in cross-section as best seen in FIG. 3 with an outer surface 52, an inner surface 53, a top surface 54 and a bottom surface 55. Each of the upper beam 34 and the intermediate beam 50 extend horizontally between the legs 20 and 21. The intermediate beam 50 is proximate to the upper beam 34, however, spaced vertically below the upper beam 34 so as to provide a vertical space 44 between the top surface 54 of the intermediate beam and the bottom surface 49 of the upper beam 34. The outer surface 53 of the intermediate beam 50 is disposed inwardly from the flat outer end plane within which the outer end surfaces 26 of the legs 20 and 21 lie. Similarly, the inner surface 52 of the intermediate beam 50 is outwardly of the inner end plane in which the inner end surfaces 28 of the legs 20 and 21 lie.

[0091] In the leg structure 8, as seen in FIG. 2, the inclusion of the upper beam 34 and the intermediate beam 50 provides increased strength to the leg assembly 20 as contrasted with the leg assembly in which merely one of the beams is provided. The location of the intermediate beam 50 proximate to the upper beam 34 provides a pleasing aesthetic.

[0092] Reference is made to FIG. 4 which illustrates the identical tables 10 and leg structures 8 in FIG. 1, however, with a privacy panel 56 attached to each leg structure 8. As can be best seen in FIG. 5, the privacy panel 56 has an outer face 58 and an inner face 57 which are joined by a top edge 60 and a bottom edge 61, a right edge 62 and a left edge 64. A hook member 64 is removably engaged on the intermediate beam 50. The hook member 64, as best seen in FIG. 6, includes an outer arm 66 and an inner arm 67 joined by a bight member 70. The outer arm 66 extends from the bight member 70 to a distal end 69. The inner arm 67 extends from the bight member 70 to a distal end 69. A slotway 71 is formed between the outer arm 66 and the inner arm 67. The outer arm 66 has an outer surface 72. A threaded bore 74 extends into the outer arm 66. A threaded fastener 76 is provided having an enlarged head 77 and a threaded shank 78 which is adapted to be threadably engaged within the bore 74. As seen in FIG. 5, the panel 56 has an upper opening 79 therethrough through which the fastener 76 extends so as to secure the panel 56 to the outer arm 66 of the hook member 64 with the inner face 57 of the panel 56 in engagement with the outer surface 72 of the outer arm 66 of the hook member 64.

[0093] FIGS. 5 and 7 show a bracket member 80 to engage the right leg 20 at the bottom 24 of the leg 20 to couple the panel 56 to the leg 20. An identical bracket member 80 is used to secure the panel member to the leg 21 in a mirror image fashion. Bracket member 80 is formed as a plate member of constant thickness between an outer surface 85 and an inner surface 86. A vertically extending slotway 81 is cut into the bracket member 80 so as to define an upwardly extending arm 82. A threaded bore 87 extends through the bracket member spaced from the slotway 81 away from the arm 82. A fastener 88 is provided with an enlarged head 89 and a threaded shank 84 to be received within the bore 87. Referring to FIG. 8, at the bottom of the right leg 20, a notch 90 is cut out from the interior surface 30 of the leg. The notch 90 has a width corresponding to the width between the outer surface 85 and the inner surface 86 of the bracket member 80.

[0094] Referring to FIG. 9, the bracket member 80 is engaged on the leg 20 with the interior surface 30 being received within the slotway 71 and a portion 91 of the bracket member 80 below the slotway 81 extending horizontally through the slot 90. In this manner, the bracket member 80 can be secured to the leg 20 so as to not extend below the bottom of the leg 20 yet with the bracket member 80 engaged the leg 20 to fully extend perpendicular to the interior surface 30. As schematically shown in FIG. 9, the bracket member 80 does not interfere with the engagement of a threaded shank 93 carried on the foot 32 being threadably received within a plate 92 fixed inside the leg 20 having a threaded bore and providing a mechanism for height adjusting the leg 20.

[0095] Referring to FIG. 5, with the bracket member 80 engaged on the right leg 20, as seen in FIG. 9, the fastener 88 extends through a lower right opening 94 in the panel 56 to urge the inner face 57 of the panel 56 into engagement with the outer surface 85 of the bracket member 80. As can be seen in FIG. 5, the outer face 58 of the panel is disposed to be parallel to the outer end plane containing the outer end surfaces 26 of the legs 20 and 21. The outer face 58 of the panel is shown as being recessed inwardly from the outer end surfaces 26. This is preferred but not necessary. Preferably, the outer face 58 does not extend outwardly beyond the outer end plane formed by the outer end surfaces 26 as is advantageous such that the edges of the panel 56, namely, the top edge 60, the right edge 62 and the left edge 63 are not readily visible and need not be finished. Preferably, the top edge 60, right edge 62 and left edge 63 are located close to the respective intermediate beam 50, right leg 20 and left leg 21 such that they cannot easily be seen.

[0096] As can be seen in FIG. 4, each of the upper fasteners 76 and lower fasteners 88 is symmetrically located vertically and horizontally to provide a pleasing aesthetic appearance. Preferably, the heads of the fasteners 76 and 88 do not extend outwardly beyond the outer end plane formed by the outer end surfaces 26 of the legs. In the embodiment illustrated in FIG. 5, the hook member 64 by reason of its bight member 70 engaging the top surface 54 of the intermediate beam 50 substantially bears the vertical component of the weight of the panel 56. The bracket member 80 principally provides for relative location of bottom portions of the panel 56 in a correct
vertical plane. With the panel 56 held against vertical movement by the hook member 64, the panel member 56 via the lower fastener 88 engages the bracket member 80 in a manner to prevent the bracket member 80 from sliding downwardly out of engagement with the leg 20.

FIG. 10 illustrates the tables 10 of FIG. 1 with a double hook member 100 as shown in FIG. 11 engaged on the intermediate beam 50 and with a handled briefcase 101 releasably hung upon the double hook member 100. The double hook member 100 is illustrated in FIG. 11 and is similar to the hook member 64 of FIG. 6 in having an inner arm 67 joined by a bight member 70 to an outer arm 66 to form a slotway 71 between the inner arm 67 and the outer arm 66 within which the intermediate beam member 50 is to be received to support the double hook member 100. The double hook member 100 has the outer arm 66 merge into an outer bight member 102 which merges into an upwardly extending hook prong arm 103. As seen in FIG. 10, a handle 104 of the case 100 is received on the outer bight member 102 in a slotway 105 between the outer arm 66 and the hook prong arm 103. Various other handled bags or cases or articles of clothing, cords, leashes and the like may be hooked upon the double hook member 100 and thus supported by the leg structure 8. The double hook member 100 is slidable longitudinally along the intermediate beam member 50 and thus may be located at desired locations.

Reference is made to FIG. 12 which illustrates the tables 10 as in FIG. 1 on which a privacy screen 110 is removably mounted using a widened form of the hook member 164 as illustrated in FIG. 13. The hook member 164 in FIG. 13 is identical to the hook member 64 shown in FIG. 6 with the exception that the bight member 70 is of increased length so as to provide the slotway 71 between the inner arm 67 and the outer arm 66 to be of increased width. As seen in the partial front cross-section of FIG. 14, a fastener 176 extends through an opening 179 in the privacy screen and into the bore 74 in the hook member 164. The privacy screen 110 has an inner face 57 and an outer face 58. The inner face 57 engages the outer end surface 26 of the legs 20 and 21 so as to dispose the inner face 57 in the outer end plane. The fastener 76 draws the privacy screen 110 into engagement with the outer end surfaces 26 of the leg and the outer surface 46 of the upper beam 34. The hook member 164 engages the intermediate beam 50 with the bight member 70 engaging the top of the intermediate beam to prevent movement of the privacy panel 110 vertically downwardly. As seen, the hook member 164 provides its outer surface 72 to be engaged with the inner face 57 of the privacy screen 110. As an alternate arrangement, in the embodiment of FIG. 13, the outer arm 66 could have a width such that an inner surface 112 of the outer arm 66 is located further inwardly closer adjacent to the outer surface 52 of the intermediate beam 50, that is, to have the slotways 71 of a width substantially corresponding to the width of the intermediate beam 50.

In FIG. 12, the privacy screen 110 is shown to extend between two leg structures 8, that is, across the end of two desks 10. This is not necessary and the privacy screen 110 could merely be provided at the end of one desk 10 as attached to the leg structure 8 for that desk.

Reference is made to FIG. 15 showing the tables 10 of FIG. 1 to which two storage cabinets 120 have been attached. Each storage cabinet 120 is formed by a top extension panel 121, a bottom panel 122 and a plurality of vertical panels 123. The cabinet 120 has a rear panel 125 as seen in FIG. 16 to which a hook member 164 identical to the hook member 164 in FIG. 13 has been secured by the use of four fasteners 126 which extend through four small openings 124 in the outer arm 66 and into the rear panel 125 as seen in the partial pictorial view of FIG. 16. As is the case with the manner in which the hook member 164 of FIG. 13 mounts the privacy panel 110 to the leg structures 8 in FIG. 12, in FIG. 15, the rear panel 125 of the cabinet 120 engages the outer surfaces 26 of the legs 20 and 21. With the hook 164 engaged over the intermediate beam 50, the leg structure 8 carries the vertical loading of the cabinet 120. Preferably two such hook members 164 as shown in FIG. 16 are provided to engage the intermediate beam 50 of each leg structure 20. The relative location of the hook members 64 vertically on the rear panel 125 will establish the relative height of a top surface 127 of the top extension panel 121 relative to the upper surface 14 of the worksurface 12 of the table 10. In FIG. 15, the upper surface 127 is horizontal and flush with the upper surface 14 of the worksurface 12 such that the top extension panel 121 forms an end extension of the worksurface 12.

The inner arm 67 of the hook members 164 shown in FIG. 16 has a vertical dimension which is less than the vertical dimension of the space 44 between the upper beam 34 and the intermediate beam 50 such that for ease of attachment and removal of the cabinet 120 in FIG. 15 with the hook member 164 secured to the rear of the cabinet 120, the inner arm 67 of the hook member can be moved horizontally through the space 44 until the inner arm 67 is inwardly of the intermediate beam 50 at which time the cabinet is lowered until the bight arm 70 engages the top surface 52 of the intermediate beam 50.

FIG. 17 illustrates tables 10 as in FIG. 1 to which a planter 130 is mounted to the leg structures 8 at the end of the tables 10 and with the planter 130 having mounted on its rear hook members the same as that shown in FIG. 16 for engagement with the intermediate beam 50.

Reference is made to FIG. 18 which illustrates tables 10 to which a planter 130 is mounted in an identical manner to that described in FIG. 17, however, in which a shelf member 140 is also mounted underneath the planter 130. The shelf member 140 includes a vertical back panel 141 and a horizontal shelf panel 142 fixedly secured together. FIG. 19 is a partial front cross-sectional view through FIG. 18 similar to FIG. 5 and showing a hook member 256 which removably couples the shelf element 140 to the leg structure 8. As seen in FIG. 19, the hook member 256 is substantially the same as the hook member 164 shown in FIG. 13, however, the outer arm 66 is extended downwardly along the back panel 141 to horizontal support arm 144 which extends forwardly under the shelf panel 142. The outer arm 66 is secured to the rear panel 140 as by fasteners in a similar manner in that the hook member 164 is secured to the rear panel 125 of the cabinet 120 as seen in FIG. 16. The hook members 256 to support the bookshelf are to engage the intermediate beam 50 at locations spaced axially along the intermediate beam 50 from locations where brackets 156 which support the planter 130 are located on the intermediate beam 50. The shelf member 140 is first to be coupled to the leg assemblies 8 and thereafter the planter 130 may be coupled to the leg assemblies 8.

Reference is made to FIG. 20 which illustrates the tables 10 of FIG. 1 to which a worksurface extension 150 is
mounted with the worksurface extension 150 having an upper surface 151 which is flush with the upper surface 14 of the worksurface 12.

[0105] FIG. 21 is a schematic partial front cross-sectional view of the embodiment of FIG. 20 similar to FIG. 5 and showing one manner in which the worksurface extension 150 may be mounted. As seen in FIGS. 1, 5 and 21, underneath the worksurface 12 and above the leg structure 8, there are provided a pair of longitudinally extending rails 160 which provide a rail space 161 between a top surface 99 of the upper beam 34 and the lower surface 15 of the worksurface. The rails 160 serve to rigidly connect the leg structures 20 and provide a rigid support for the worksurface 12 to which the worksurface 12 is preferably fixedly secured. The right end 19 of the worksurface 12 and an end 163 of the rails 160 are in the same common end plane as the outer surfaces 26 of the legs 20 and 21.

[0106] As seen in FIG. 21, an elongate support beam 152 is secured to the lower surface 16 of the worksurface 12 and extends beyond the end 18 of the table 10. The extension 150 sits on the support beam 152 and is secured thereto by screws and the like.

[0107] Referring to FIG. 21, the support beam 152 extends through the rail space 161 above the upper beam 34. The space 44 between the upper beam 34 and the intermediate beam 50 remains open laterally outwardly such that independently of the extension worksurface 150 various elements may be supported on the leg structures 8 underneath the support beams 152. For example, in FIG. 20, privacy panels 366 as illustrated in FIG. 4 are shown as secured to the leg structures 8 by engagement with the intermediate beam 50 in the same manner as described with reference to FIG. 4. In a similar manner, for example, other elements such as the double hook member 100, the shelf member 140 and the storage cabinet 120 can be coupled to the leg assemblies 8 underneath the extension worksurface 150. In a similar manner, various elements may also be coupled to the leg structures 8 underneath the cabinet 170 as mounted and shown in FIG. 22.

[0108] Reference is made to FIG. 22 which illustrates the tables 10 of FIG. 1 to which a cabinet 170 has been mounted. The cabinet 170 is similar to cabinet 120 but without a rear wall. The cabinet 170 is disposed such that the bottom panel 172 is in the same plane as the lower surface 15 of the worksurface 12 mounted on support beams 152 such as shown in FIG. 21.

[0109] Reference is made to FIG. 23 which shows as another embodiment of the present invention a modified structure for coupling the privacy panel 56 to the intermediate beam 50. In FIG. 23, the hook member 364 is provided which is generally C-shaped having in addition to the inner arm 67 bridge member 70 and the outer arm 66 a lower arm 365 which extends inwardly from the outer arm 66. The C-shaped bracket member 364 is adapted to be engaged onto the intermediate beam 50 in a snap-fit relation with the bridge member engaged on the top surface 54 of the intermediate beam 50 and the lower arm 365 engaged on the lower surface 55 of the beam member 50. The outer arm 66 carries a horizontally disposed outwardly extending tubular member 366 whose outer surface is threaded. The panel 56 has an opening 79 therethrough. An inner ferrule 367 and an outer ferrule 368 each extend into the opening 79 through the panel 56 from either side and a threaded nut 57 with an internally threaded inwardly directed bore engages onto the threaded stud tube 366 to draw and secure the panel 56 on the tube 366 sandwiched between the nut 70 and the outer portion 66 of the bracket.

[0110] In accordance with the present invention, FIG. 5 illustrates one arrangement of securing the lower end of the panel 56 to the bracket 80 by the use of threaded fastener 88. A threaded fastener in the lower opening 94 through the panel 56 may be eliminated and, for example, a simple connection being provided between the outer surface of the bracket and the inner face 57 of the panel as, for example, by the use of magnets or by the use of Velcro brand hook and eye fasteners.

[0111] Reference is made to FIG. 24 showing the tables 10 of FIG. 1 to which two low storage cabinets 220 have been attached in an analogous manner that the low storage cabinets 120 is attached to the ends of the tables in FIG. 15, however in FIG. 24, an upper surface 127 of a top extension panel 121 is horizontal and flush with the upper surface of the upper beam 34, nevertheless, alternatively, the upper surface 127 may be flush with the upper surface of the worksurface.

[0112] Similar to the low storage cabinets 120 in FIG. 15, as seen in FIGS. 24 and 25, each storage cabinet 220 in FIG. 24 is formed by the top extension panel 121, a bottom panel 122, a plurality of vertical panels 123, and a rear panel 125. The storage cabinet 220 also has as seen in FIG. 24 a front panel 126. In FIG. 25, three vertical panels 123 best shown to be internally within the storage cabinet 220, and to include a central of the vertical panels 123 and two outermost of the vertical panels 123.

[0113] The storage cabinet 220 has its top panel 121, a bottom panel 122, rear panel 125 and front panel 126 form a rectangular box open both at a first end 130 and a second end 131. Each of the outer vertical panels 123 are spaced from their respective end 130 and 131.

[0114] At the first end 130, a first end portion 132 of the storage cabinet is provided which defines a first interior storage space 134 open outwardly through an open outer end 136. The first interior storage space 134 in the first end portion 132 is defined within the top panel 121, the bottom panel 122, the rear panel 125 and the front panel 126 outwardly of the rightmost vertical panel 123 closest to the first end 130. The first interior storage space 134 of the storage cabinet 220 at the right in FIG. 24 is readily accessible to a person who may be working at the lower right table 10 as seen in FIG. 24, for example, while sitting in the chair 700 in front of the front 16 of the worksurface 12 at the first end 130. At the first end 130, in first end portion 132 of the storage cabinet 220 the first interior storage space 134 is provided to open outwardly through the open outer end 136 and, by example, a briefcase 702 is shown stored within the first interior storage space 134.

[0115] As seen in FIG. 25, similarly at the second end 131, a second end portion 133 of the storage cabinet 220 is provided which defines a second interior storage space 135 which open outwardly through an open outer end 137. The second interior storage space 135 in the second end portion 133 is defined within the top panel 121, the bottom panel 122, the rear panel 125 and the front panel 126 outwardly of the rightmost vertical panel 123 closest to the second end 131 and is accessible to a person who may be working at the upper right hand table 10 as seen in FIG. 24, for example, while sitting in the chair 701 in front of the front 16 of the worksurface 12. At the second end 131, the second end portion 133 of the storage cabinet is provided to open outwardly through the open outer end 137.
A central portion 140 of the storage cabinet is defined between the two outermost vertical panels 123, and thus between the first end portion 132 and the second end portion 133.

A third interior storage space 142 is defined between the central of the vertical panels 123 and the outermost of the vertical panel 123 closest to the first end 130. A fourth interior storage space 143 is defined between the central of the vertical panels 123 and the outermost of the vertical panels 123 closest to the second end 131. As seen in FIG. 24, the front panel 126 is provided with two rectangular openings 144 and 145 to provide access to the first interior storage space 142, and second interior storage space 143, respectively. Each of the openings 144 and 145 are provided with optional doors 146 and 147 hingedly mounted to the central of the vertical panel 123 for pivoting about a vertical axis as seen in FIG. 24. In FIG. 24, in the third interior storage space 142, a removable storage bin 703 is schematically shown.

The third interior storage space 142 has its opening 144 accessible to a person in front of the front panel 126. For example, a person in either of the chairs 700 or 701 would need to move to opposite the openings 144 and 145 to easily access the third interior space 142 and the fourth interior space 143.

Reference is made to FIG. 26 which shows a third embodiment of a low storage cabinet 320 which is identical to the low storage cabinet 220 shown in FIGS. 24 and 25 with the exception that the top panel 121 has an opening 150 in the central portion 140 between the two outermost vertical panels 123. The opening 150 provides access vertically downwardly into the third interior storage space 142 and the fourth interior storage space 144. In FIG. 25, there is shown adjacent to the central of the vertical panels 123, an arrangement for suspending vertical paper storage files 152 and 153 such that the files can be inserted and removed vertically through the opening 150. As well, adjacent each of the outermost of the vertical panels 132, there is shown disposed below the opening 150 a horizontal shelf 154 and a horizontal shelf 155 on which there is mounted a resilient pad 158 and a resilient pad 159 as, for example, for location of any articles as may be desired. In FIG. 25, the front panel 126 continues to have openings 144 and 145 therethrough as closed by the doors 146 and 147 as can be useful, for example, to provide access to storage in the third interior storage space 142 and the fourth interior storage space 143 as, for example, underneath the hanging files 152, 153 or underneath the shelves 154, 155.

Reference is made to FIG. 27 which shows a fourth embodiment of a low storage cabinet 420 which has close similarities to the low storage cabinets 220 and 320 shown in FIGS. 24 and 26. In FIG. 27, while openings 144 and 145 are provided through the front panel 126, doors are not provided. In the embodiment of FIG. 27, while there is an opening 150 through the top panel 121, a horizontal shelf 154 is provided throughout the opening 150 providing a support surface at a height marginally below the upper surface 127 of the top panel 121. In FIG. 7, two small plant containing planters 704 and two boxes 705 containing tissue paper are shown as supported on the shelf 154. FIG. 27 also shows the minor variation of including a central planter 706 disposed to extend longitudinally between the pairs of back to back tables 10.

In each of the embodiments illustrated in FIGS. 24, 26 and 27, the interior storage spaces 134 and 135 within the first end portion 132 and the second end portion 134, are readily accessible to a person working at an adjacent work surface. The third interior storage space 142 and the fourth interior storage space 143 in the central portion 140 are easily accessible vertically upwardly or laterally outwardly to a person who is positioned to be in front of the front panel 126.

Each of the storage cabinets 220, 320 and 420 preferably extends along the end of the tables as mounted to leg structures 8 at the end of each table 10 and provides for efficient optimal usage of the interior space of the cabinet for the convenience of easy access by a person sitting in a chair at an adjacent table to the storage within the end portions 132 and 133 yet efficient use of the storage within the central portion 140 by a person who may move to be adjacent the storage cabinets at the front panel 126.

Each of the storage cabinets provide a convenient efficient construction and preferably having each of the rear panel 125 and the bottom panel 122 extend as a continuous elongate member as joined to the top panel 121 and front panel 126 with each of the top panel 121 and front panel 126 also substantially spanning major portions of the distance from the first end 130 to the second end 131.

Reference is made to FIG. 28 which illustrates showing the tables 10 of FIG. 1 to which elevates storage cabinets 270 have been attached in an analogous manner that the elevated storage cabinets 170 are attached to the ends of the table in FIG. 22.

Similar to the storage cabinets 120 in FIGS. 24 and 25, each elevated storage cabinet 270 is formed by a top panel 121, a bottom panel 122, a plurality of vertical panels, a rear panel 125 and a front panel 126. The vertical panels are illustrated as being a first end panel 174, a second end panel 175, a first interior panel 176 and a second interior panel 177 as best seen in the cross-sectional view of FIG. 29.

A first end portion 132 of the storage cabinet is provided between the first end panel 174 and the first intermediate panel 176. A second end portion 133 of the storage cabinet is provided between the second end panel 175 and the second interior panel 177. A central portion 140 of the storage cabinet is provided between the first interior panel 176 and the second interior panel 177.

Over the first end panel 132, the rear panel 126 is cut away by an opening 180 and over the second end portion 133, the rear panel 125 is cut away as an opening 181. Over the center portion 140, the front panel 126 is cut away by an opening 178. A first interior storage space 184 is provided in the first end portion 132 defined within the top panel 121, bottom panel 122, rear panel 126, front panel 127, first end panel 174 and first interior panel 176. The first interior storage space 184 opens outwardly through the opening 180 through the rear panel 125. This first interior storage space 184 is accessible to a person who may be working, for example, at the upper left hand table 10 as seen in FIG. 28, for example, while sitting in the chair 703 in front of the front 16 of the worksurface 12 of the upper left table 10. Thus, the rear panel 125 abuts the left end of the upper left hand table 10 and access, for example, to books 707 within the first interior storage space 184 is readily provided to a person sitting in the chair 703.

Similarly, at the second end portion 133 of the storage cabinet, a second interior space 185 is provided defined within the top panel 121, bottom panel 122, rear panel 125, front panel 126, the second end panel 175 and the second interior panel 177. The second interior space 184 is accessible via the opening 181 to a person who may be sitting at the chair 703 as seen at the upper left table 10 in FIG. 28.
An interior storage space 186 is defined within the central portion 140 of the storage cabinet as bounded by the top panel 120, bottom panel 122, rear panel 125, front panel 126, the first interior panel 176 and the second interior panel 177 which is accessible via the opening 178 through the front panel 126, for example, by a person who may be standing adjacent the front panel 126 as to access books 708.

In FIG. 28, each of the two storage cabinets 270 are identical mirror images of each other as is preferred but not necessary. As can be seen, each of the storage cabinets provides in the end portions 132 and 133 storage which is readily accessible to a person working at a worksurface 12 and with storage provided in the central portion 140 utilizing the central portion 140 for access by persons located adjacent each respective front panel 126.

Reference is made to FIG. 30 which illustrates an arrangement substantially the same as that shown in FIG. 28, however, with a shelf 140 similar to that shown in FIG. 18 mounted below the storage cabinet 270 and with the top panel 121 marked in dashed lines 709 to show the location of an alternative opening 190 through the top panel 121 to provide access to the central interior storage space 186 in addition to or alternate to the opening 178 through the front panel 126.

FIG. 30 also shows a central spline-like panel 192 carrying electrical for communication outlets 193 disposed in between the pairs of back to tables 10.

Preferably, the storage cabinets illustrated in the preferred embodiments may be provided so as to extend from a first end to a second end across the ends of back to back tables 10 such that each of the first end 130 and second end 131 might be adjacent a respective front end 16 of each of the tables. However, each of the storage cabinets could be provided to be merely adjacent one table 10 as, for example, in the embodiments of FIGS. 24, 26 and 27 to end at the central of the vertical panels 123, that is, providing but half of a storage cabinet such as shown as 220 in FIG. 24, nevertheless, providing convenient access and utilization of the storage with the storage in the first portion 132 readily accessible to a person using the desk and the storage in the remainder readily accessible to a person adjacent the front panel 126.

While the invention has been described with reference to preferred embodiments, many modifications and variations will now occur to persons skilled in the art. For a definition of the invention, reference is made to the following claims.

1. In combination, a worktable and a storage cabinet, the worktable having a work surface with a front edge for access by a user, a rear edge opposite the front edge and a side edge joining the front edge and the rear edge, the storage cabinet mounted to the table extending along the side edge with a first end of the storage cabinet proximate the front edge and the storage cabinet extending away from the first end to the rear edge of the table, a first end storage compartment provided in the storage cabinet proximate the first end accessible through a first end storage compartment access opening selected from one or more of an upper opening vertically upwardly from the central storage compartment and an outward lateral opening which opens away from the side edge away from the work surface.

2. In combination, a worktable, a second worktable and a storage cabinet, each worktable having a work surface with a front edge for access by a user, a rear edge opposite the front edge, and a side edge joining the front edge and the rear edge, the tables secured together with their rear edges in opposition, their front edges spaced and their side edges lying a common same straight line, the storage cabinet having a first end and a second end, the storage cabinet mounted to the tables extending along the side edges with the first end of the storage cabinet proximate the front edge of a first table and the second end of the storage cabinet proximate the front edge of the second table,

a first end storage compartment provided in the storage cabinet proximate the first end accessible through a first end storage compartment access opening selected from one or more of one or more of a first end access opening in the first end and a first inward lateral access opening which opens across the side edge toward the work surface of the first table,

a second end storage compartment provided in the storage cabinet proximate the second end accessible through a second end storage compartment access opening selected from one or more of one or more of a second end access opening in the second end and a second inward lateral access opening which opens across the side edge toward the work surface of the second table,

a central storage compartment provided in the storage cabinet in between the first end storage compartment and the second end storage compartment,

the central storage compartment accessible through a central storage compartment access opening selected from one or more of an upper opening vertically upwardly from the central storage compartment and an outward lateral opening which opens away from the side edge away from the work surface.

3. A combination as claimed in claim 2 wherein the storage cabinet comprises a hollow elongate box-like structure having an interior defined between the first end and the second end by a top panel, a bottom panel, a rear panel and a front panel,

the top panel and bottom panel each being horizontal, the rear panel and the front panel being vertical, the rear panel spanning between the top panel and the bottom panel along a rear of the top panel and the bottom panel, and the front panel spanning between the top panel and the bottom panel along a front of the top panel and the bottom panel,

4. A combination as claimed in claim 3 wherein:

each of the top panel, the bottom panel, the rear panel and the front panel extend between the first end and the second end to form a hollow box-like structure, the first end storage compartment, the second end storage compartment and the central storage compartment provided within the hollow box-like structure with the central storage compartment intermediate the first end storage compartment and the second end storage compartment.
5. A combination as claimed in claim 4 including a first end panel and a second end panel each being vertical, the first end panel spanning between the top panel and the bottom panel along a first end of the top panel and a first end of the bottom panel, and the first end panel spanning between the front panel and the rear panel along a first end of the front panel and a first end of the rear panel, the second end panel spanning between the top panel and the bottom panel along a second end of the top panel and a second end of the bottom panel, and the second end panel spanning between the front panel and the rear panel along a second end of the front panel and a second end of the rear panel.

6. A combination as claimed in claim 4 wherein at the first end of the storage cabinet a first end of the top panel, a first end of the bottom panel, a first end of the front panel and a first end of the top panel are disposed in a common plane defining the first end access opening therebetween in the first end which comprises the first end storage compartment access opening.

7. A combination as claimed in claim 6 wherein at the second end of the storage cabinet a second end of the top panel, a second end of the bottom panel, a second end of the front panel and a second end of the top panel are disposed in a common plane defining the second end access opening therebetween in the second end which comprises the second end storage compartment access opening.

8. A combination as claimed in claim 6 wherein the upper opening extends vertically upwardly from the central storage compartment through the top panel to provide the central storage compartment access opening.

9. A combination as claimed in claim 7 wherein the upper opening extends vertically upwardly from the central storage compartment through the top panel to provide the central storage compartment access opening.

10. A combination as claimed in claim 6 wherein the outward lateral opening extends horizontally from the central storage compartment through the front panel to provide the central storage compartment access opening.

11. A combination as claimed in claim 7 wherein the outward lateral opening extends horizontally from the central storage compartment through the front panel to provide the central storage compartment access opening.

12. A combination as claimed in claim 4 including a first outermost vertical divider panel provided within the hollow box-like structure separating the first end storage compartment from the central storage compartment and a second outermost vertical divider panel provided within the hollow box-like structure separating the first end storage compartment from the central storage compartment.

13. A combination as claimed in claim 5 including a first outermost vertical divider panel provided within the hollow box-like structure separating the first end storage compartment from the central storage compartment and a second outermost vertical divider panel provided within the hollow box-like structure separating the first end storage compartment from the central storage compartment.

14. A combination as claimed in claim 5 wherein the first inward lateral access opening extends horizontally from the first end storage compartment through the rear panel to provide the first end storage compartment access opening.

15. A combination as claimed in claim 14 wherein the second inward lateral access opening extends horizontally from the second end storage compartment through the rear panel to provide the second end storage compartment access opening.

16. A combination as claimed in claim 14 wherein the work surface of each worktable is disposed in a horizontal plane at a common height, the storage cabinet mounted to the tables extending along the side edges with an upper surface of the bottom panel at the common height and accessible via the first inward lateral access opening to provide an extension of the work surface of the first worktable.

17. A combination as claimed in claim 15 wherein the work surface of each worktable is disposed in a horizontal plane at a common height, the storage cabinet mounted to the first worktable extending along the side edges with an upper surface of the bottom panel at the common height and accessible via the first inward lateral access opening to provide an extension of the work surface of the first worktable, and with the upper surface of the bottom panel accessible via the second inward lateral access opening to provide an extension of the work surface of the second worktable.

18. A combination as claimed in claim 3 wherein the work surface of each worktable is disposed in a horizontal plane at a common height, the storage cabinet mounted to the tables extending along the side edges with an upper surface of the top panel at the common height to provide an extension of the work surfaces.

19. A combination as claimed in claim 6 wherein the work surface of each worktable is disposed in a horizontal plane at a common height, the storage cabinet mounted to the tables extending along the side edges with an upper surface of the top panel at the common height to provide an extension of the work surfaces.