ARTICLE OF FURNITURE WITH TAMBOUR MODESTY PANEL

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ABSTRACT
A tambour modesty panel for use with articles of furniture. In one exemplary embodiment, the tambour modesty panel is positioned under a work surface of an article of furniture and includes a tambour positioned between opposing end panels. In one embodiment, the opposing end panels include a groove formed therein for receiving opposing sides of the tambour and directing the movement of the tambour. In another embodiment, opposing end panels of the tambour modesty panel include tracks secured thereto for receiving opposing sides of the tambour and directing the movement of the tambour. When the work surface is positioned adjacent to a wall having services outlets positioned within the wall, access to the outlets may be provided by moving the tambour to an open position. Alternatively, to restrict access to and/or to obstruct the view of the outlets and cables, the tambour may be moved to a closed position.
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CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit under Title 35, U.S.C. §119 (e) of U.S. Provisional Application Ser. No. 60/942,509, entitled ARTICLE OF FURNITURE WITH TAMBOUR MODESTY PANEL, filed on Jun. 7, 2007.

BACKGROUND

[0002] 1. Field of the Invention
[0003] The present invention relates to articles of furniture and, particularly, to modesty panels for use with the same.
[0004] 2. Description of the Related Art
[0005] Caseworks, such as desks, credenzas, etc., are commonly placed adjacent to a wall of a building, such as a permanent office wall or the wall panel of an office partition system. Services outlets, such as electrical outlets, cable jacks, or telephone connections, may be positioned within the wall, and office electronics, such as computers, printers, fax machines, etc., that are positioned on or near a work surface of the casework are connected to the outlets by cords or cables. A modesty panel may be used to hide the cords and/or cables that may extend from the work surface to the outlets in the wall. In many articles of furniture, the modesty panel is designed as a large access panel, allowing a user to remove the entire panel and expose the surface of the wall and the outlets positioned within the wall.
[0006] A disadvantage of this design is that the modesty panel may be heavy, making it cumbersome and hard to move when access to the outlets is required.
[0007] What is needed is an improvement over the foregoing.

SUMMARY

[0008] The present invention provides a tambour modesty panel for use with articles of furniture. In one exemplary embodiment, the tambour modesty panel is positioned under a work surface of an article of furniture and includes a section positioned between opposing end panels. In one embodiment, the opposing end panels include a groove formed therein for receiving opposing sides of the tambour and directing the movement of the tambour. In another embodiment, opposing end panels of the tambour modesty panel include tracks secured thereto for receiving opposing sides of the tambour and directing the movement of the tambour. When the work surface is positioned adjacent to a wall having services outlets positioned within the wall, access to the outlets may be provided by moving the tambour to an open position. Alternatively, to restrict access to and/or to obstruct the view of the outlets and cables, the tambour may be moved to a closed position.
[0009] Advantageously, by utilizing a tambour to form the modesty panel, the modesty panel may be easily raised and lowered to respectively provide access to services outlets and to hide the services outlets from the user's view. Additionally, by utilizing the tambour, the degree of access provided to the services outlets may be varied, i.e., the tambour may be placed and retained in a position between fully opened and fully closed positions to provide partial access to the services modules.

[0010] In one form thereof, the present invention provides, in combination, a wall having at least one services outlet; and an article of furniture positioned adjacent the wall, the article of furniture including a work surface; work surface support structure; and a tambour positioned below the work surface, the tambour movable between an open position and a closed position, wherein placing the tambour in the open position provides access to the at least one services outlet and placing the tambour in the closed position substantially restricts access to the at least one services outlet.

[0011] In another form thereof, the present invention provides an article of furniture positioned adjacent the wall, the article of furniture including a work surface; work surface support structure, the work surface and the work surface support structure together defining a knee hole area adjacent a front side of the furniture and a clearance space beneath the work surface adjacent a rear side of the furniture; and a tambour positioned below the work surface, the tambour movable between an open position and a closed position, wherein placing the tambour in the open position provides access between the knee hole area and the clearance space and placing the tambour in the closed position substantially restricts access between the knee hole area and the clearance space.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The above-mentioned and other features and advantages of this invention, and the manner of attaining them, will become more apparent and the invention itself will be better understood by reference to the following description of an embodiment of the invention taken in conjunction with the accompanying drawings, wherein:
[0013] FIG. 1 is a fragmentary perspective view of an office environment depicting an article of office furniture incorporating the tambour modesty panel of the present invention, the article of furniture positioned adjacent the wall of the office;
[0014] FIG. 2 is a fragmentary perspective view depicting the tambour modesty panel in the open position;
[0015] FIG. 3 is a cross-sectional view of FIG. 2 taken along line 3-3 of FIG. 2;
[0016] FIG. 4 is a fragmentary perspective view depicting the tambour modesty panel in the closed position;
[0017] FIG. 5 is a cross-sectional view of FIG. 4 taken along line 5-5 of FIG. 4; and
[0018] FIG. 6 is a fragmentary view of a tambour modesty panel in accordance with another embodiment, wherein the tambour includes a spring tension mechanism.

[0019] Corresponding reference characters indicate corresponding parts throughout the several views. The exemplification set out herein illustrates one preferred embodiment of the invention, in one form, and such exemplification is not to be construed as limiting the scope of the invention any manner.

DETAILED DESCRIPTION

[0020] Referring to FIG. 1, a fragmentary view of an office 10 is shown having office furniture, such as desk 12, positioned therein. Desk 12 is supported by floor 14 and is positioned adjacent wall 16 of office 10. By placing desk 12 adjacent wall 16, office electronics, such as computers, fax machines, desk lighting, etc., positioned on or near desk 12 are provided with access to services outlet modules, such as electrical outlet 18, coaxial cable jack 20, or RJ-11 jack 22.
While described and depicted herein with specific reference to electrical outlets, coaxial cable jacks, and RJ-11 jacks, the terms “services outlets” and “outlets” refer generically to any connector positioned on and/or extending through a wall to provide electrical, communication, and/or data services, such as television, telephone, and internet, and is not limited to the specific examples of the services outlets that are described herein.

[0021] Desk 12 includes work surface 24 supported by work surface support structure, such as side panel 26 and pedestal 28. While depicted and described as including side panel 26 and pedestal 28, the work surface support structure may be formed from any component or plurality of components capable of supporting work surface 24 in a desired position, such as one or more legs, a pair of side panels 26, or a pair of pedestals 28. Additionally, work surface 24 may be secured to the work surface support structure in any known manner, such as by screws, bolts, dovetail connections, and/or tongue and groove arrangements. Work surface 24 and the work surface structure define a knee hole area or space 29 adjacent a front side of desk 12 beneath work surface 24, in which a user’s legs will be disposed when the user works at desk 12.

[0022] Referring additionally to FIGS. 2-5, tambour modesty panel 30 generally includes tambour 32 and end panels 34, 36, and is positioned beneath work surface 24. In one embodiment, tambour 32 is formed from a plurality of slats 38 connected to one another via backing 39. In one embodiment, slats 38 are formed from wood. In other embodiments, slats 38 may be formed from metal and/or plastic, for example. Backing 39 may be formed from cloth, for example, and provides the connection between each of the individual slats 38. In other embodiments, backing 39 may be formed from wire, plastic, or individual hinges. For example, if slats 38 are formed of plastic, backing 39 may be a living hinge that interconnects slats 38 and allows for the connection between slats 38 to bend and flex during movement of tambour 32 between the open and closed position, as described in detail below.

[0023] As shown in FIGS. 1-5 and in particular in FIGS. 3 and 5, end panels 34 and 36 of tambour modesty panel 30 each include grooves 40 and 42 formed therein. While the grooves of end panel 34 are not specifically depicted herein due to the orientation of the views, it will be understood that end panel 34 includes opposing grooves formed as a mirror image of grooves 40 and 42 of end panel 36 that cooperate with grooves 40 and 42 to align and guide the movement of tambour 32. In another exemplary embodiment, grooves 40 and 42 may be formed in tracks (not shown) that are attached to end panels 34 and 36 and substantially match the design and shape of grooves 40 and 42 to align and guide the movement of tambour 32 between end panels 34, 36. Support panels 44 and 46 extend between end panels 34 and 36. Specifically, support panel 44 is configured to extend along the bottom of end panels 34 and 36 to support tambour 32 when tambour 32 is in the closed position, as shown in FIGS. 4 and 5. Support panel 46 extends along an upper portion of end panels 34 and 36 adjacent to, and beneath, work surface 24.

[0024] Referring to FIGS. 2-5, to secure tambour 32 between end panels 34 and 36, opposing ends of tambour 32 are inserted within groove 42 in end panel 36 and the corresponding groove in end panel 34. As tambour 32 is advanced within groove 42 and the corresponding groove in end panel 34, tambour 32 is directed upward and into groove 40 of end panel 36 and the corresponding groove in end panel 34. Once the entirety of the opposing ends of tambour 32 are positioned within groove 40 and the corresponding groove in end panel 34, tambour 32 is secured within tambour modesty panel 30.

[0025] Referring to FIGS. 2 and 3, tambour modesty panel 30 is depicted with tambour 32 in the open position. Specifically, tambour 32 is shown in FIG. 3 rolled upon itself within groove 40. To reach this position, tambour 32 is slid along groove 40. As it slides, tambour 32 reaches the top of groove 40 where it begins to turn in a reverse, circling and downward direction and is ultimately positioned with top surface 48 of tambour 32 resting against backing 39 as shown in FIG. 3. In the open position, tambour 32 has a substantially cylindrical cross-section, as shown in FIG. 3. In the open position as shown, access to services outlets, such as electrical outlets 18, coaxial cable jack 20, and RJ-11 jack 22 positioned on wall 16, is provided. By providing access to the services outlets, a user may connect electrical components or other office equipment thereto via suitable cables.

[0026] In order to facilitate the connection of electrical components or other office equipment to the services modules, work surface 24 includes an aperture 50 formed therein. Aperture 50 is sized to allow a plug, such as plug 52 of electrical cord 54, to pass therethrough into a “garage” or clearance space 61 formed beneath work surface 24 between wall 16 and tambour modesty panel 30 and between end panels 34 and 36. In this manner, clearance space 61 is defined adjacent a rear side of desk opposite knee hole area 29, and tambour modesty panel 30 alternatively provides access from knee hole area 29 to clearance space 61 and restricts such access when same is in its open and closed positions, respectively. Alternatively, when desk 12 is not disposed directly against wall 16, clearance space 61 is defined between a planar end face of desk 12 and tambour modesty panel 30. Once plug 52 has passed through aperture 50, grommet 56 may be placed within aperture 50 to provide an aesthetic cover over aperture 50 and prevent the removal of plug 52. Alternatively, electrical cord 54 and plug 52 may be passed through apertures 58 in end panels 34, 36 into clearance space 61. Clearance space 61 provides space to accommodate plug 52, as well as other accessory items that may be used with the outlets, such as power surge protector units, for example. Tambour modesty panel 30 may be used in conjunction with other cable management features such as those described in U.S. patent application Ser. No. 11/419,607, entitled CASE-GOODS WITH CABLE MANAGEMENT FEATURES, filed May 22, 2006, the entire disclosure of which is expressly incorporated by reference herein.

[0027] Referring to FIGS. 4 and 5, tambour 32 is depicted in the closed position. Specifically, referring to FIG. 8, tambour 32 is positioned with bottom surface 60 adjacent to support panel 44 and top surface 48 spaced a small distance from the bottom of work surface 24. In this position, tambour 32 forms a substantially planar surface to obstruct a user’s view of the services modules positioned on wall 16. From the closed position, tambour 32 may be moved to the open position, as described above, or to any position between the closed position and the open position, to allow for access to services modules. In another exemplary embodiment, tambour 32 may be designed and configured to substantially match additional, substantially solid panels (not shown) extending between end panel 34 and side panel 26 of desk 12 and/or between end panel 36 and pedestal 28 of desk 12. In one exemplary embodiment, to facilitate the opening and closing
of tambour 32, the bottom slat 38, which defines bottom surface 60 of tambour 32, may include handles 62 extending therefrom. Handle 62 is designed to facilitate grasping and manipulation by a user to allow the user to exert a force on tambour 32 for directing movement of tambour 32 between an open position, a closed position, or any position therebetween.

[0028] Referring to FIG. 6, tambour 32 may optionally include a spring tension mechanism 68, including a coil or other suitable spring 70 disposed around axle 72 and having a first end 74 attached to a pin 76 or other fixed portion of panel 34, and a second end 78 fixed with respect to axle 72. Axle 72 may include one or more collars 80 to which the top slat 38 of tambour 32 is secured to provide a greater diameter surface upon which tambour 32 may be rolled to aid in the smooth opening and closing of tambour 32, and panels 34 and 36 may further include circular cut-out or relief areas 82 in addition to grooves 40 which accommodate the rolled up tambour 32 when same is in the open position. In operation, spring 70 is tensioned by rotation of axle 72 when tambour 32 is lowered. Mechanism 68 may include a brake or other retention feature to aid in holding tambour 32 in the closed position which, when handle 62 of tambour 32 is grasped by an operator and raised, is overcome to allow the bias force of spring 70 to aid in rotating axle 72 to move tambour 32 to an open position.

[0029] While this invention has been described as having a preferred design, the present invention can be further modified within the spirit and scope of this disclosure. This application is therefore intended to cover any variations, uses, or adaptations of the invention using its general principles. Further, this application is intended to cover such departures from the present disclosure as come within known or customary practice in the art to which this invention pertains and which fall within the limits of the appended claims.

What is claimed is:

1. In combination:
   a wall having at least one services outlet; and
   an article of furniture positioned adjacent said wall, said article of furniture comprising:
   a work surface;
   work surface support structure; and
   a tambour positioned below said work surface, said tambour movable between an open position and a closed position, wherein placing said tambour in said open position provides access to the at least one services outlet and placing said tambour in said closed position substantially restricts access to the at least one services outlet.

2. The combination of claim 1, wherein said article of furniture further comprises a pair of end panels having corresponding grooves formed therein, wherein opposing sides of said tambour are received within said grooves to direct the movement of said tambour between said open position and said closed position.

3. The combination of claim 1, wherein said work surface of said article of furniture includes a grommet, said grommet providing access to a clearance space between said wall and said tambour.

4. The combination of claim 1, wherein said article of furniture includes a vertical panel, said vertical panel having an aperture providing access to a clearance space between said wall and said tambour.

5. The combination of claim 1, wherein said tambour includes a tension mechanism.

6. The combination of claim 5, wherein said tension mechanism includes a spring, said spring tensioning when said tambour is moved toward said closed position.

7. An article of furniture positioned adjacent said wall, said article of furniture comprising:
   a work surface;
   work surface support structure, said work surface and said work surface support structure together defining a knee hole area adjacent a front side of said furniture and a clearance space beneath said work surface adjacent a rear side of said furniture; and
   a tambour positioned below said work surface, said tambour movable between an open position and a closed position, wherein placing said tambour in said open position provides access between said knee hole area and said clearance space and placing said tambour in said closed position substantially restricts access between said knee hole area and said clearance space.

8. The combination of claim 7, wherein said article of furniture further comprises a pair of end panels having corresponding grooves formed therein, wherein opposing sides of said tambour are received within said grooves to direct the movement of said tambour between said open position and said closed position.

9. The combination of claim 7, wherein said work surface of said article of furniture includes a grommet, said grommet providing access to said clearance space.

10. The combination of claim 7, wherein said article of furniture includes a vertical panel, said vertical panel having an aperture providing access to said clearance space.

11. The combination of claim 7, wherein said tambour includes a tension mechanism.

12. The combination of claim 11, wherein said tension mechanism includes a spring, said spring tensioning when said tambour is moved toward said closed position.

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