Seating furniture with built-in media dock.

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Related U.S. Application Data

Continuation-in-part of application No. 12/460,375, filed on Jul. 17, 2009, now Pat. No. 8,132,856.

Abstract

An article of furniture for storing and powering electronic equipment including a seating area, at least one concealable compartment located within the seating area, and a power source located within the compartment. The power source having a power cable that is attached to the interior frame of the article of furniture and concealed until it is needed. The power source includes power cables that protrude from the article of furniture for connection with a building’s power supply. The compartment holds and conceals power supply components for electrical devices within the interior frame of the article of furniture to allow access and ease of use without having to manage a number of power cords.
SEATING FURNITURE WITH BUILT-IN MEDIA DOCK

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. patent application Ser. No. 12/460,375 filed Jul. 17, 2009, which is hereby incorporated by reference.

BACKGROUND OF THE INVENTION

[0002] Keeping a neat appearance in a home can be a challenging task. This is particularly true with the proliferation of electronic media equipment available. Laptop computers, cell phones, mp3 players, and personal digital assistants (PDAs) now compete for space with the usual various and numerous remote controls, books, magazines, DVDs and CDs. Additionally, many homeowners also have wireless Internet routers, broadband modems, and game consoles also competing for space, as well as for power outlets. As such, keeping a living area free from clutter, wires and all the various power adaptors for each of the personal electronic devices is nearly impossible.

SUMMARY OF THE INVENTION

[0003] Therefore, it is an object of the present invention to provide an article of seating furniture that includes at least one compartment for storing and powering electrical equipment, such as audio/video components, portable audio/video devices, personal electronic devices, computing devices, or game consoles.

[0004] To attain the above object, according to an aspect of the invention, there is provided an article of furniture including a seating area, at least one concealable compartment, the compartment contains at least one power outlet wherein the power outlet is affixed to the internal framework of the seating furniture in a manner accessible to a user. The power outlet receives power via an electrical cable that connects to a building's power supply.

[0005] In an embodiment, the article of seating furniture has an outer layer opening to facilitate the passage of the electrical cable. In an embodiment, the electrical cable is capable of being powered by a building's electrical system by engaging a power receptacle of the building.

[0006] In another embodiment, the power outlet is accessible to the user via a concealable compartment having a flexible material covering. The flexible material covering may be comprised of fabric, plastic, vinyl, leather or other pliable material. The compartment may comprise a zipper, buttonable, hook and loop fastener or other closure means.

[0007] In still another embodiment, the power outlet compartment is accessible via a louvered opening. The louvered opening comprises wood, plastic, vinyl, metal or pliable material. In still another embodiment, the power outlet is accessible to the user via a concealable compartment having a slideable or hinged door opening. The slideable door or hinged door opening may comprise wood, plastic, vinyl, metal or other pliable material.

[0008] The power source preferably includes a plurality of power outlets.

[0009] Preferably, the article of furniture further includes an opening in the seating area to permit the passage of at least one wire between the compartment and the seating area. The

opening in the seating area is preferably closeable by a hook and loop fastener, buttons or a zipper.

[0010] In an embodiment, the compartment is openable from either a front surface of the article of furniture or a side surface of the article of furniture.

[0011] In an embodiment, the article of seating furniture capable of providing power to electrical equipment, comprising a seating area and an compartment. The compartment containing at least one power source including at least one power outlet, wherein the power outlet is affixed to the structure of the seating furniture in a manner accessible to a user and concealable via the compartment. The power outlet having a concealed power cable mounted to the interior structure of the seating furniture, wherein the power cable connects to a building's electrical system to provide power to the power outlets.

[0012] In an embodiment, the the concealed power cable is attached to the internal structure of the article of seating furnishing in a manner to prevent crimping of the power cable and to allow a connector end of the power cable to emerge from the rear of the article of seating furniture so that the power cable can connect to the building's electrical system.

[0013] These and other exemplary features and advantages of the present invention will become clear from the following description with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] The foregoing and other exemplary purposes, aspects and advantages will be better understood from the following detailed description of an exemplary embodiment of the invention with reference to the drawings, in which:

[0015] FIG. 1 shows a perspective view of an exemplary embodiment of the invention with compartments containing a power outlet in an open position.

[0016] FIG. 2 shows a perspective view of the exemplary embodiment of the invention with a power outlet and power cable mounted in a compartment with a concealable flap within the article of seating furniture.

[0017] FIG. 3 shows a perspective view of another exemplary embodiment of the invention illustrating a concealable compartment for accessing a power outlet within the article of seating furniture.

[0018] FIG. 4 shows a perspective view of another exemplary embodiment of the invention illustrating electrical device power cables emerging from the concealed power outlet compartment to the exterior of the article of furniture.

[0019] FIG. 5 shows a perspective view of another exemplary embodiment of the invention illustrating a power outlet strip attached to the internal structure of the article of seating furniture.

DETAILED DESCRIPTION OF THE INVENTION

[0020] Referring now to the drawings, and more particularly to FIGS. 1-5, there are shown exemplary embodiments of the apparatus according to the present invention.

[0021] FIGS. 1-2 show an exemplary embodiment of the article of seating furniture 10 that includes at least one compartment 12 for storing and powering electrical equipment. The seating furniture may be any known type, such as a sofa, love seat, chair, chaise lounge, divan, canapé, or ottoman. The electrical equipment may also be of any known type, such as audio/video components, portable audio/video devices, per-
sonal electronic devices, computing devices, communication devices, and/or game consoles. It should be understood that the electrical equipment may include any electrical or electronic device that may be plugged into a power outlet.

[0022] As shown in FIGS. 1-5, the compartment 12 is maybe situated anywhere within the article of seating furniture that is conveniently accessible to the user. In an embodiment, the compartment 12 is located along the front surface of the furniture 10 beneath the seating area, along a rear panel compartment or disposed in an arm rest for easy access. However, it should be understood that the compartment 12 may be located on any accessible side of the furniture 10 to suit the functional or aesthetic design of the furniture 10. For example, as shown in FIG. 2, the compartment 12 may be located on a side surface of the furniture 10.

[0023] As illustrated in FIGS. 1-2, the compartment 12 for media storage includes a power source 14 located within the compartment 12. The power source 14 preferably includes a power strip 14 and/or a plurality of power outlets in order to accommodate more than one item of electrical equipment. The power source may include one or more standard power outlets, universal serial bus power ports, IEEE 1394 serial bus power ports, or thunderbolt power port. The power source may also be comprised of a wireless inductive coupling power transmission pad, built into a surface of the furniture. Alternatively, other electrical ports may be disposed within the compartment 12, including video graphics array (VGA), high-definition multimedia interface (HDMI), Display Port, Mini-Display port, as well as other ports for video and sound for connection to both internal and external devices.

[0024] In an embodiment, the power source 14 may be fully integrated into the compartment, fixedly attached to the interior structure of the furniture, and/or removable. Additionally, the power source 14 may be situated in any interior compartment of the furniture such as in a drawer 12 or arm rest 12. The compartment is concealed behind a panel 13. The panel 13 may be made of fabric, wood, plastic, vinyl, metal, or a combination thereof. The panel 13 may also be rigid, flexible and/or louvered.

[0025] FIGS. 3-4 illustrate how the wires 17 from the power source 14 and wires 31 from the electrical devices 32 may be routed through the seating furniture 10. In FIG. 3, the power outlet 14 is found in a drawer type compartment 12. A power cable 17 from the power outlet 14 is routed from the compartment 12 and out the rear of the article of seating furniture 10 as described in FIG. 4 below. Preferably, as shown in FIG. 3, the furniture 10 further includes an opening 24 on the seating surface 26, for example, beneath the cushions 28, to allow passage of a wire 31 or wires 31 from the drawer 12 to the seating area of the furniture 10 in order to permit users to simultaneously use and power their electrical devices while seated on the furniture 10. Preferably, the opening 24 comprises a slat that is closable, for example, by a zipper, buttons and/or a hook and loop fastener or zipper. The opening may also be provided in an arm rest, along a back edge of the furniture or along any surface of the furniture that allows both easy access and concealment of the power outlets.

[0026] As illustrated in FIG. 4, the seating furniture 10 may include one or more outlets 18 to facilitate the passage of wires 17 from the interior to the exterior of the article of furniture. For example, the seating furniture 10 may include a hole outlet 18 through at least one of its exterior surfaces to facilitate passage of the wires 17 and cables 17 outside of the furniture. However, as noted above, it should be understood that the opening may be of any suitable shape or size that permits that passage of wires and/or cables associated with the power source 14 and/or electrical equipment 32. In an embodiment, cable management wraps and reels 33 are mounted on an interior frame near the outlets 18 for storing excesses cable power cables 17. In another embodiment, the power cable 17 is stored in a retractable reel 33 such that it automatically stores itself on the reel when it is not in use.

[0027] Preferably, any wires that pass from the compartment 12 to the exterior of the furniture 10 are fixedly attached to the interior structure of the compartment 12 in a manner that prevents tangling of wires may be prevented. Further illustrated in FIG. 4 the compartment 12 further routes the power cable 17 from the the electrical power outlets 14 by attaching the power cable to the internal structure of the compartment 12 in a manner that conceals the power cable from view. The power cable outlet opening 18 for the power cable 17 may include a means for storing the power cable 17 and concealing it behind a cover.

[0028] FIG. 5 illustrates the compartment 12 may include an outlet opening 18 on its rearward wall 19 to facilitate the passage of any wires 17 or cables 17 associated with the power source 14 and the exterior of the furniture 10. For example, as shown in FIG. 5, the opening 18 may be a slot 18 and/or a hole 18 in the rearward wall 19 of the compartment 12. However, it should be understood that the opening 18 may be of any suitable shape or size that permits that passage of wires 17 and/or cables 17 associated with the power source 14 and/or electrical equipment.

[0029] The visible front panel 13 of the compartment 12 may be of any suitable design to comport with the design of the article of furniture 10. Alternatively, the front panel of the compartment may be louvered to improve the circulation of air to cool any electrical equipment that may be located within the compartment 12. The front panel may also comprise a slideable or hingedly mounted door, allowing easy access to the power outlet compartment. These front panels 13 may be made of fabric, wood, plastic, vinyl, metal, etc. The cover may be rigid or flexible.

[0030] Preferably, when the furniture 10 includes multiple compartments 12, the furniture 10 includes a support brace 15 running between the compartment 12. The support brace 15 provides support for the compartment 12, as well as additional support for users sitting on the furniture 12 to prevent contact and interference with power cables from the power outlets within the compartments 12.

[0031] Preferably, the furniture 10 also includes a suspension system to provide additional comfort to users, while preventing contact and interference with the compartments containing the power outlets within or beneath the seating area when a user is seated. Preferably, the suspension system incorporates no sag springs, as opposed to coil springs that may protrude and interfere with the operation of the power outlet compartment.

[0032] While the embodiments herein have been described in terms of storing and powering electrical equipment, it should be understood that the compartments 12 may provide storage for any other items whether powered or not, such as remote controls, DVDs, CDs, books, magazines, blankets, etc.

[0033] While the invention has been described in terms of several exemplary embodiments, those skilled in the art will
recognize that the invention can be practiced with modification within the spirit and scope of the appended claims.

[0034] Further, it is noted that, Applicant’s intent is to encompass equivalents of all claim elements, even if amended later during prosecution.

What is claimed is:

1. An article of seating furniture capable of providing power to electrical equipment, comprising:
   a seating area;
   at least one power source including at least one power outlet, wherein said power outlet is affixed to the structure of said seating furniture in a manner accessible to a user and concealable via a compartment; and
   said power source having an electrical cable to provide power to said power outlets.

2. The article of furniture in claim 1, wherein said at least one power source is powered by a building electrical system via said electrical cable.

3. The article of furniture of claim 1, further comprising an opening in an outer layer of said seating furniture to facilitate the passage of said electrical cable.

4. The article of furniture of claim 2, wherein said electrical cable is capable of connecting to a building electrical system by electrically and mechanically engaging with a power receptacle.

5. The article of furniture of claim 1, wherein said power outlet is accessible the user via the concealable compartment wherein said compartment comprises a flexible material covering.

6. The article of furniture of claim 5, wherein said flexible material comprises fabric, plastic, vinyl, leather or pliable material.

7. The article of furniture of claim 5, wherein said compartment comprises a zipper, button, hook or loop fastener, or other closure means.

8. The article of furniture of claim 1, wherein said power outlet is accessible the user via the concealable compartment wherein said compartment comprises a flexible louvered opening.

9. The article of furniture of claim 8, wherein said flexible louvered opening comprises wood, plastic, vinyl, metal or pliable material.

10. The article of furniture of claim 1, wherein said power outlet is accessible the user via the concealable compartment wherein said compartment comprises a slidable door or hinged door opening.

11. The article of furniture of claim 10, wherein said flexible louvered opening comprises wood, plastic, vinyl, metal or pliable material.

12. An article of seating furniture capable of providing power to electrical equipment, comprising:
   a seating area;
   at least one power source including at least one power outlet, wherein said power outlet is affixed to the structure of said seating furniture in a manner accessible to a user and concealable via a compartment;
   said power outlet having a concealed power cable mounted to the interior structure of said seating furniture, wherein said power cable connect to a building’s electrical system to provide power to said power outlets.

13. The article of furniture in claim 12, wherein said concealed power cable is attached to the internal structure of the article of seating furniture in a manner to prevent crimping the power cable and to allow a connector end of the power cable to emerge from the article of seating furniture so the power cable can connect to the building’s electrical system.

14. The article of furniture of claim 12, wherein said power outlet includes one or more standard power outlets, universal serial bus power ports, IEEE 1394 serial bus power ports, or thunderbolt power port.

15. The article of furniture of claim 12, wherein said power outlet is accessible the user via the concealable compartment wherein said compartment comprises a flexible material covering.

16. The article of furniture of claim 15, wherein said flexible material comprises fabric, plastic, vinyl, leather or pliable material.

17. The article of furniture of claim 15, wherein said compartment comprises a zipper, button, hook or loop fastener, or other closure means.

18. The article of furniture of claim 12, wherein said power outlet is accessible the user via the concealable compartment wherein said compartment comprises a flexible louvered opening.

19. The article of furniture of claim 18, wherein said flexible louvered opening comprises wood, plastic, vinyl, metal or pliable material.

20. The article of furniture of claim 12, wherein said power outlet is accessible the user via the concealable compartment wherein said compartment comprises a slidable door or hinged door opening.