PORTABLE CORD STATION

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ABSTRACT

A portable cord station includes a body and a reel rotatably coupled to the body. A handle system is coupled to the body and configured for movement between an extended position and a retracted position. A mobility system is coupled to the body to permit movement of the body and the reel relative to a work surface. A locking system is coupled to the body and movable between a first position and a second position to provide a locking interaction with the reel.
PORTABLE CORD STATION

FIELD
[0001] The present invention relates to a portable cord station, and more specifically to a portable power cord station having a reel with an extendable handle, wheels, and a reel locking mechanism.

BACKGROUND
[0002] It is well known to provide a cord reel for storing an electrical cord and for permitting the electrical cord to be removed (e.g., extended, withdrawn, etc.) from the reel and to be returned (e.g., retracted, coiled, etc.) to the reel. However, such known cord reels do not realize certain advantageous features (and/or combinations of features). The known types of cord reels typically are fixed or not otherwise generally conducive to mobility. For example, certain cord reels include a mounting bracket for attachment to a wall or other mounting surface for permanent placement of the cord reel.

[0003] The known types of cord reels that are not permanently fixed, such as those having a base or stand with legs or feet that are intended to hold the cord reel in a desired location (e.g., without slippage) also tend to have certain disadvantages. For example, the cord reels are often heavy when loaded with a long length of cord and are difficult to lift, carry, slide, push, pull, or otherwise maneuver from one location to another. Accordingly, these types of known cord reels often are not conveniently mobile or maneuverable when a user (such as a do-it-yourselfer, light contractor, etc.) desires to move the cord reel from one location to another (e.g., within a job site or work location, between job sites, etc.). Some of the known cord reels include handles, but the handles are typically located near the reel, requiring a user to bend over and “lift” or “drag” the cord reel for transport.

[0004] Therefore, it would be desirable to provide a portable cord station having a reel that permits an electrical cord or the like to be conveniently removed and returned. It would also be desirable to provide a portable cord station having various electrical receptacles and other features such as surge protection, ground fault interruption, etc. It would also be desirable to provide a portable cord station that is easily and conveniently maneuverable. It would also be desirable to provide a portable cord station having a handle that is movable to improve the mobility of the cord station. It would further be desirable to provide a portable cord station having wheels or the like configured in a manner to facilitate movement of the cord station when desired and to permit temporary placement in a fixed position when mobility is not desired. It would also be desirable to provide a portable cord station having a reel that is rotatable, yet may be temporarily “locked” in a desired position with an easily activatable locking mechanism.

[0005] Accordingly, it would be desirable to provide a portable cord station having any one or more of these or other advantageous features.

SUMMARY
[0006] The present invention relates to a portable cord station having a body and a reel rotatably coupled to the body. A handle system is coupled to the body and configured for movement between an extended position and a retracted position. A mobility system is coupled to the body to permit movement of the body and the reel relative to a work surface. A locking system is coupled to the body and movable between a first position and a second position to provide a locking interaction with the reel.

[0007] The present invention also relates to a portable cord station having a body with a mounting surface and a cord storage device rotatably coupled to the mounting surface. At least one rotatable member is coupled to the body adjacent a lower edge area of the body. A handle device coupled to the body is movable between a first position and a second position.

[0008] The present invention further relates to a portable cord station having a cord storage device. A frame includes a support surface for receiving the cord storage device. At least one rotational member is coupled to the frame adjacent a lower surface of the frame. A handle member is coupled to the frame and movable between a storage position and an extended position, so that the handle in the extended position is movable from a first orientation where the lower portion of the frame engages the floor surface and the rotational member is free from contact with the floor surface and a second orientation where the lower surface of the frame is free from contact with the floor surface and the rotational member is configured to engage the floor surface for transporting the cord storage device.

BRIEF DESCRIPTION OF THE DRAWINGS
[0009] FIG. 1A is a schematic representation of a front perspective view of a portable cord station with a handle in one position according to an exemplary embodiment.
[0010] FIG. 1B is a schematic representation of a front perspective view of the portable cord station shown in FIG. 1A with the handle in another position.
[0011] FIG. 2A is a schematic representation of a front perspective view of a portable cord station with a handle in one position according to another exemplary embodiment.
[0012] FIG. 2B is a schematic representation of a front perspective view of the portable cord station shown in FIG. 2A with the handle in another position.
[0013] FIG. 3A is a schematic representation of a front perspective view of a portable cord station shown in FIG. 3A with the handle in another position.
[0014] FIG. 3B is a schematic representation of a front perspective view of a portable cord station shown in FIG. 3A with the handle in another position.
[0015] FIG. 3C is a schematic representation of a front perspective view of the portable cord station shown in FIG. 3A with the handle in a further position.
[0016] FIG. 4A is a schematic representation of a front perspective view of a portable cord station with a handle in one position according to a further exemplary embodiment.
[0017] FIG. 4B is a schematic representation of a front perspective view of the portable cord station shown in FIG. 4A with the handle in another position.
[0018] FIG. 5A is a schematic representation of a partial side view of a portable cord station with wheels in a first position according to an exemplary embodiment.
FIG. 5B is a schematic representation of a side view of the portable cord station shown in FIG. 5A with wheels in a second position.

FIG. 5C is a schematic representation of a partial rear elevation view of the portable cord station with wheels in a first position according to another exemplary embodiment.

FIG. 6A is a schematic representation of a partial side view of the portable cord station with wheels in a first position according to another exemplary embodiment.

FIG. 6B is a schematic representation of a side view of the portable cord station shown in FIG. 6A with wheels in a second position.

FIG. 6C is a schematic representation of a partial rear view of the portable cord station with wheels shown in FIG. 6A.

FIG. 7A is a schematic representation of a partial rear view of a portable cord station with locking mechanism shown according to another exemplary embodiment.

FIG. 7B is a schematic representation of a partial rear view of the portable cord station with the locking mechanism shown in FIG. 7A in a first position.

FIG. 7C is a schematic representation of a partial rear view of the portable cord station with the locking mechanism shown in FIG. 7B in a second position.

FIG. 7D is a schematic representation of a partial rear perspective view of the portable cord station with the locking mechanism shown in FIG. 7A.

FIG. 7E is a schematic representation of a cross sectional view of the portable cord station with the locking mechanism in the first position as shown in FIG. 7B.

FIG. 7F is a schematic representation of a cross sectional view of the portable cord station with the locking mechanism in the second position as shown in FIG. 7C.

FIG. 8A is a schematic representation of a partial rear view of a portable cord station with a locking mechanism shown according to another exemplary embodiment.

FIG. 8B is a schematic representation of a side view of the portable cord station with the locking mechanism shown in FIG. 8A in a first position.

FIG. 8C is a schematic representation of a side view of the portable cord station with the locking mechanism shown in FIG. 8A in a second position.

FIG. 9A is a schematic representation of a partial rear view of a portable cord station with a locking mechanism shown according to another exemplary embodiment.

FIG. 9B is a schematic representation of a side view of the portable cord station with the locking mechanism shown in FIG. 9A in a first position.

FIG. 9C is a schematic representation of a side view of the portable cord station with the locking mechanism shown in FIG. 9A in a second position.

FIG. 10A is a schematic representation of a partial perspective view of a portable cord station with a locking mechanism shown according to yet another exemplary embodiment.

FIG. 10B is a schematic representation of a cross sectional view of the portable cord station with the locking mechanism shown in FIG. 10A.

DETAILED DESCRIPTION

Referring to the FIGURES, a portable cord station 10 (e.g., cord reel, utilities connection device, cord storage device, etc.) is shown according to various exemplary embodiments for use in providing an easily maneuverable cord station for removal and return of a desired length of cord (not shown for clarity) that is spooled (e.g., wound, reeled, wrapped, etc.) about the reel for storage. The reel is shown to include various utility connectivity devices (shown for example as receptacles 14 for various sized electrical plugs, but may also include surge protectors, power indicator lights, ground fault interrupters, etc.) that are operably connected to the cord in a conventional manner for the convenience of a user (such as a do-it-yourselfer, light contractor, etc.) in interconnecting devices at a remote work location or the like. The portable cord station may be positioned at a desired work location and the cord extended for interconnection with a distant or remote utility supply source. Portable cord station 10 is shown schematically to include a body portion 20 having a handle system 40, 140, 240, 340 and a mobility system 60, 160 and a locking system 80, 180, 280, 380. Although the portable cord station is shown and described for use with an electrical cord (e.g., line, cable, etc.) according to the various illustrated embodiments, the portable cord station is also adaptable for use with other generally flexible members such as hoses, tubing, rigging material, chain and the like.

Referring to the FIGURES, body 20 (e.g., base, holder, stand, support structure, frame, etc.) is shown schematically according to an exemplary embodiment to include a support portion 22 configured to support a cord storage device (e.g., spool, bobbin, etc.—shown as a reel 30). According to a preferred embodiment, the reel is oriented with its axis of rotation generally horizontal and rotatably mounted to the support portion using conventional components such as an axle and bushing or bearing assembly or the like. However, the reel may be non-rotatably mounted to the support portion according to an alternative embodiment. The body portion 20 is also shown to include projections 24 (feet, etc.) configured to rest upon a work surface (such as a floor, table, ground, etc.) as desired to facilitate operation by a user. Although the body is shown having distinctive contours and shapes providing an aesthetically pleasing appearance, the body may be provided with any suitable shape for functional interaction with the handle system, the mobility system and the locking system. The body and reel may be made of any suitable material, such as acrylonitrile butadiene styrene (ABS) plastic formed in a molding operation or other suitable operation, and configured for supporting the reel and/or utility connectivity devices, and for interacting with the handle, mobility, and locking systems. According to an alternative embodiment, the body may have any suitable shape and contour, and may be made of other materials, such as those having other lightweight, durable and/or electrical insulating properties. According to another alternative embodiment, a handle may be provided on the reel to assist a user in rotating the reel to "wind" the cord onto the reel. According to yet another alternative embodiment, the reel may be configured with a retraction mechanism, such as a torsion spring or the like, that is biased to...
rotate the reel in a direction to retract the cord onto the reel when the cord is extended and the locking mechanism is released.

[0040] Referring to FIGS. 1A and 1B, an extendable handle system 40 for the portable cord station is shown according to an exemplary embodiment. Handle system 40 is shown to include a handle portion 42 (grip, cross member, holder, etc.) coupled to a pair of elongated, telescopingly extendable and retractable members 44 (legs, columns, struts, posts, etc.) movable between an extended use position (as shown in FIG. 1A) and a retracted storage position (as shown in FIG. 1B). The elongated members 44 are shown as rectangular members having two telescoping stages, but may by any suitable shape with any number of stages for extension to a desired height. Body 20 includes suitable cavities (compartments, openings, pockets, etc.) to receive the elongated members. The elongated members may also include "positioners" of a conventional type (such as spring-biased pins configured to interact with suitably located apertures, or the like—not shown) to temporarily "fix" the elongated members in an extended position, a retracted position, or any one of a variety of intermediate positions (such as for accommodating users of various heights, etc.). Handle portion 42 is shown as "offset" in a generally horizontal orientation according to the illustrated embodiment, and is shown partially "centered" over reel 30 for use as a "carry handle" and is intended to permit a user to carry the portable cord station when the handle portion is retracted, and with the cord station generally balanced beneath the carry handle. The handle portion is also shown to include a cover 46 (sheath, sleeve, tube, etc.) that is intended to provide cushioning and a non-slip grip for a user. However, according to an alternative embodiment, the handle portion may be provided without a separate cover material or may be provided with an ergonomic grip surface or the like. According to another alternative embodiment, the telescopingly extendable and retractable members may be spring-biased toward either the extended position or the retracted position.

[0041] Referring to FIGS. 2A and 2B, an extendable handle system 140 for the portable cord station is shown according to another exemplary embodiment. Handle system 140 is shown to include a handle portion 142 coupled to a pair of elongated, telescopingly extendable and retractable members 144 movable between an extended use position and a retracted storage position, similar to those shown and described for FIGS. 1A and 1B. Body 20 is shown to include a second handle portion 26 that may be integrally formed with body 20 and configured to extend at least partially over reel 30 as a "carry handle" and is intended to generally align with the approximate center of gravity of the portable cord station with a fully-loaded reel, so that a user can carry the portable cord station in a generally balanced manner when the extendable handle portion is retracted.

[0042] Referring to FIGS. 3A-3C, a folding handle system 240 for the portable cord station is shown according to an exemplary embodiment. Handle system 240 is shown to include a handle portion 242 coupled to a first pair of elongated members 244 (legs, columns, struts, poles, etc.) that are pivotally hinged to a second pair of elongated members 246, which are pivotally hinged to body 20 at a hinge member 248. The members 244, 246 are pivotally hinged about another hinge member 248 so that the handle system may articulate at the hinge members for movement of the handle system between an extended use position (as shown in FIG. 3A) and a folded storage position (as shown in FIG. 3C). The elongated members 244, 246 are shown as rectangular members having two folding stages, but may by any suitable shape with any number of folding stages for use at a desired height. Body 20 includes suitable cavities (compartments, openings, pockets, etc.) to receive the folded elongated members in the storage position. The elongated members or hinge members may also include "positioners" of a conventional type (such as spring-biased pins, linkages, or the like—not shown) to temporarily "fix" the elongated members in the extended position (FIG. 3A) or the folded position (FIG. 3C). Handle portion 242 is shown as "offset" in a generally horizontal orientation according to the illustrated embodiment, that is shown partially "centered" over reel 30 as a "carry handle" and is intended to permit a user to carry the portable cord station in a generally balanced manner when the handle portion is folded to the storage position.

[0043] Referring to FIGS. 4A and 4B, an extendable panel-type handle system 340 for the portable cord station is shown according to an exemplary embodiment. Handle system 340 is shown to include a handle portion 342 coupled to telescopingly extendable and retractable panel members 344, 346 (sleeves, channels, etc.) movable between an extended use position (as shown in FIG. 4A) and a retracted storage position (as shown in FIG. 4B). The panel members 344, 346 are shown as generally rectangular members having two telescoping stages, but may by any suitable shape with any number of stages for extension to a desired height. Body 20 includes a suitable cavity (compartment, pocket, etc.) to receive the panel members. The panel members may also include "positioners" of a conventional type (such as spring-biased pins, linkages, or the like—not shown) to temporarily fix the panel members in the extended position or the retracted position. Handle portion 342 is shown as "offset" and partially "centered" over reel 30 for use as a carry handle when the panel members are retracted.

[0044] According to any preferred embodiment, a handle system is provided to improve the ability of a user to move and maneuver the portable cord station with ease. The handle system may be extendable to any desired height and configured to be fixed at a desired height by a user until the handle system is released and moved to the storage position. The handles may have any suitable number of stages or segments and may be configured for movement between a first position and a second position by any suitable method, such as telescopic, fold, collapse, swing, etc. The handle system may be configured for permanent attachment to the body, or may be configured for removable attachment to the body. For example, portions of the handle system may be designed as multi-purpose tools, such as a handle member for the cord station, and also as tool for use by the user at the jobsite. Accordingly, all such applications are included within the scope of the disclosure.

[0045] Referring to FIGS. 5A-5C, a mobility system 60 for a portable cord station is shown according to an exemplary embodiment. A lower portion of body 20 that provides a base or foundation for the cord station includes feet 24 that are shown to include pads 62 that are positioned on the bottom of feet 24 and intended to provide direct contact with a work surface 12 (e.g. to provide a layer having any one or more of non-slip properties, vibration and/or shock absorbing properties, electrically insulating properties, abrasion
resistance properties, etc.). A rotational member (e.g. caster, bearing, roller, ball, etc.—shown as wheel 64) is rotatably mounted by a pin 66 (axle, rod, etc. mounted through a bushing on the wheel or the like) within an opening 68 adjacent a rear lower edge area 70 of body 20 so that the wheel is largely concealed and enclosed along its sides by body 20, while remaining exposed along the lower edge area 70. The partial enclosure of the wheels is intended to minimize intrusion of debris and other materials that might interfere with rotation of the wheels. The pin 66 is located on body 20 so that a lowermost surface of the wheels is slightly above a lowermost surface of pads 62 (as shown in FIGS. 5A and 5C). The relative position of the pads and wheels is intended to position wheels 64 slightly above work surface 12 when the portable power station rests securely on the pads (i.e. when mobility is not desired). The portable cord station 10 may easily become mobile and maneuverable by “tilting” (e.g. tipping, angling, etc.) the body (such as by tilting the handle), so that the lowermost surface of the wheels contact the work surface and the lowermost surface of the pads 62 are pivoted upwardly about the wheels and no longer contact the work surface 12. The portable cord station is then freely movable by “wheeling” the station to a desired location. The degree of “tilting” necessary for mobility is determined by the relative distance between the lowermost surfaces of the pads and wheels, and is preferably a relatively small angle to promote ease of mobility for a user operating the handle. The handle may be tilted to an angle whereby the weight of the reel and cord are approximately centered over the wheels to improve the maneuverability and ease of transporting the cord station. According to an alternative embodiment, the body may be provided with integrally formed pads, or may be provided without separate or distinct pads. According to another alternative embodiment, the rear surface of the body may be provided with durable, low friction “glides” (bars, plates, inserts, ribs, etc.) to facilitate slidingly guiding the portable cord station over edges, such as steps or the like, without damaging the body.

[0046] Referring to FIGS. 6A-6C, a mobility system 160 for a portable cord station is shown according to another exemplary embodiment. The rotational member (shown as wheel 164) is rotatably mounted by a pin 166 within an opening 168 along a side of body 20 and adjacent a rear lower edge area 170 of body 20, whereby the wheel 164 is largely exposed along its outward sides.

[0047] According to any preferred embodiment, the mobility system is intended to permit easy and convenient mobility of the portable cord station, and to enhance the maneuverability of the cord station. The wheels are configured to engage a floor or other surface only when mobility of the cord station is desired, such as by a deliberate act of the user (e.g. tilting the handle, etc.). The wheels may be generally concealed within the body, or exposed along the body in any suitable manner to provide the desired mobility, according to the geometry of the body. According to alternative embodiments, the wheels may be actuated in other manner, such as spring-activation, lever activation, etc. The wheels may also be configured for continuous contact with the floor, but may be provided with locks (e.g. brakes, etc.) that may be set by the user at the job site and released when mobility of the cord station is desired. Accordingly, all such applications are included within the scope of the disclosure.

[0048] Referring to FIGS. 7A-7E, a twist-turn locking system 80 for a reel of the portable cord system 10 is shown according to an exemplary embodiment. Reel 30 is shown to include a rearward surface having circular ribs 32 and radially extending ribs 34 that are interconnected to form compartments 36, according to the illustrated embodiment shown in FIGS. 7A and 7E. Locking system 80 includes a plunger mechanism 82 configured to interact with ribs 32, 34 to releasably “lock” the reel in a fixed position and prevent rotation. Plunger mechanism 82 is configured as a “quarter-turn” or “twist-lock” device and is shown to include a handle 84, a stem 86, a spring 88, and a plug 90. The spring 88 is shown a compression-type coil spring configured to bias the plug 90 into a compartment 36 on the rearward surface of reel 30 so that the reel is prevented from rotating. A rearward surface of body 20 includes arcuate ramps 92 that interact with handle 84, so that when the handle is turned from the locked position (shown in FIGS. 7C and 7F) to the unlocked position (shown in FIGS. 7B, 7D and 7E), the spring 88 is compressed and the plug 90 is withdrawn from compartment 36 to permit the reel to freely rotate. Ramps 92 are shown to include flats 94 at the unlocked position, whereby the force provided by spring 88 is intended to be sufficient to maintain the handle in the unlocked position until the handle is moved by a user to the locked position and the spring biases the plug into the compartment. According to an alternative embodiment, the plug may have any suitable shape and may be configured to engage any suitable structure on the rearward surface of the reel, such structure may be formed as intermeshing teeth, lugs, ribs, etc. According to another alternative embodiment, the plug and compartment may have any other shape configured for selective engagement (e.g. circular, etc.) and the spring may be configured in any desired manner to bias the plug in a desired direction.

[0049] Referring to FIGS. 8A-8C, a lever-action locking system 180 for the reel 30 of the portable cord system 10 is shown according to an exemplary embodiment. Reel 30 is shown to include a lower circular rim 38 and radially extending ribs 34. A lever 182 (e.g. toggle, latch, etc.) having a hook end 184 and a handle end 186 is shown slidably and pivotally coupled to a lower surface of body 20. A spring 188 interacts between lever 182 and body 20 to bias the lever rearwardly and in a clockwise direction so that hook end 184 of lever 182 is biased upwardly and inwardly to “catch” the rim 38 between a pair or ribs 34 to “lock” the reel from moving in a rotational direction. The hook end 184 is shown to include an angled leading edge 190 to facilitate the hook end sliding onto, and over, the rim 38. The lever may be configured for hand or foot actuation, and may be located at any suitable location on the body to engage a suitable structure on the reel (such as a rim, flange or the like).

[0050] Referring to FIGS. 9A-9C, a cam-actuated locking system 280 for reel 30 of the portable cord system 10 is shown according to an exemplary embodiment. Reel 30 is shown to include rearward surface 282. A lever 284 (e.g. toggle, latch, etc.) having a cam profile 286 and a handle end 288 is shown pivotally coupled within a “window” of the body 20 for interaction with the rearward surface 282. The lever 284 is moveable between an unlocked position (shown in FIG. 9B) where handle end 288 is shown rotated upwardly so that a leading edge of the cam profile 286 does not contact rearward surface 282 and the reel is free to rotate, and a locked position (shown in FIG. 9C) where the handle
end 288 is shown rotated downwardly so that a leading edge of the cam profile 286 contacts rearward surface 282 and is intended to prevent rotation of reel 30. The cam profile 286 of the lever and the rearward surface 282 may be made from (or have applied thereto) a material having a relatively high frictional coefficient to provide an effective frictional "wedging" interaction between the cam profile and the rearward surface of reel when the lever is in the locked position. A spring member (not shown) may also be provided to facilitate operation of the lever in an over-center manner, so that the lever is biased toward a desired direction (i.e. locked or unlocked) once the handle end is moved beyond an over-center point by the user. The lever may be configured for hand or foot actuation, and may be located at any suitable location on the body to engage a suitable structure on the reel (such as a rim, flange or the like). The rearward surface of the reel and the face of the cam profile may have any suitable texture or structure (e.g. rough, ribbed, etc.) to facilitate a frictional interaction when the handle end is moved to the locked position.

[0051] Referring to FIGS. 10A-10B, a resilient locking system 380 for reel 30 of portable cord station 10 is shown according to another exemplary embodiment. A rearward surface of reel 30 is shown to include radially extending ribs 34. A resilient projection (e.g. flap, card, etc.—shown as a fin 382) extends from body 20 and is configured to extend at least partially beyond a leading edge of rib 34 to create an overlap (e.g. interference, interaction, etc.). The fin 34 is formed as a relatively thin member and is formed from a material having sufficient flexibility to permit the fin to deflect over the leading edge of ribs 34 when a certain minimum torque is applied to reel 30. The fins 382 may be integrally formed with body 20, or may be removably attached thereto for replacement in the event that the fins become worn or damaged. The amount of "retention" force provided by locking system 380 may be varied by increasing or decreasing the number of fins, or by varying the thickness or stiffness of the material, or by increasing or decreasing the overlap of the fins and leading edge of the radially extending ribs.

[0052] According to any preferred embodiment, the locking system is intended to permit movement of the reel when a user extends cord from, or retracts cord to the reel, and substantially prevents rotation of the reel when a desired length of cord is established (or when the cord is fully retracted, such as when the cord station is moved to or from a jobsite). The locking mechanism may be manually or automatically actuated, and configured to provide a predetermined, controlled interference with the reel that is intended to prevent the reel from rotating when the locking system is actuated. The locking system may also be "non-actuatable" and intended to provide a predetermined resistance to rotation that is overcome by the deliberate actions of a user to extend and/or retract the cord from the reel. Accordingly, all such applications are intended to be included within the scope of the disclosure.

[0053] According to any preferred embodiment, a portable cord station is provided that includes a handle system, a mobility system and a locking system to provide a mobile and maneuverable cord station for providing utility connection capability from a utility supply source to a remote jobsite, work station or other desirable location. The handle system is movable between a use position for "wheeling" the cord station and a stored position concealing the handle and/or providing a "carrying" handle. The mobility system may be concealed or exposed and is configured to permit the cord station to transform from a stationary configuration to a mobile configuration by actuating the mobility system (e.g. lifting the cord station via the handle, etc.). The locking system is configured to permit a use to selectively rotate the reel for dispensing or retrieving cord, and to prevent rotation of the reel when a desired length of cord has been established by the user.

[0054] According to any alternative embodiment, the portable cord station may be equipped with suitable hardware of a conventional type for receiving, transmitting, adapting, distributing or splitting utilities (such as electrical power, telecommunication signals, voice/data signals, etc.). The portable cord station may also be equipped with suitable protection devices of a conventional type (such as power surge arrestors, on-off switches, overload protection, ground fault interruption, indicator lights, EMU/RFI filters, "always-on" receptacles that are independent of on-off switches, etc.). The reel may also be equipped with a counter device that tracks the length of cord that has been withdrawn from the reel (or conversely, the length of cord remaining on the reel).

[0055] It is important to note that the construction and arrangement of the elements of the portable cord station as shown in the preferred and other exemplary embodiments is illustrative only. Although only a few embodiments of the present inventions have been described in detail in this disclosure, those skilled in the art who review this disclosure will readily appreciate that many modifications are possible (e.g., variations in sizes, dimensions, structures, shapes and proportions of the various elements, values of parameters, mounting arrangements, use of materials, colors, orientations, etc.) without materially departing from the novel teachings and advantages of the subject matter recited. For example, elements shown as integrally formed may be constructed of multiple parts or elements shown as multiple parts may be integrally formed, the operation of the handle system, mobility system and locking system may be reconfigured, actuation-assisted, or otherwise varied, or the length, width or orientation of the structures and components or other elements of the portable cord station may be varied. It should be noted that the elements and/or assemblies of the portable cord station may be constructed from any of a wide variety of materials that provide sufficient strength, durability and electrical resistance, in any of a wide variety of colors, textures, shapes and combinations. It should also be noted that the body of the portable cord station may be configured in any suitable shape and used in association with a wide variety of reel configurations to support use in any of a wide variety of orientations and applications. Accordingly, all such modifications are intended to be included within the scope of the present inventions. Other substitutions, modifications, changes and omissions may be made in the design, operating conditions and arrangement of the preferred and other exemplary embodiments without departing from the spirit of the present inventions.

[0056] The order or sequence of any process or method steps may be varied or re-sequenced according to alternative embodiments. In the claims, any means-plus-function clause is intended to cover the structures described herein as
performing the recited function and not only structural equivalents but also equivalent structures. Other substitutions, modifications, changes and omissions may be made in the design, operating configuration and arrangement of the preferred and other exemplary embodiments without departing from the spirit of the inventions as expressed in the appended claims.

What is claimed is:

1. A portable cord station, comprising:
   a body;
   a reel rotatably coupled to the body;
   a handle system coupled to the body and configured for movement between an extended position and a retracted position;
   a mobility system coupled to the body and configured to permit movement of the body and the reel relative to a work surface; and
   a locking system coupled to the body and movable between a first position and a second position to provide a locking interaction with the reel.

2. The portable cord station of claim 1 wherein the handle system comprises at least one telescopingly extendable and retractable member.

3. The portable cord station of claim 2 further comprising a handle portion coupled to the telescopingly extendable and retractable member and extending at least partially over the reel.

4. The portable cord station of claim 2 wherein the telescopingly extendable and retractable member is spring biased toward one of the extended position and the retracted position.

5. The portable cord station of claim 1 wherein the handle system comprises at least one foldable member configured to articulate about a hinged joint for movement between the extended position and the retracted position.

6. The portable cord station of claim 5 wherein the foldable member comprises at least two pairs of elongated members pivotally coupled at the hinged joint.

7. The portable cord station of claim 1 wherein the body further comprises an integrally formed carrying handle extending at least partially over the reel.

8. The portable cord station of claim 1 wherein the handle system comprises at least one panel member configured for telescopic expansion and retraction relative to the body.

9. The portable cord station of claim 1 wherein the mobility system comprises at least one rotatable member.

10. The portable cord station of claim 9 wherein the rotatable member comprises a wheel.

11. The portable cord station of claim 10 wherein a lower surface of the wheel is disposed at an elevation above a lower surface of the body.

12. The portable cord station of claim 11 wherein the lower surface of the body is pivotally movable above the lower surface of the wheel to facilitate movement of the body and the reel.

13. The portable cord station of claim 10 wherein the wheel is substantially concealed by the body.

14. The portable cord station of claim 1 wherein the lower surface of the body further comprises at least one pad.

15. The portable cord station of claim 1 wherein the locking system comprises a spring-biased member configured to engage an opening on the reel.

16. The portable cord station of claim 1 wherein the locking system comprises a lever having a hook portion configured to engage the reel.

17. The portable cord station of claim 1 wherein the locking system comprises a member having a cam profile movable to create a frictional interaction with the reel.

18. The portable cord station of claim 1 wherein the locking system comprises a flexible member configured to interact with the reel and create a resistance to rotation of the reel.

19. A portable cord station comprising:
   a body having a mounting surface;
   a cord storage device rotatably coupled to the mounting surface;
   at least one rotatable member coupled to the body adjacent a lower edge area of the body;
   a handle device coupled to the body and movable between a first position and a second position.

20. The portable cord station of claim 19 further comprising a biasing device configured to bias the cord storage device in a rotational direction.

21. The portable cord station of claim 19 wherein the cord storage device further comprises a utility connection device.

22. The portable cord station of claim 19 wherein the body further comprises a cavity configured to receive at least a portion of the handle device when the handle device is in the first position.

23. The portable cord station of claim 19 wherein the handle device in the second position is configured to lift the body from a first position where the wheels are substantially free from contact with a surface and a second position where the wheels engage the surface to at least partially support the body and cord storage device and facilitate movement of the body and cord storage device.

24. The portable cord station of claim 19 wherein the handle device is configured for carrying the body and the cord storage device in the first position and to wheel the body and the cord storage device in the second position.

25. The portable cord station of claim 19 further comprising a locking system coupled to the body and configured to engage the cord storage device to substantially prevent movement of the cord storage device relative to the body.

26. The portable cord station of claim 25 wherein the locking system comprises at least one of a plunger, a cam member, a hook member and a flexible member.

27. The portable cord station of claim 19 wherein the body is pivotable about the wheel between a stationary configuration and a mobile configuration.

28. A portable cord station, comprising:
   a cord storage device;
   a frame having a support surface for receiving the cord storage device and a lower surface;
   at least one rotational member operably coupled to the frame adjacent the lower surface of the frame;
   a handle member coupled to the frame and movable between a storage position and an extended position;
so that the handle in the extended position is movable from a first orientation where the lower portion of the frame engages the floor surface and the rotational member is substantially free from contact with the floor surface and a second orientation where the lower surface of the frame is substantially free from contact with the floor surface and the rotational member is configured to engage the floor surface for transporting the cord storage device.

29. The portable cord station of claim 28 wherein the frame further comprises a compartment to at least partially receive the handle member.

30. The portable cord station of claim 28 wherein the cord storage device comprises a reel configured for rotation relative to the frame.

31. The portable cord station of claim 30 further comprising a locking system configured to substantially prevent rotation of the reel.

32. The portable cord station of claim 31 wherein the locking system comprises a twist-lock device.

33. The portable cord station of claim 31 wherein the locking system comprises at least one flexible fin member coupled to the frame and configured to engage the reel.

34. The portable cord station of claim 31 wherein the locking system comprises a member having a cam profile and movable between an unlocked position where the cam profile is substantially free of contact with the reel and a locked position wherein the cam profile engages the reel in a frictional interaction.

35. The portable cord station of claim 31 wherein the locking system comprises a lever having a hook member configured to releasably engage a portion of the reel.

36. The portable cord station of claim 28 wherein the handle member in the stored position is configured to provide a carry handle for a user.

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