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Blunt et al.(10) **Pub. No.: US 2012/0168554 A1**(43) **Pub. Date: Jul. 5, 2012**(54) **SYSTEM FOR STORING A BULK SUPPLY OF
CABLE FOR CONTROLLED PAYOUT AND
METHOD OF USING THE SYSTEM**(52) **U.S. Cl. 242/588.2; 242/595; 242/588.3**(57) **ABSTRACT**(76) **Inventors:** **Randy Blunt**, Mesa, AZ (US);
Kevin Coldani, Murrieta, CA (US)(21) **Appl. No.:** **12/984,181**(22) **Filed:** **Jan. 4, 2011****Publication Classification**(51) **Int. Cl.**
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A system and method for storing a wrapped supply of cable for controlled payout. A container has a peripheral wall bounding a storage space, a top and a bottom. A support assembly is provided on the container for the supply of wrapped cable through which the supply of wrapped cable, operatively placed within the storage space, can be turned guidingly within the storage space around a first axis. The peripheral wall has an opening through which cable from the wrapped supply operatively placed in the storage space can be directed and drawn to cause the operatively placed supply of wrapped cable to turn around the first axis and thereby cause cable to be controllably paid out.

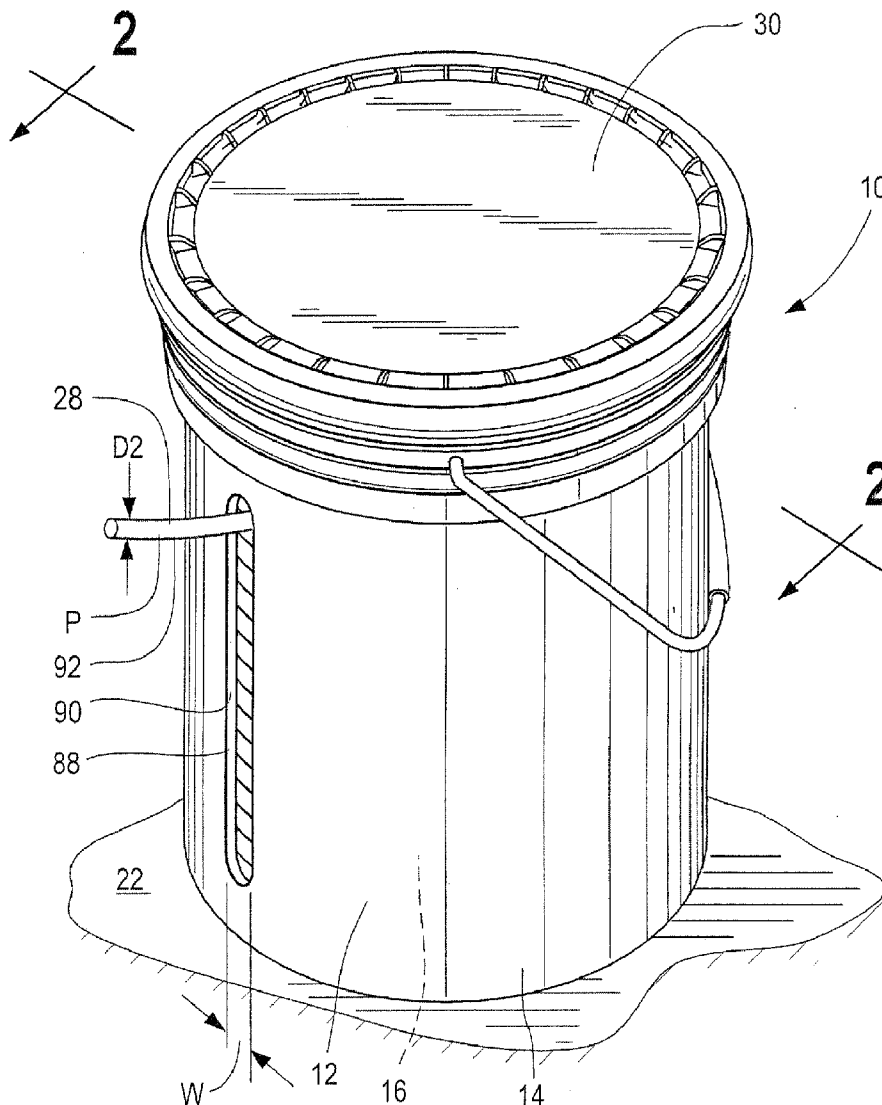


Fig. 3

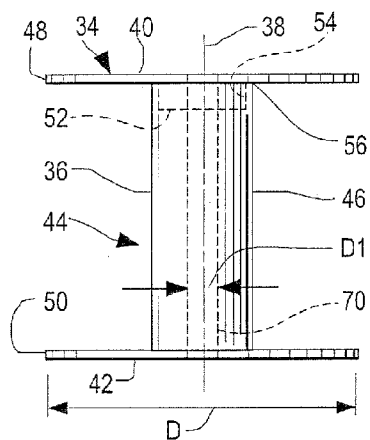


Fig. 4

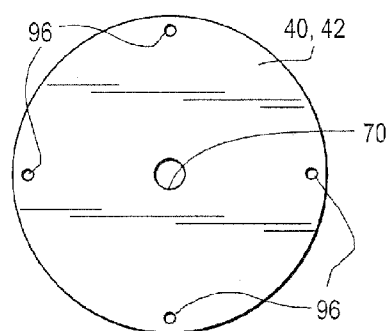


Fig. 5

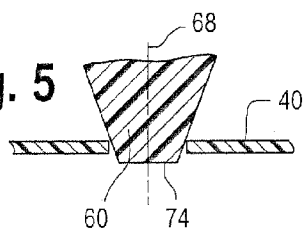


Fig. 7

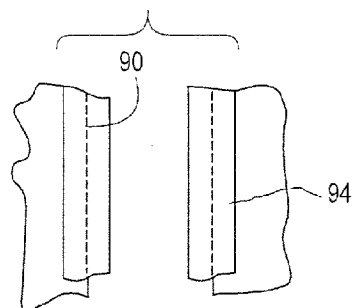


Fig. 6

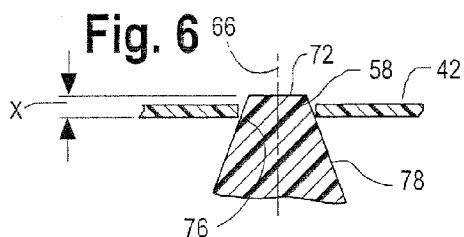


Fig. 8

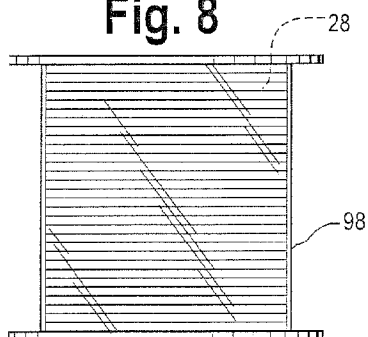


Fig. 9

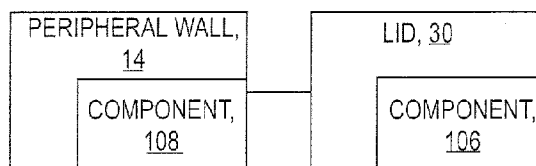


Fig. 11

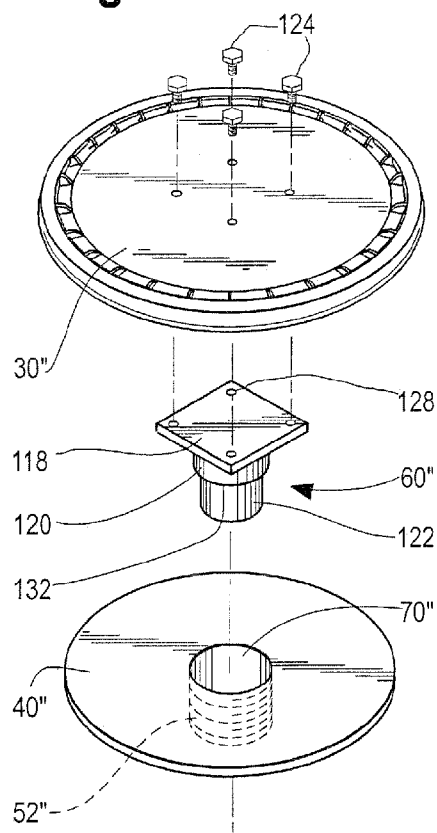


Fig. 10

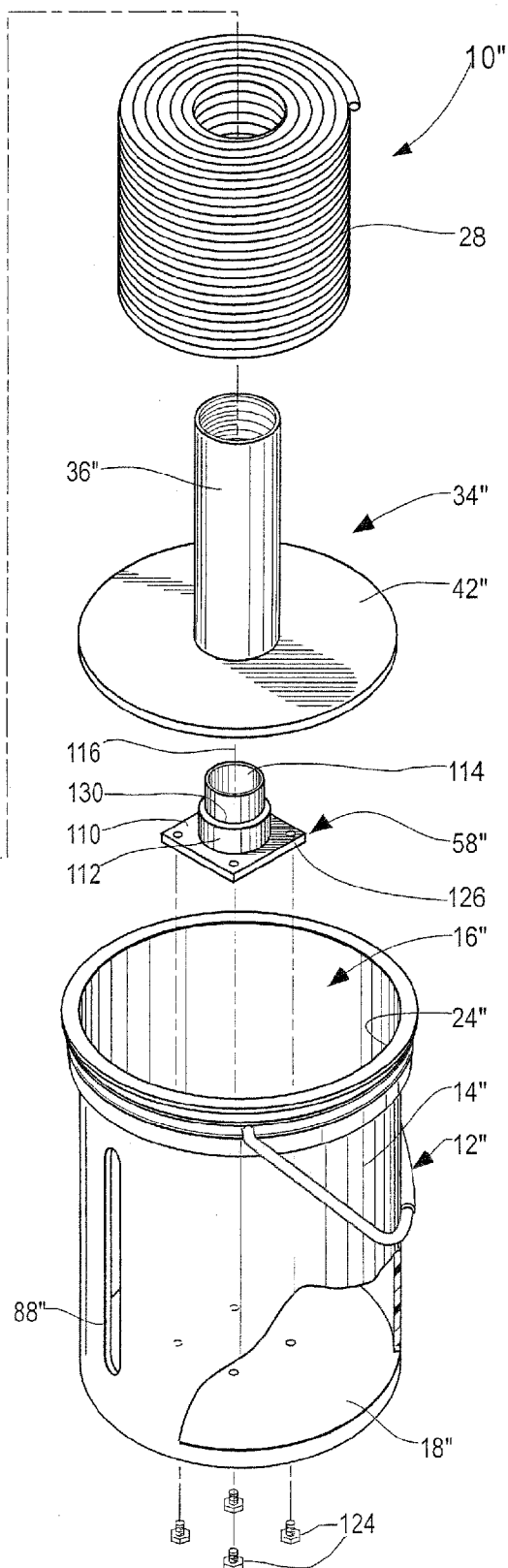
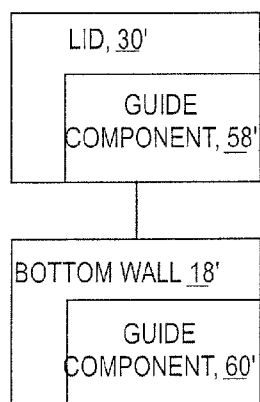


Fig. 12

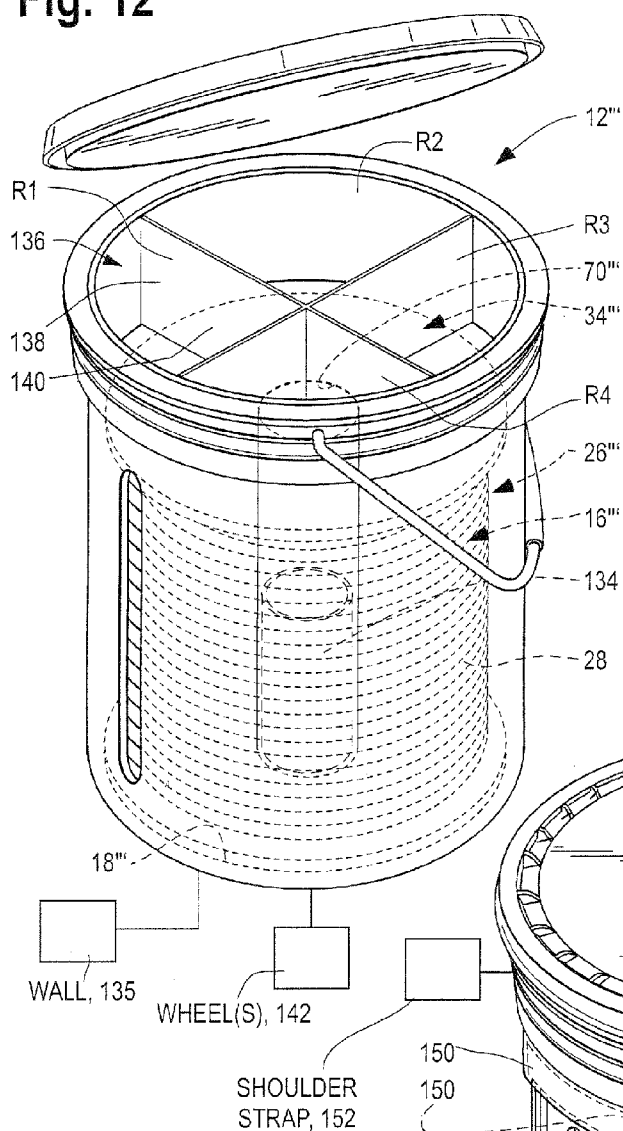
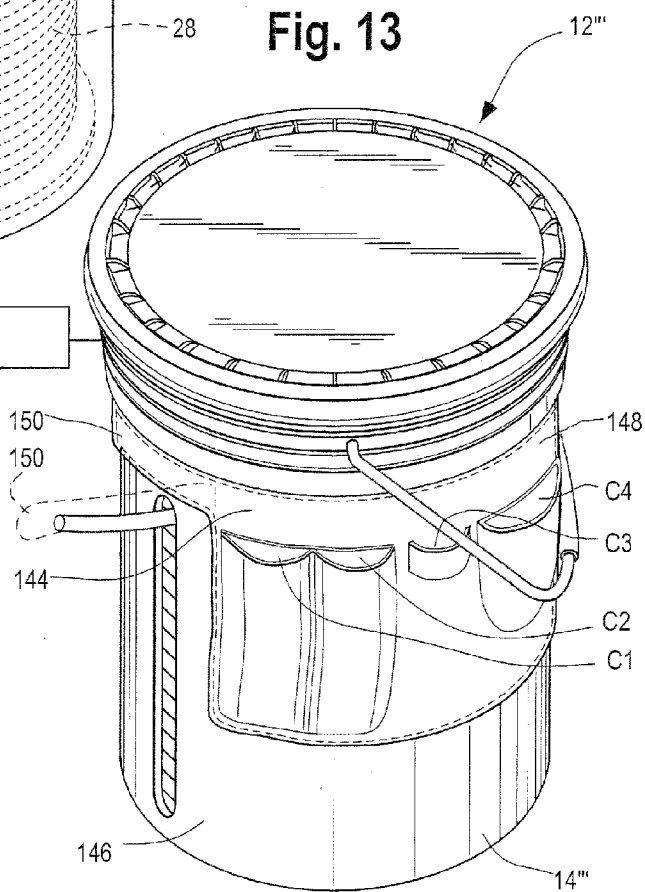


Fig. 13



**SYSTEM FOR STORING A BULK SUPPLY OF
CABLE FOR CONTROLLED PAYOUT AND
METHOD OF USING THE SYSTEM**

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] This invention relates to bulk cable storage and, more particularly, to a system that allows controlled payout of cable from a stored supply thereof. The invention is also directed to a method of using such a system.

[0003] 2. Background Art

[0004] The continuing evolution of the cable industry, and increase in the number of cable users, bring with them the need for additional and efficient installation and after-sale maintenance capability. The challenging economy has placed even greater demands upon installers who are even further challenged by an increasing number of entities vying for such business.

[0005] Installers working in the cable industry are routinely required to visit multiple field sites in a given day for purposes of performing installations and/or effecting repairs or maintenance. These installers will typically equip themselves with a supply of tools and components that will address all anticipated demands for at least an entire day. Unforeseen field conditions may necessitate use of special components, such as connectors, and tools through which such connectors and other components are installed.

[0006] To compete in this industry, it is important that installers be able to complete work on any given site within as short as possible a visit time. Return trips to a site, if great enough in number, may significantly adversely affect profits and could conceivably lead to the demise of an entity if not adequately limited.

[0007] To meet the above objectives, installers may stock their vehicles each day with a multitude of tools and components to hopefully address every field condition that will be encountered. While this approach addresses on-site versatility, it introduces another problem that may also reduce efficiency. That is, by keeping on hand so many different tools and components, an installer is challenged to control their accessibility so that they can be readily located and retrieved for use on a job site.

[0008] Cable installers will commonly use vans, or like vehicles, to transport their materials from one site to the next. While such vans have a substantial storage capability, access to different regions of the van to retrieve particular components may not be convenient. Further, as a practical matter, it is difficult, if not impossible, to strategically place components in a van so that they can be efficiently accessed as needed. Thus, time may be wasted in searching for a needed component. Oft times, an installer may have a needed component in such a vehicle but may not be able to locate the same. This may necessitate a follow-up visit or an attempt to jury rig available components that may result in a compromised installation.

[0009] Field installations commonly demand substantial lengths of coaxial cable. Conventionally, coaxial cable, and other types of cable, are stored in bulk by forming the wire independently into a coil or wrapping it directly against a core on a reel. With reels, spaced end flanges confine the cable to the core with the volume capacity dictated by: a) the radial space between the flanges and core; and b) the axial space

between end flanges. Wrapped cable tends to pay off a reel in a relatively straight form and thus reels are desirable for this reason.

[0010] Wrapped coaxial cable generally will have sufficient memory that it tends to unwind from a wrapped state, whether pre-coiled or wrapped around a core. To address this problem, typically two different approaches are taken, which are described hereinbelow for a supply of cable wrapped directly against a core on a reel, but apply as well to a pre-coiled wire supply that is slid onto a core.

[0011] With one approach, the free end of the cable is fixed in place as by taping or stapling the end to the reel or underlying turns. While this approach is effective for purposes of transporting unused bulk supplies, once the free end of the cable is released, an unraveling problem presents itself. This unraveling condition may result in significant amounts of the cable paying off on its own, as a result of which the cable may entangle with other proximate objects. Alternatively, the turns of the unraveling cable may entangle to develop "birds' nests" at the reel whereupon paying off of the cable as needed may be difficult or impossible.

[0012] To address the above problem, it is known to place the reel with the wrapped cable supply thereon in a surrounding container. Typically, the container will be a square box with dimensions selected to nominally match that of the reel with the cable supply thereon. This system is convenient from the standpoint that it creates conveniently stackable units in which the wrapped cable is for the most part confined upon the reel.

[0013] Different mechanisms are incorporated into this system to allow access to the cable. In one system design, lid flaps are opened. The cable is drawn off of one reel end through a space between the upper flange and the surrounding container wall.

[0014] This system has certain drawbacks. First of all, it may be difficult for the user to conveniently grasp the end of the cable that may drop downwardly into the container. This may necessitate partial or full separation of the reel from the container to gain access to the cable end so that it can be drawn away from the reel.

[0015] Further, by drawing the cable axially off the end of the reel, the cable turns may bind and ultimately entangle, particularly with certain winding patterns for the cable. When this situation presents itself, the user may then again have to separate the reel from the container to remedy the problem.

[0016] This problem is particularly prevalent in the absence of a reel. Coiled wire tends to have set twists and turns that inhibit smooth paying off of cable from the supply.

[0017] Another problem with using containers as described above is that they are commonly made from cardboard material that has a number of inherent limitations in this particular application. To avoid unnecessary expense, the cardboard is commonly made with a gauge and construction that does not add appreciably to the weight of the overall system and can be inexpensively purchased or made. After repeated uses, the container may begin to fall apart to the point that the user will separate the reel and contend with the above noted problems.

[0018] Untreated cardboard is also prone to deterioration in the presence of moisture. Since installations are frequently carried out in outside environments wherein rain and snow are experienced, these containers are prone to progressive deterioration such that they might eventually have to be separated from the reel before an initial supply of cable is exhausted.

[0019] Further, once the supply of cable is exhausted, the installer must appropriately dispose of the reel and container. With the ever-increasing concern about environmental impact, disposal of these components becomes a problem.

[0020] It is also known to treat the cardboard or paper containers with an agent that repels moisture. While this addresses the problem of deterioration due to exposure to moisture, it introduces the additional problem that the container may be less biodegradable.

[0021] Regardless of the nature of the cardboard material, it is normally of a nature that it will readily collapse under forces imparted during storage and/or use. Again, this may compromise the ability to use the combined reel and container system.

[0022] Wooden reels are often used within boxes. Wooden reels can be re-used; however, if used in conjunction with boxes, the above problems are contended with, including that of discarding the boxes, and the reel if the same is not practically re-usable. Typically, such a reel will have non-biodegradable components. While it is known to make a re-usable box, the above-noted problems associated with a "reel-in-box" persist.

[0023] It is also known to use reels, as made from wood, without a surrounding container. The reel can be supported on a pipe or dowel for guided turning, as in a van compartment. While facilitating cable payout, the user is limited to drawing the cable off from within the van compartment. Portable caddies with spool guides have been developed for small gauge wire and limited lengths of a larger cable and are generally not practical to transport significant quantities of cable, such as coaxial cable, that may be required on a job.

[0024] Typically, as an installer arrives at a site, he/she will accumulate the anticipated components required for performance of all tasks at the site. The installer may take, for example, a box of cable, a diverse supply of connectors, installation tools, and electronic and other testing equipment. If needed components/tools are not brought to the work location from the vehicle, repeated trips to the vehicle may be necessitated.

[0025] The ability to strategically accumulate and store components that will be needed challenges even the most experienced installers. Generally, an installer will deal with the competing objectives of minimizing back-and-forth maneuvering to a vehicle and carrying only the necessary supplies from the vehicle to the work site.

[0026] Further, there is often not a practical way to arrange components in close quarters of a van compartment that allows an efficient accumulation of components that an installer anticipates will be needed. As noted above, the placement of these various tools and components in a van may be such that significant amounts of time are required for putting them together to transport from the van to the site.

[0027] Still further, these small and loose components are inherently difficult to transport in a convenient manner. Containers with a large supply of cable may be heavy and awkward to carry. Typically, the containers are required to be cradled in a user's arms during transportation. This may preclude simultaneous transportation of tools and other components that are needed.

[0028] Another problem that is contended with is that the containers with reels of cable are often placed on the floor of the transporting vehicle. It may be awkward for an installer to conveniently position him/herself to grasp the underside of

the container to effect lifting. This may lead to fatigue after repeated lifting and, in a worse case, injury.

[0029] The above problems have been contended with for decades in spite of the need over this time period for efficiency and convenience in terms of handling bulk supplies of wire, other system components and tools on job sites.

SUMMARY OF THE INVENTION

[0030] In one form, the invention is directed to a system for storing a wrapped supply of cable for controlled payout. The system includes: a) a container having a peripheral wall bounding a storage space, a top and a bottom; and b) a support assembly on the container for a supply of wrapped cable through which a supply of wrapped cable operatively placed within the storage space can be turned guidingly within the storage space around a first axis. The peripheral wall has an opening through which cable from a wrapped supply operatively placed in the storage space can be directed and drawn to cause an operatively placed supply of wrapped cable to turn around the first axis and thereby cause cable to be controllably paid out through the peripheral wall opening.

[0031] In one form, the peripheral wall has a cylindrical configuration with a central axis that is substantially coincident with the first axis and extends between the top and bottom of the container.

[0032] In one form, the container is provided in combination with a supply of wrapped cable that is operatively placed within the storage space.

[0033] In one form, the peripheral wall has a top opening through which the supply of wrapped cable can be directed to be operatively placed within the storage space. The container has a bottom wall and further includes a lid that is removably attached to the peripheral wall to selectively block the top opening.

[0034] In one form, the support assembly has at least one guide component on the bottom wall.

[0035] In one form, the support assembly has at least another guide component on the lid. The guide components cooperatively guide the operatively placed supply of wrapped cable in movement around the first axis.

[0036] In one form, the supply of wrapped cable includes a reel with a core around which the cable is wrapped.

[0037] In one form, the reel has spaced flanges that bound a storage region for cable upon the core.

[0038] In one form, the container further includes a repositionable handle that can be grasped by a user to lift and transport the container.

[0039] In one form, the peripheral wall opening is elongate in a direction along the first axis. The storage space has an axial extent along the first axis and the opening extends over a majority of the axial extent of the storage space.

[0040] In one form, at least one storage tray is operatively mounted within the storage space.

[0041] In one form, the peripheral wall is made from molded plastic.

[0042] In one form, the container is in the form of a standard paint container with one of a 5 gallon or a 7 gallon capacity.

[0043] In one form, there is at least one wheel on the container that can be rolled against a subjacent surface to facilitate repositioning of the system.

[0044] In one form, there is a shoulder strap on the container that can be engaged by a user to facilitate transportation of the system by a user.

[0045] In one form, the core has a surface that bears against part of the support assembly to guide turning movement of the supply of wrapped cable around the first axis.

[0046] In one form, the surface bears against a part of the support assembly on the lid to guide turning movement of the supply of wrapped cable around the first axis.

[0047] In one form, a frangible sheet layer is applied around the supply of wrapped cable to confine the cable and the sheet layer is progressively ruptured as the cable is controllably paid out from the storage space.

[0048] In one form, at least one pouch for a plurality of discrete objects is releasably supported upon the container.

[0049] In one form, the container has a bottom wall with a plurality of discrete support feet projecting therefrom.

[0050] In one form, the opening is bounded by an edge defined at least in part by a material with high friction characteristics that resists guided sliding movement of wire, extending outwardly through the opening, inwardly back into the storage space.

[0051] In one form, the lid is releasably snap fit to the peripheral wall.

[0052] In one form, the system further includes a brake assembly on the container through which a variable friction force can be applied to at least one of the spaced flanges to resist turning of the supply of wrapped cable around the first axis.

[0053] In one form, the cable is coaxial cable.

[0054] The invention is further directed to a method of storing and controllably paying out cable from a wrapped supply of the cable. The method includes the steps of: providing a container with a storage space bounded by a cylindrical peripheral wall and a bottom wall and having an open top that is selectively blocked by a lid; directing a supply of wrapped cable through the open top into the storage space so that the supply of wrapped cable is operatively placed and cooperates with the container to allow the supply of wrapped cable to be turned guidingly within the storage space around a first axis; directing the cable from within the storage space through the peripheral wall; and pulling the cable extended through the peripheral wall to thereby cause the supply of wrapped cable to turn around the first axis and cable to be controllably paid out through the peripheral wall.

[0055] In one form, the cable is coaxial cable.

[0056] In one form, the first axis extends between the bottom wall and open top.

BRIEF DESCRIPTION OF THE DRAWINGS

[0057] FIG. 1 is a perspective view of one form of system, according to the present invention, including a container that defines a storage space within which a wrapped supply of cable is operatively placed/stored and from which a free end of the cable projects;

[0058] FIG. 2 is a cross-sectional view of the system taken along line 2-2 of FIG. 1 and with a handle repositioned from a stored position in FIG. 1 towards a lifting position;

[0059] FIG. 3 is a side elevation view of a reel around which the cable within the storage space is wrapped;

[0060] FIG. 4 is a plan view of the reel in FIG. 3;

[0061] FIG. 5 is an enlarged, fragmentary, partial cross-sectional view showing the cooperation between a guide component on a lid on the container and one end of the reel;

[0062] FIG. 6 is a view as in FIG. 5 showing the cooperation between another guide component on the container and the opposite end of the reel;

[0063] FIG. 7 is an enlarged, fragmentary, elevation view showing a high friction material disposed over an edge of an opening through which cable is directed outwardly from the container storage space;

[0064] FIG. 8 is a view of a reel as in FIG. 3 with a supply of cable wrapped therearound and a frangible sheet disposed thereover to prevent unraveling of the cable;

[0065] FIG. 9 is a schematic representation of a releasable connection between a peripheral wall on the container and the lid, as shown FIGS. 1 and 2;

[0066] FIG. 10 is a schematic representation of reel guide components on a lid and bottom wall of a container according to the invention;

[0067] FIG. 11 is an exploded, perspective view of a modified form of system, according to the invention;

[0068] FIG. 12 is a perspective view of a further modified form of system, according to the invention, and including a parts container that is accessible with the lid separated as in this Figure; and

[0069] FIG. 13 is a view as in FIG. 12 of a further modified form of system, according to the invention, and including an optional tool/parts apron and optional shoulder strap for lifting and transporting the system.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0070] Referring initially to FIGS. 1-6, one form of system for storing a wrapped supply of cable, for controlled payout thereof, is shown at 10. The system 10 consists of a container 12 having a peripheral wall 14 bounding an internal storage space 16. The container 12 has a bottom wall 18, with a plurality of feet 20 thereon to engage a subjacent support surface 22 upon which the container 12 bears to be operatively oriented, as shown in FIGS. 1 and 2. The peripheral wall 14 has a top opening 24 through which a supply 26 of wrapped cable 28 can be directed to be operatively placed within the storage space 16, as seen in FIG. 2. The container further has a lid 30 that can be removably attached to the peripheral wall 14, as through a snap fit connection, to selectively cover/block and expose the top opening 24. The peripheral wall 14 has a cylindrical configuration with a central axis 32 that extends between the top and bottom of the container 12 and either a constant or tapered diameter between its axial ends.

[0071] The cable supply 26 consists of a reel 34 made up of a cylindrical core 36 with a central axis 38, and optional spaced, disc-shaped flanges 40, 42 that project radially outwardly at the axially opposite ends of the core 36. Each flange 40, 42 has a diameter D. The cable supply might alternatively be provided with only a core.

[0072] The supply 26 is formed by situating the wrapped cable 28 around the core 36 to partially or entirely fill the annular region 44 radially between the core outer surface 46 and the peripheral edges 48, 50 of the flanges 40, 42, respectively, and axially between the flanges 40, 42. The cable 28 can be pre-coiled and slid axially over the core 36 or wrapped directly against the core 36.

[0073] In this embodiment, the core 36 and flange 42 are formed together as an inseparable unit. The flange 40 is provided with a stub component 52 that can be nested in a complementary receptacle 54 on the core 36. The stub component 52 and core 36 may be releasably maintained together through frictional engagement, or otherwise as by the use of cooperating threads. With this arrangement, the flange 40 can

be selectively separated from the core 36 to allow the core end 56 to be directed through a pre-coiled supply of cable 28. Alternatively, the cable 28 might be wound directly against the core 36 to progressively accumulate the cable therearound. It is also contemplated that the stub component 52 may be fixed permanently to the core 36, as through an adhesive.

[0074] A support assembly is provided on the container through which the supply 26 of wrapped cable 28, operatively placed within the storage space 16 as shown in FIG. 2, can be turned guidingly within the storage space 16 around the axis 32. The support assembly consists of separate guide components 58, 60, respectively on the bottom wall 18 and the lid 30 of the container 12. The guide components 58, 60 each is in the form of a truncated cone respectively with axes 66, 68 that are substantially coincident with the lid 30 attached to the peripheral wall 14, as shown in FIG. 1.

[0075] The guide components 58, 60 cooperate with the reel 34 at its opposite ends. To interact with the guide components 58, 60, the core 36 is provided with a central through-bore 70 with a diameter D1 that is slightly greater than the diameters of the free end surfaces 72, 74 of the guide components 58, 60, respectively. The relative diameters of the throughbore 70 and surfaces 72, 74 are chosen so that the exemplary guide component 58 can be directed into the bore 70 an axial distance X, at which point an annular edge/surface 76 on the flange 42 will abut to the outer surface 78 of the guide component 58. The guide component 60 cooperates with the reel 34 in the same manner at the reel flange 40.

[0076] With the supply 26 of wrapped cable 28 operatively placed within the storage space 16 and the lid 30 attached, the interaction of the guide components 58, 60 and the core 36, as described above, causes the axes 66, 68 to be coincident with the core axis 38, that is in turn coincident with the axis 32. The components are relatively dimensioned so that with the lid 30 attached, the truncated cones 62, 64 and the guide components 58, 60 penetrate the bore 70 from axially opposite directions but are not pressed against the core flanges 40, 42 with any significant binding force, whereby the guide components 58, 60 support the supply 26 of wrapped cable 28 so that it can be freely turned guidingly within the storage space 16 around the axis 32.

[0077] The diameter of the radially inwardly facing surface 80, bounding the storage space 16, is selected to be preferably larger than diameter D (FIG. 3) so that the supply 26 of cable 28 can turn without any interference between the supply 26 of cable 28 and surface 80. To minimize the overall size of the container 12, the surface 80 can be made with a diameter that is only slightly greater than the diameter D.

[0078] In this embodiment, the peripheral wall 14 has a non-uniform diameter that creates a draft angle that facilitates formation, as by molding, and stacking of multiple containers 12, as at a manufacturing facility or by an end user. Of course, the surface 80 could have a uniform diameter.

[0079] In one form, the container 12 is made by modifying certain components of a conventional plastic paint bucket with a 5 or 7 gallon capacity. While this is one design option that allows utilization of some existing, standard components and/or tooling, of course all of the components of the system 10 might be individually designed to produce desired structural and operating characteristics. Still further, as described hereinbelow, the container may be made by simply modifying a completed paint bucket.

[0080] Formation of the container 12 from a plastic material is desirable from the standpoint that the same can be made by molding using a lightweight moldable material. With this construction, the container 12 can be easily and economically produced.

[0081] A repositionable, U-shaped handle 82 may be utilized, as on conventional paint buckets, to facilitate transportation of the container 12 with the supply 26 of cable 28 operatively placed therewithin. The handle 82 shown has a U-shaped wire body 84 with a graspable component 86 that can be comfortably engaged by a user's one hand to lift and transport the container 12. The body 84 is pivotable from a lifting position to a side storage position, as shown in FIG. 1, wherein the lid 30 can be selectively attached to, and separated from, the peripheral wall 14, without interference from the handle 82. In FIG. 2, the handle is shown pivoted from the stored position towards the lifting position wherein component 86 is at its highest point.

[0082] Aside from affording a convenient means for transporting the supply 26 of cable 28, the system 10 also is designed to facilitate controlled payout of cable 28 from the supply 26 thereof within the storage space 16. More particularly, the peripheral wall 14 has an opening 88 therethrough through which a free end portion P of the cable 28 can be directed and drawn from externally of the storage space 16. As the cable 28 is drawn in this manner, the reel 34 turns guidingly around the axis 32, whereby the cable 28 is progressively and smoothly paid out.

[0083] In this embodiment, the opening 88 has a circumferential width W that is greater than the diameter D2 of the cable 28 so that the cable 28 can be drawn generally in a circumferential direction, to maximize the turning force component, thereby to turn the supply 26 without significant interference between the cable 28 and the edge 90 bounding the opening 88. In this embodiment, the opening 88 extends preferably over substantially the entire axial extent of the annular winding region 44 and over at least a majority, and potentially substantially the entirety, of the axial extent of the storage space 16.

[0084] In the event that the peripheral wall 14 is made from a plastic material, the edge 90 may generate sufficient friction against the cable outer surface 92 such that the projecting cable portion P is inhibited from being drawn back into the storage space 16 by forces resulting from a set in the cable turns. In the event that the projecting portion P is drawn back into the storage space 16, the lid 30 might have to be removed to re-thread the cable 28 through the opening 88.

[0085] As shown in FIG. 7, a high friction material 94 may be disposed about the edge 90. This material 94 may be held in place by an adhesive or applied through an overmolding process, or by placement of a press-fit component that conforms to the overall shape of the edge 90. Alternatively, the material 94 may be held in place using fasteners such as rivets, screws, etc.

[0086] With the supply 26 of cable 28 separate from the container 12, it is desirable to control unravelling of the cable 28. As shown in FIG. 4, at least one opening 96, and in this case four openings 96, are provided in one of the flanges 40, 42. The free end of the cable 28 can be directed through any one of the openings 96 to prevent unravelling.

[0087] Alternatively, as shown in FIG. 8, a frangible sheet 98 may be wrapped around the cable 28 in a continuous fashion to avoid unravelling. The sheet material is selected so that it will progressively tear/rupture as the cable 28 is pulled

by the user with the system in the operative state of FIG. 1. Accordingly, the wrapped supply 26 of cable 28 can be stored without the fear of unravelling and operatively placed within the storage space 16 without removing the frangible sheet 98. Due to the above-described operation, the frangible sheet 98 will progressively be broken away and will not appreciably interfere with payout of the cable 28 in use.

[0088] To control turning of the supply 26 of cable 28 within the storage space 16, a braking mechanism may be provided, as shown at 100 in FIG. 2. The braking mechanism 100 consists of a component 102 that can be urged with a variable pressure against the reel flange 40. An external actuator 104 is operable to reposition the component 102 to select a resistance that results in the paying out of the cable 28 in the desired manner.

[0089] In FIG. 9, a generic form of structure for releasably connecting the lid 30 and peripheral wall 14 is shown. The invention contemplates virtually an unlimited number of different arrangements utilizing cooperating components 106, 108, respectively on the lid 30 and peripheral wall 14. The components 106, 108 may be cooperating threads. Alternatively, the components 106, 108 may be snap-fit components as conventionally used on paint buckets. While the details of this structure are not critical to the invention, what is desirable is the ability to be able to selectively separate the lid 30 from the peripheral wall 14 to operatively place the supply 26 of cable 28 and subsequently remove the reel 34 once the supply of cable 28 is exhausted to allow a new supply 26 of cable 28 to be replaced, whether as a totally separate structure or utilizing the reel 34 with a replenished supply of the cable 28.

[0090] What is desirable also is that the lid 30 be connected to the peripheral wall 14 in a manner so that the lid 30 is rigidly joined to the peripheral wall 14. With this rigid connection in the depicted configuration, the container 12 can be used as a seat for the user or a step to facilitate access to an elevated location. To that end, the aforementioned feet 20 can be made from a material, and with a construction, so that the feet 20 do not tend to slip against the subjacent surface 22 upon which the container 12 is supported.

[0091] The guide components 58, 60 may be integrated into a standard 5 gallon or 7 gallon paint bucket as opposed to modifying certain basic components thereon, as described above. As one example, as shown in FIG. 10, a conventional paint bucket may be utilized with a lid 30' to which the guide component 58' is added, as through a layer that includes the guide component 58' and can be attached to the lid 30', as by adhesive bonding. A similar arrangement can be made to incorporate the guide component 60' into the bottom wall 18' of a conventional paint bucket.

[0092] In FIG. 11, a further modified form of system is shown at 10" that uses a conventional container 12" consisting of the "bucket", with a peripheral wall 14", a bottom wall 18", and a top opening 24", with the top opening 24" blocked selectively by a lid 30". These components can be purchased as standard paint buckets, with the peripheral wall 14" modified by forming the opening 88".

[0093] In this embodiment, the guide components 58", 60" have the same or a similar construction, with the exemplary guide component 58" having a base 110 with a fixed annular sleeve 112. A shaft 114 is mounted for guided movement within the sleeve 112 about an axis 116.

[0094] The guide component 60" has a base 118, sleeve 120, and shaft 122 corresponding to the base 110, sleeve 112, and shaft 114, consecutively.

[0095] The base 110 is secured to the bottom wall 18" through threaded fasteners 124. The base 118 is attached to the lid 30" using similar fasteners 124. The bases 110, 118 may have pre-threaded bores 126, 128, respectively, to allow the fasteners 124 to be directed thereto to captively hold the bottom wall 18" and lid 30". With the guide components 58", 60" secured in place, the shafts 114, 122 are coaxial and project towards each other.

[0096] A reel 34" has a two-component construction, with a combined flange 42" and core 36" making up one component and a separate flange 40", with an associated stub component 52", making up the other component.

[0097] The reel 34" with wrapped cable 28 around the core 36" can be directed into the storage space 16" with the shafts 114, 122 directed oppositely into the bore 70" defined through the reel 34". The reel 34" is thus captively located between facing, annular shoulders 130, 132 defined on the guide components 58", 60", respectively. With this configuration, while the shoulders 130, 132 may perform some guiding function by acting against the reel 34", guided movement is primarily the result of the movement of the shafts 114, 122 within their respective sleeves 114, 120 as the reel 34" turns around the axis 116.

[0098] In FIG. 12 a further embodiment of the invention is shown wherein a container 12'" has an upwardly projecting shaft 134 from the center of a bottom wall 18"'. The shaft 134 projects into a throughbore 70'" in a reel 34"'. The shaft 134 is a guide component that makes up a support assembly for the reel 34"'. The shaft 134 may be fixed, or guided in movement, relative to the bottom wall 18"'.

[0099] As one example, a disc-shaped wall 135 may define a guide component on a support assembly to bear the weight of the reel 34'" and guide the same in the same manner as a "lazy susan". This can be used in any of the embodiments herein and potentially allows the use of a less robust upper guide component or the elimination of the same altogether.

[0100] In this embodiment, the reel 34'" has an axial dimension that is less than that for the storage space 16"'. As a result, with the supply 26'" of cable 28 operatively placed within the storage space 16"', there is a cylindrical space 136 atop the reel 34'" within which a parts container 138 can be nested, as to rest upon the top of the reel 34"'. The parts container 138 has a divider 140 to define, in this embodiment, four different receptacles R1, R2, R3, R4. With this arrangement, the user has the convenience of carrying potentially parts, tools, meters, etc., together with the cable 28, in one convenient package with the container 12"'.

[0101] Further, in this embodiment, at least one wheel 142 is shown as an option that can be incorporated into the container 12'" and any other containers as herein described. The wheel(s) 142 allows the container 12'" to be conveniently rolled against a subjacent surface.

[0102] In FIG. 13, a further modification of the container 12'" is shown wherein a tool apron 144 is secured at the outside surface 146 of the peripheral wall 14"'. The tool apron 144 may have a wall portion 148 that extends fully around the surface 146. The wall portion 148 may have a continuous and fixed diameter or alternatively may be of a variable diameter by incorporating a securing strap 150 that is shown separated from the remainder of the wall portion 148 in dotted lines in FIG. 13. The securing strap 150 may be permanently fixed to the remainder of the wall portion 148 or releasably connected, as through a buckle arrangement, hook and loop fastener, or the like.

[0103] In this embodiment, the tool apron **144** has a plurality of compartments **C1**, **C2**, **C3**, **C4** designed to accommodate parts, tools, meters, etc., as may be used on a job.

[0104] In FIG. 13, an optional shoulder strap **152** is shown connected to the container **12**". The shoulder strap **152** may be temporarily or permanently connected to the container **12**" using any conventional type shoulder strap construction and means for connection. The shoulder strap **152** may be used to lift or otherwise reposition the container **12**".

[0105] It should be understood that the features shown in the different embodiments are all contemplated for interchangeable use. Many other variations are contemplated within the disclosure of the invention that is made herein.

[0106] For example, the material making up the various components may be changed depending upon objectives. As just one example, the guide components **58**, **60** could be made from plastic or metal, with the latter less susceptible to wear and potentially affording a more solid guide base.

[0107] The construction of each of the reels is not limited to any particular material. The reels may be made partially or wholly from metal, wood, plastic, composite or other non-metallic material. The selection of materials for the reels may be dictated in part by whether or not they will be reused and whether they are to be disposed of in an environmentally friendly manner.

[0108] The inventive system is particularly useful for cable installation, wherein the cable **28** is a coaxial cable.

[0109] The foregoing disclosure of specific embodiments is intended to be illustrative of the broad concepts comprehended by the invention.

1. A system for storing a wrapped supply of cable for controlled payout, the system comprising:

a container having a peripheral wall bounding a storage space, a top and a bottom; and

a support assembly on the container for a supply of wrapped cable through which a supply of wrapped cable operatively placed within the storage space can be turned guidingly within the storage space around a first axis,

the peripheral wall having an opening through which cable from a wrapped supply operatively placed in the storage space can be directed and drawn to cause an operatively placed supply of wrapped cable to turn around the first axis and thereby cause cable to be controllably paid out.

2. The system for storing a supply of cable according to claim 1 wherein the peripheral wall has a cylindrical configuration with a central axis that is substantially coincident with the first axis and extends between the top and bottom of the container.

3. The system for storing a supply of cable according to claim 1 in combination with a supply of wrapped cable operatively placed/stored within the storage space.

4. The system for storing a supply of cable according to claim 3 wherein the peripheral wall has a top opening through which the supply of wrapped cable can be directed to be operatively placed within the storage space and the container has a bottom wall and further comprises a lid that is removably attached to the peripheral wall to selectively block the top opening.

5. The system for storing a supply of cable according to claim 4 wherein the support assembly comprises at least one guide component on the bottom wall.

6. The system for storing a supply of cable according to claim 5 wherein the support assembly comprises at least

another guide component on the lid and the one and at least another guide components cooperatively guide the operatively placed supply of wrapped cable in movement around the first axis.

7. The system for storing a supply of cable according to claim 6 wherein the supply of wrapped cable comprises a reel with a core around which the cable is wrapped.

8. The system for storing a supply of cable according to claim 7 wherein the reel comprises spaced flanges that bound a storage region for cable around the core.

9. The system for storing a supply of cable according to claim 1 wherein the container further comprises a repositionable handle that can be grasped by a user to lift and transport the container.

10. The system for storing a supply of cable according to claim 1 wherein the peripheral wall opening is elongate in a direction along the first axis, the storage space has an axial extent along the first axis, and the opening extends over a majority of the axial extent of the storage space.

11. The system for storing a supply of cable according to claim 1 in combination with at least one storage tray that is operatively mounted within the storage space.

12. The system for storing a supply of cable according to claim 1 wherein the peripheral wall is made from molded plastic.

13. The system for storing a supply of cable according to claim 1 wherein the container is in the form of a standard paint container with one of a 5 gallon or a 7 gallon capacity.

14. The system for storing a supply of cable according to claim 1 wherein there is at least one wheel on the container that can be rolled against a subjacent surface to facilitate repositioning of the system.

15. The system for storing a supply of cable according to claim 1 wherein there is a shoulder strap on the container that can be engaged by a user to facilitate transportation of the system by a user.

16. The system for storing a supply of cable according to claim 7 wherein the core has a surface that bears against part of the support assembly to guide turning movement of the supply of wrapped cable around the first axis.

17. The system for storing a supply of cable according to claim 16 wherein the core surface bears against part of the support assembly on the lid to guide turning movement of the supply of wrapped cable around the first axis.

18. The system for storing a supply of cable according to claim 3 wherein a frangible sheet layer is applied around the supply of wrapped cable to confine the cable and the sheet layer is progressively ruptured as the cable is controllably paid out from the storage space.

19. The system for storing a supply of cable according to claim 1 in combination with at least one pouch for a plurality of discrete objects that is releasably supported upon the container.

20. The system for storing a supply of cable according to claim 1 wherein the container has a bottom wall with a plurality of discrete support feet projecting therefrom.

21. The system for storing a supply of cable according to claim 1 wherein the opening is bounded by an edge defined at least in part by a material with high friction characteristics that resists guided sliding movement of wire extending outwardly through the opening inwardly back into the storage space.

22. The system for storing a supply of cable according to claim 4 wherein the lid is releasably snap fit to the peripheral wall.

23. The system for storing a supply of cable according to claim 8 wherein the system further comprises a brake assembly on the container through which a variable friction force can be applied to at least one of the spaced flanges to resist turning of the supply of wrapped cable around the first axis.

24. The system for storing a supply of cable according to claim 3 wherein the cable is coaxial cable.

25. A method of storing and controllably paying out cable from a wrapped supply of the cable, the method comprising the steps of:

providing a container with a storage space bounded by a cylindrical peripheral wall and a bottom wall and having an open top that is selectively blocked by a lid;
directing a supply of wrapped cable through the open top into the storage space so that the supply of wrapped

cable is operatively placed and cooperates with the container to allow the supply of wrapped cable to be turned guidingly within the storage space around a first axis;
directing the cable from within the storage space through the peripheral wall; and

pulling the cable extended through the peripheral wall to thereby cause the supply of wrapped cable to turn around the first axis and thereby cause cable to be controllably paid out through the peripheral wall.

26. The method of storing and controllably paying out cable according to claim 25 wherein the cable is coaxial cable.

27. The method of storing and controllably paying out cable according to claim 25 wherein the first axis extends between the bottom wall and open top.

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