AUTOMATIC REWIND DEVICE WITH UNIVERSAL COUPLING FOR USE WITH GARDEN OR LAWN HOSE

Inventor: Linda Censoprano, Foster City, CA (US)

Correspondence Address:
FLIESLER MEYER LLP
650 CALIFORNIA STREET, 14TH FLOOR
SAN FRANCISCO, CA 94108 (US)

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ABSTRACT
An automatic rewind device with universal coupling for use with garden or lawn hose. As described herein, the rewind device includes two couplings connected by a spring-loaded cable. Each of the couplings are adapted to connect to one of a faucet or hose wand, lawn tool, or distant end of a hose. When the rewind device is installed, the couplings are connected to the faucet and hose wand so that a garden or lawn hose can be installed alongside the cable. In accordance with an embodiment the garden or lawn hose is a spiral hose, and the cable can be threaded through the spiral. To use the lawn hose, a gardener can pull on and extend the cable, which exerts a force on the spring. When finished, the gardener can press a button to release the spring and the rewind device then automatically retracts the hose toward the faucet. In this manner, the hose can be conveniently retracted and stored, including in some instances left to hang from the faucet, for future use. Since the rewind device can include universal couplings, it can be retrofitted to existing hoses of different dimensions and tubing diameters.
AUTOMATIC REWIND DEVICE WITH UNIVERSAL COUPLING FOR USE WITH GARDEN OR LAWN HOSE

CLAIM OF PRIORITY


FIELD OF INVENTION

[0002] The invention is generally related to gardening and other tools, and is particularly related to an automatic rewind device with universal coupling for use with a garden or lawn hose.

BACKGROUND

[0003] For many people, a common weekend activity is gardening and spending time outdoors. According to the National Gardening Association, 70 percent or approximately 80 million U.S. households participated in one or more lawn and garden activities in 2007, resulting in a total of over $35 billion in annual retail sales of lawn and garden products.

[0004] A substantial portion of these sales are related to activities such as lawn care, growing indoor houseplants, flower gardening, and landscaping. The typical amount spent by consumers has increased on a yearly basis, with increased interest in maintaining and getting the most from a beautiful garden.

[0005] One of the most recognizable tools in any gardener’s shed is a garden or lawn hose, and indeed some gardeners keep a variety of hoses of different lengths, shapes, and material type that are best suited for the different tasks that gardener may undertake. Unfortunately, the very nature of hoses mean they are generally unwieldy, and efforts have been made to make their handling and storage more efficient. This is the area that embodiments of the invention are designed to address.

SUMMARY

[0006] Described herein is an automatic rewind device with universal coupling for use with garden or lawn hose. As described herein, the rewind device includes two couplings connected by a spring-loaded cable. Each of the couplings are adapted to connect to one of a faucet or hose wand.

[0007] When the rewind device is installed, the couplings are connected to the faucet and hose wand, lawn tool, or even the distant end of a hose, so that a garden or lawn hose can be installed alongside the cable. In accordance with an embodiment the garden or lawn hose is a spiral hose, and the cable can be threaded through the spiral.

[0008] To use the lawn hose, a gardener can pull on and extend the cable, which exerts a force on the spring. When finished, the gardener can press a release button to release the spring and the rewind device then automatically retracts the hose toward the faucet. In this manner the hose can be conveniently retracted and stored, including in some instances left to hang from the faucet, for future use.

[0009] Since the rewind device can include universal couplings, it can be retrofitted to existing hoses of different dimensions and tubing diameters.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 shows an example of a wall-mounted garden hose reel.

[0011] FIG. 2 shows an example of a garden hose reel that is mounted in a wheeled cart.

[0012] FIG. 3 shows an example of a spiral-shaped garden hose and hose wand.

[0013] FIG. 4 shows an example of a spiral-shaped garden hose as it might be stored on a wall.

[0014] FIG. 5 shows an example of an automatic rewind device for use with a garden hose in accordance with an embodiment of the invention.

[0015] FIG. 6 shows a schematic cutaway of an automatic rewind device for use with a garden hose in accordance with an embodiment of the invention.

[0016] FIG. 7 shows an example of an automatic rewind device as it can be used with a hose wand in accordance with an embodiment of the invention.

[0017] FIG. 8 shows how the automatic rewind device can be coupled with a garden hose in accordance with an embodiment of the invention.

[0018] FIG. 9 shows how the automatic rewind device allows the garden hose to be extended and used in accordance with an embodiment of the invention.

[0019] FIG. 10 shows how the automatic rewind device allows the garden hose to be automatically retracted in accordance with an embodiment of the invention.

DETAILED DESCRIPTION

[0020] As described above, the very nature of garden or lawn hoses mean they are generally unwieldy and difficult to rewind and store. In accordance with an embodiment, described herein is an automatic rewind device with universal coupling for use with garden or lawn hose. The rewind device includes two couplings connected by a spring-loaded cable. Each of the couplings are adapted to connect to one of a faucet or hose wand, lawn tool, or distant end of a hose.

[0021] When the rewind device is installed, the couplings are connected to the faucet and hose wand so that a garden or lawn hose can be installed alongside the cable. In accordance with an embodiment the garden or lawn hose is a spiral hose, and the cable can be threaded through the spiral.

[0022] FIG. 1 shows an example of a wall-mounted garden hose reel 10. The wall-mounted garden hose reel reflects attempts to store and provide use to garden hoses. Such devices are particularly useful for storing large hoses. However, a wall-mounted hose reel must be permanently fixed to a wall, where it may be considered unsightly. Additionally, wall-mounted hose reels are typically manual devices, and may be difficult to rewind after use, particularly for elderly gardeners.

[0023] FIG. 2 shows an example of a garden hose reel that is mounted in a wheeled cart 12. Such devices are again particularly useful for storing large hoses. However, this type of hose reel is not well suited to small or spiral hoses, and
since it takes up yard space is generally not left in place but is instead wheeled to a storage location when not in use.

[0024] FIG. 3 shows an example of a spiral-shaped garden hose 14 and hose wand 16. In recent years, spiral hoses have been introduced because of their relatively compact nature, and because their spiral shape tends to allow for easier rewinding and storage. However, despite their spiral shape, the hoses are generally still incapable of retracting by themselves.

[0025] FIG. 4 shows an example of a spiral-shaped garden hose as it might be stored on a wall 18. Even though a spiral hose can be easier coiled than a straight or linear hose, little progress has been in the manner of storing such a hose. Generally the spiral hose is suspended on a wall such as shown in FIG. 4, and can remain attached to or separate from a nearby faucet.

[0026] FIG. 5 shows an example of an automatic rewind device for use with a garden hose in accordance with an embodiment of the invention. As shown in FIG. 5, in accordance with an embodiment the automatic rewind device 20 includes two couplings 22, 24 connected at a distance by a spring-loaded cable 26. Each of the couplings are adapted 25, 27 to connect using a thread, pressure, clamp, clip, or other universal means to one of a faucet, hose wand, or other apparatus. When the rewind device is installed, the couplings are connected respectively to the faucet and either a hose wand or a distal end of a hose so that a garden or lawn hose can be installed alongside the cable and between the couplings. To use the hose, a gardener can pull on and extend the cable, which exerts a corresponding force on the spring. They can then use the hose for their watering duties. When finished, the gardener can press a release button 34 to release the spring. The rewind device then automatically retracts, or assists in retracting, the distal end of the hose toward the faucet.

[0027] FIG. 6 shows a schematic cutaway of an automatic rewind device for use with a garden hose in accordance with an embodiment of the invention. As shown in FIG. 6, in accordance with an embodiment the rewind device includes a housing having therein a spring 30 that can be tensioned against a support 32. While the cable 26 is being pulled from the device a force is exerted on the spring. At any point the cable can be temporarily halted and a spring loaded stop 36 used to automatically hold the extension of the cable (and the hose) at that position. To release the cable again, the release button 34 can be depressed, which releases the stop, and in turn allows the spring to automatically return and retract the cable. The process can be repeated as necessary to extend and retract the cable and the hose.

[0028] FIG. 7 shows an example of an automatic rewind device as it can be used with a hose wand in accordance with an embodiment of the invention. As shown in FIG. 7, since the couplings are adapted to either connect using a thread to one of a faucet or hose wand, a hose wand 16 can be easily attached and left in place. A hose, including a spiral hose can then be attached or threaded in the space between the two couplings (although in the case of a spiral hose the cable can be threaded through the spiral, before attaching the hose to the couplings).

[0029] FIG. 8 shows how the automatic rewind device can be coupled with a garden hose in accordance with an embodiment of the invention. As shown in FIG. 8, in accordance with an embodiment the cable 26 of the automatic rewind device can be threaded through a spiral hose 42, and attached, using the couplings 22, 24, between a faucet 40 and the hose at one end, and between the hose and a hose wand 16 at the other end.

[0030] FIG. 9 shows how the automatic rewind device allows the garden hose to be extended and used in accordance with an embodiment of the invention. As shown in FIG. 9, to use the hose, a gardener can simply pull on the hose wand to lengthen 46 the cable. The release button can be depressed 48 to allow for the cable to be shortened or lengthened as desired.

[0031] FIG. 10 shows how the automatic rewind device allows the garden hose to be automatically retracted in accordance with an embodiment of the invention. As shown in FIG. 10, to retract and store the hose, the gardener can press the release button 48 to release the stop and allow the spring to retract 50 the cable. As the cable retracts it draws the body of the hose closer to the faucet. In accordance with an embodiment, the entire hose assembly, including rewind device and hose wand, can be left attached or even suspended from the faucet, for ease of storage and subsequent use.

[0032] The foregoing description of the present invention has been provided for the purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations will be apparent to the practitioner skilled in the art.

[0033] Particularly it will be evident that additional forms of coupling the device to the faucet, hose, wand or other lawn or garden equipment, and of implementing the rewind mechanism can be provided either as alternatives or in addition to those described above, while remaining within the spirit and scope of the invention. Other types of housing can also be used, for example screw-on type housings, enclosures, and other types of release buttons, such as triggers. The automatic rewind feature can also be incorporated into a combination hose and hose wand system so that an additional housing containing the spring and release button is not necessary.

[0034] The embodiments were chosen and described in order to best explain the principles of the invention and its practical application, thereby enabling others skilled in the art to understand the invention for various embodiments and with various modifications that are suited to the particular use contemplated. It is intended that the scope of the invention be defined by the following claims and their equivalent.

What is claimed is:

1. An automatic rewind device with universal coupling for use with garden or lawn hose, comprising:
   - a first coupling adapted to connect to one of a faucet or hose wand;
   - a second coupling also adapted to connect to one of a faucet or hose wand;
   - a flexible cable connecting the first coupling and the second coupling and capable of being extended or retracted;
   - a spring biased so that while the cable is pulled from the device a force is exerted on the spring; and
   - wherein when the rewind device is installed, the couplings are connected to the faucet and hose wand so that a hose can be installed alongside the cable, and so that a gardener can pull on to extend the cable, which exerts a force on the spring, and when finished, the spring is released and the device automatically retracts the hose toward the faucet.

2. The automatic rewind device of claim 1 wherein the first coupling and second coupling are threaded to accept one or more of a lawn hose, or other lawn or garden hose equipment.
3. The automatic rewind device of claim 1 wherein the device includes a spring loaded stop and a release button, and wherein while the cable is pulled from the device a force is exerted on the spring, and at any point the cable can be temporarily halted and the stop will hold the extension at that position, and wherein to release the cable, the release button can be depressed, which releases the stop, and allows the spring to return and retract the cable.

4. The automatic rewind device of claim 1 wherein the hose is a spiral hose and wherein the cable is threaded through the spiral before attaching the couplings to the faucet and the hose wand.

5. The automatic rewind device of claim 1 wherein the rewind device can be left attached to the faucet and the hose for storage of the hose.

6. A hose including an automatic rewind device, comprising:

   a spiral hose
   a first coupling adapted to connect the hose to a faucet;
   a second coupling adapted to connect to the hose to a hose wand;
   a flexible cable connecting the first coupling and the second coupling and capable of being extended or retracted;
   a spring biased so that while the cable is pulled from the device a force is exerted on the spring; and
   wherein the couplings are connected to the faucet and hose wand, and the flexible cable is threaded through the spiral so that a gardener can pull on and extend the cable, which exerts a force on the spring, and when finished, the spring can be released and the hose automatically retracted toward the faucet.

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