

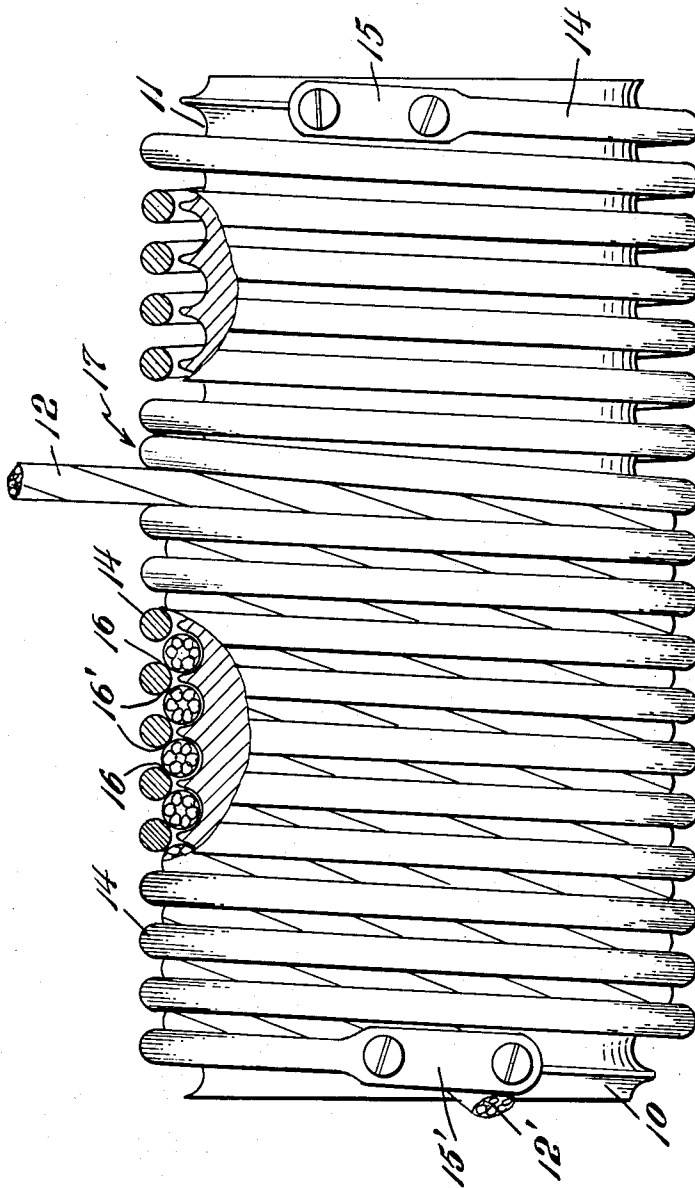
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CABLE DRUM

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2,755,036

CABLE DRUM

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2 Claims. (Cl. 242—117)

This invention relates to a cable drum and more specifically to a cable drum of the helical groove type which is adapted to space adjacent turns of the cable wound thereupon.

In cable drums of the class described, there has always been present the problem of keeping the cable on the drum proper should for any reason there be a relaxing of tension in the free end of the cable wound thereupon. This is particularly true should, for instance, it be desired to completely release the load upon the free end of the cable, in which case the residual springiness, which is present in the cable when it is wound upon a drum, will allow the cable to become disengaged with the drum, the adjacent turns becoming entangled one with another.

It is therefore one of the objects of my invention to overcome the foregoing difficulties.

Another object of my invention is to provide a cable drum having means coupled therewith which will prevent release of the cable wound thereupon.

A still further object of my invention is to provide a device which may be attached to a cable drum which will not only guide the cable to be wound thereupon in adjacent helices but will additionally hold the cable wound thereon in close contact with the drum.

With these and other objects in view, the invention consists of certain novel features of construction as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawing:

The single figure is a top view of the winding drum and the cable holding device of my invention with certain parts thereof shown in broken section.

In proceeding with my invention, I provide a circular drum with a bore therethrough so that the drum may be mounted upon a shaft. On the periphery of the drum I mount a helical spring retaining member having a predetermined pitch in accordance with the diameter of the cable which is to be used on the drum and preferably, although not necessarily, I provide a helical groove on the surface of said drum having a pitch equal to the pitch of the aforementioned spring retaining member.

With reference to the drawing, 10 designates the winding drum which is shown as being provided with a helical groove 11 on the peripheral surface thereof. In the embodiment shown, the pitch of groove 11 is chosen so that the cable 12 will lie in such a way that the successive turns thereof are spaced approximately half a diameter from each other. A spring-like retaining member 14, which is helically wound in a pitch equal to the pitch of the groove 11 is mounted over the drum 10 by fastening the lugs 15—15' thereto. One of the lugs 15' additionally serves as a clamp for the cable 12, and end 12' thereof being clamped between the lug 15' and the drum 10. As will be seen, particularly by referring to the partial cross sections, the spring-like retaining member 14 is spaced from the surface of the drum 10 in a very slight amount so that when a cable 12 is seated in one of the grooves 11, retaining member 14 will contact ad-

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jacent sides of the cable 12, such as at 16 and 16' and hold the cable 12 snugly in the groove 11.

Should it be desired to withdraw the cable 12, the adjacent helices of the spring member 14 will spring apart axially of the drum sufficiently, such as shown at 17, to allow the cable 12 to be withdrawn from the drum 10. With the cable 12 partially withdrawn, as shown in the drawing, it will be seen that adjacent turns of the spring member 14 will grip the end of the cable 12 such as at 17. Thus, should the tension be released from the end of the cable 12, there will be no tendency for the remaining portion of the cable which is wound upon the drum 10 to become loose thereon, the adjacent turns thereof entangling one with the other. Additionally, the adjacent turns of the spring member 14 which grip the cable 12 hold the cable in close contact with the drum throughout the wound portion, further preventing the cable from becoming dislodged.

Alternately, it is possible to completely eliminate the grooves 11 formed on the periphery of the drum 10, since the helical fashion of the spring retaining member 14 is such that it will serve as a guiding means to lay the adjacent turns of the cable 12 upon the drum 10 in a very even manner. Thus, the spring-like retaining member 14 will not only hold the cable 12 against the surface of the drum 10 but will also serve to properly space the adjacent turns thereof.

The spring-like member 14 has additional utility when greased cables are used. As is known, the grease tends to accumulate dirt and large particles such as stones, etc. Such an accumulation may interfere with the winding of the cable upon a drum. However, with the present structure there is a wiping action that occurs as the cable 12 passes between the adjacent helices, such as at 17, and is wound upon the drum, thus removing a great deal of the accumulation of foreign matter.

I claim:

1. A drum for reeling cable comprising a circular body of finite length having a helically grooved reeling surface, a helical resilient coil of wire of circular cross section screws for fastening said coil to said body at each end thereof, said coil being of a diameter to be in spaced relation to the bottom of said grooves a distance of at least the radius of the grooves but not greater than 1.73 times the radius of the grooves, the turns of said coil lying over the ribs between said grooves, the diameter of said wire being not greater than the diameter of said grooves.

2. A drum for reeling cable comprising a circular body of finite length having a reeling surface, a helical resilient coil of wire of circular cross section, screws for fastening said coil to said body at each end thereof, said coil being of a diameter to be in spaced relation to said reeling surface, said spacing being less than the diameter and greater than the radius of the cable, the successive turns of said wire spaced from each other a distance at least equal to the spacing between successive turns of the cable but not greater than twice the distance between successive turns of the cable so that each turn of said wire will tangentially contact adjacent turns of said cable at points between 0° and 60° of a line drawn diametrically through the centers of said cable.

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