

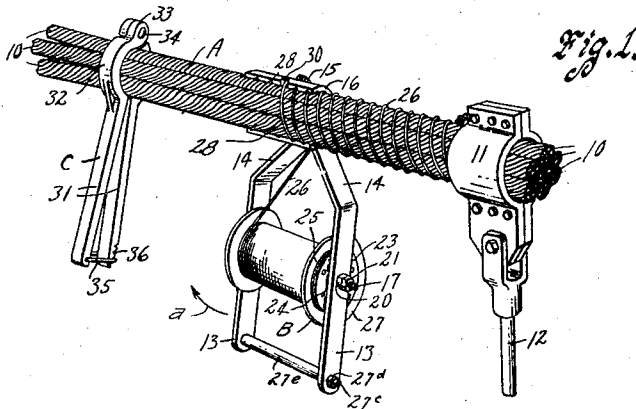
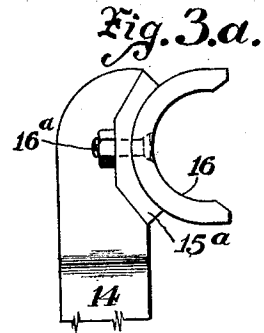
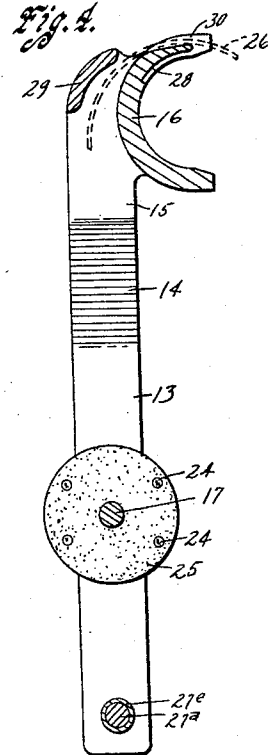
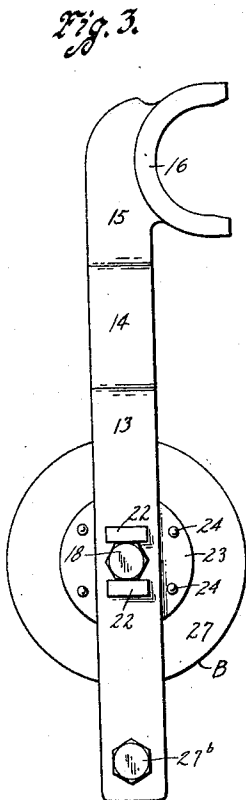
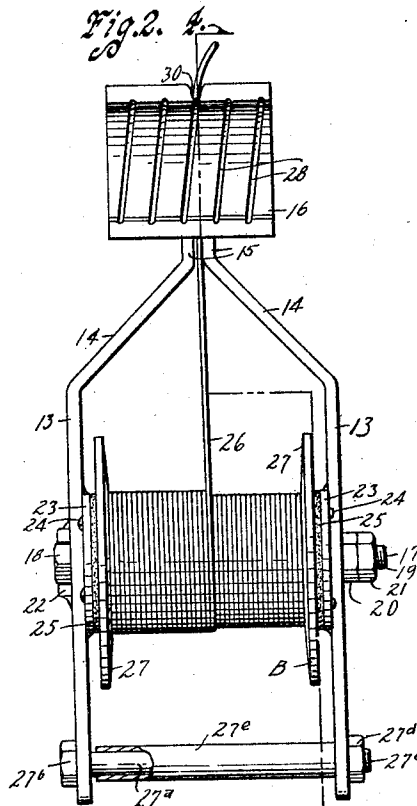
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APPARATUS FOR WRAPPING CABLE

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APPARATUS FOR WRAPPING CABLE

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The object of my invention is to provide a simple and inexpensive apparatus for wrapping cable.

With this and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of a length of cable showing my apparatus in position for performing the wrapping operation.

Figure 2 is a front elevation of the apparatus.

Figure 3 is a side elevation of the same.

Figure 3a is a detail, sectional view showing a slightly modified form of my device in which the shells are detachable; and

Figure 4 is a detailed, sectional view taken on the line 4—4 of Figure 2.

In various kinds of construction work, it is the practice to use main cables made of several secondary cables, each of which is composed of numerous strands of individual, galvanized steel wires or the like. The wires of the secondary cables are usually twisted together. The secondary cables composing the main cable are usually straight rather than twisted and unless they are wrapped in some way, one secondary cable chafes upon the other, thus destroying the galvanizing thereon, causing wear and so on. The secondary cables may sometimes tend to separate. All this chafing and separation of the secondary cables is harmful and considerably shortens their lives.

It is therefore desirable to provide some means for wrapping the main cables after they have been put in place.

I have provided a very simple apparatus by which this wrapping operation may be done. The wrapping must be done with comparatively heavy wire and, of course, should

be done with a uniform and desired number of turns to the foot or the yard.

By means of my apparatus, the wrapping can be conveniently done and the proper number of turns per foot may be uniformly secured.

In the accompanying drawing, I have shown a main cable, indicated generally by the reference character A, comprised of a number of secondary cables 10.

I have shown in Figure 1 a section of main cable, which at one point is gripped by a suitable clamp 11. A cable of this kind may be used for instance in a suspension bridge and the clamp may be connected by means of a rod 12 with the bridge structure below.

My improved apparatus comprises a frame or spool holder, comprising two parallel spaced side members 13 which at one end have portions 14 inclined toward each other. At their adjacent ends, the portions 14 terminate in projecting parallel portions 15 spaced from each other and fastened to the outside of a semi-cylindrical shell or the like 16 as by welding.

A heavy rod or the like 17 is extended through the arms 13 and has on one end a head 18 like the head of a bolt and has its other end threaded as at 19 to receive a nut 20 and a lock nut 21.

One of the arms 13 may be provided with lugs 22 adjacent the head 18 to prevent the turning thereof.

Fastened to the inner faces of the arms 14 are metal discs or the like 23, through which the rod 17 extends.

Detachably fastened to the inner faces of the discs 23 by means of bolts, rivets or the like 24 are friction discs 25 of fiber or other suitable material.

The wire 26 is preferably wound on a spool B having the discs 27 at its ends. The spool has a bore and may be mounted on my frame, and for this purpose, the rod 17 is removed, the spool is put in place, and the rod is then

inserted through the frame members 13 and the spool as shown for instance in Figure 2.

The nuts 20 and 21 may be adjusted for regulating the friction imposed by the discs 25 on the spool.

A rod or the like 27a is extended through the handle members 13 at their ends farthest from the shell 16 and is provided with a head 27b and a threaded end 27c, which latter receives the nut 27d.

On the rod 27a between the arms 13 is the loosely rotatable sleeve or the like 27e. The rod 27a and sleeve 27e form a handle by which the workmen may manipulate my apparatus.

The shell 16 is provided on its interior with regularly spaced grooves 28 of proper size to receive the wire 26 and arranged to form parts of spirals. The successive grooves 28 are spaced apart the proper distance for placing the desired number of turns of the wire on the cable.

In Figure 3a is shown a slightly modified form of the device in which the shell 16a similar to the shell 16 is detachably mounted on the frame by means of bolts 16b having their heads sufficiently countersunk in the shell.

In preparing to wrap a cable, the wire 26 is drawn from the spool around the outside of the shell 16.

The portions 15 of the frame members 13 are connected near their outer ends by a cross member 29, as shown best in Figure 4, and the wire is threaded between the members 15 and between the member 29 and the shell 16.

The outside of the shell is provided in line with the space between the members 15 with a groove 30 to guide the wire. The free end of the wire is then fastened as for instance to the clamp 11 and the wire is given a couple of turns around the cable. These turns may be adjusted manually until they are properly spaced, so that they will fit a couple of the grooves 28.

For instance, if the cable A shown in Figure 1 is to be wrapped from the clamp 11 toward the left, the shell 16 is put in position so that the two right-hand grooves 28, as shown in Figure 2, receive two turns of wire on the cable. To start with, the apparatus is slowly rotated around the cable A in the direction indicated by the arrow a in Figure 1, until the wrapping wire becomes taut. Thereafter, two workmen can continue to swing the apparatus around the cable at a greater rate of speed for performing the wrapping operation. The braking apparatus already mentioned will operate to maintain the wrapping wire taut and the wire can be quite rapidly wrapped on the cable.

The groove 30 is spaced from the adjacent grooves 28, so that after the apparatus follows the last two turns of wire on the cable, the wire traveling through the groove 30

will make another turn of wire on the cable properly spaced from those already thereon.

By means of this apparatus, a regular and uniform wrapping can be secured.

In order to make the wrapping more convenient and accurate, I preferably use detachable clamp members for holding the secondary cables 10 closely together. Such a detachable clamp member is indicated at C in Figure 1. It comprises a couple of handles 31, having at one end curved receiving members 32, which at their extreme parts have ears 33 which receive a pivot pin 34. By pulling the handles toward each other, the cables 10 may be tightly gripped and brought closely together.

A yoke 35 is pivoted to the outer end of one handle 31 and is adapted to fit over the other handle 31 and to coact with notches 36 therein for locking the clamp member C in place on the cable.

The tension on the wire may be regulated by loosening or tightening the nuts 20—21 for thus controlling the friction between the discs 25 fixed to the frame and the discs 27 forming parts of the wire spool.

After the wire on one spool has been used, the loose end is fastened on the cable in any suitable way, or may be fastened to the wire on another spool, where that is desirable for continuing the wrapping.

It will be obvious that by varying the size of the grooves 28, my apparatus may be adapted for use with wires of different diameters. Likewise by varying the spacing of the grooves 28 with relation to each other and with relation to the groove 30, my apparatus may be adapted for putting different numbers of turns of wire on the cable per foot.

The shell 16 may be made detachable if desirable for adapting one apparatus for use with different sizes of wire or for putting different numbers of turns per foot on the cable.

It is obvious that numerous changes might be made in the details of the construction and arrangement of parts of my improved wrapping apparatus, and it is my purpose to cover by my present application and the patent to be issued thereon any such modifications in structure or use of material or employment of mechanical equivalents, which may be within the scope of my invention and my claims.

I claim as my invention:

1. A shell, having an inner semi-cylindrical face adapted to fit on a cable provided with spaced grooves in the forms of parts of spirals to fit wire already spirally wound on a cable or the like and to guide the spiral spacing of the wire being wound, a spool carrying frame associated with said shell, said shell having guide means for wire drawn from the spool.

2. A shell, having an inner semi-cylindrical face adapted to fit on a cable provided with spaced grooves in the forms of parts of spirals, a spool carrying frame associated with said shell, said apparatus having guide means for wire drawn from the spool, and having means for imposing friction on a spool held by it.

3. A shell having an inner semi-cylindrical face adapted to fit on a cable and provided with interior spaced grooves in the forms of parts of spirals, a spool carrying frame associated with said shell, said apparatus having means for guiding wire drawn from the spool to the inner face of the shell, and having means for imposing friction on a spool held by it, and having a handle.

4. In a structure of the kind described, a frame having spaced side members, a spool rotatably supported between the side members, a shell carried by the frame at one end having an inner semi-cylindrical face provided with spaced guide grooves in the forms of parts of spirals, means for guiding wire drawn from the spool around the outside of the shell, and a handle between the side members of the frame at the ends thereof opposite the shell.

5. In a structure of the kind described, a frame having spaced side members, a spool rotatably supported between the side members, a shell carried by the frame at one end having an inner semi-cylindrical face provided with spaced guide grooves in the forms of parts of spirals, means for guiding wire drawn from the spool around the outside of the shell, a handle between the side members of the frame at the ends thereof opposite the shell, and means for detachably mounting the shell on the frame.

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