March 14, 1967 H. D. GREANEY ETAL 3,309,038

STRING WINDING DEVICE

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Fig. 1

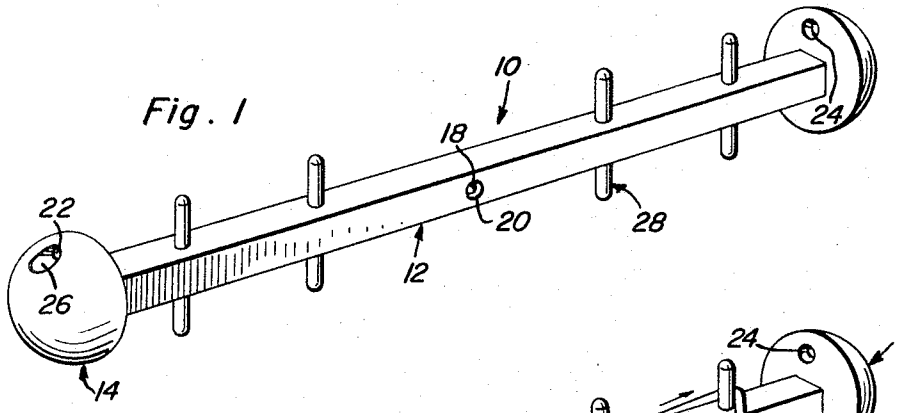


Fig. 2

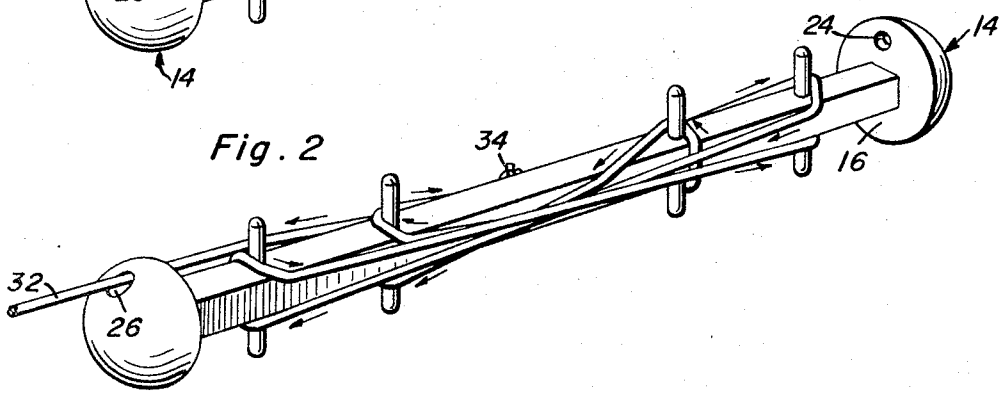
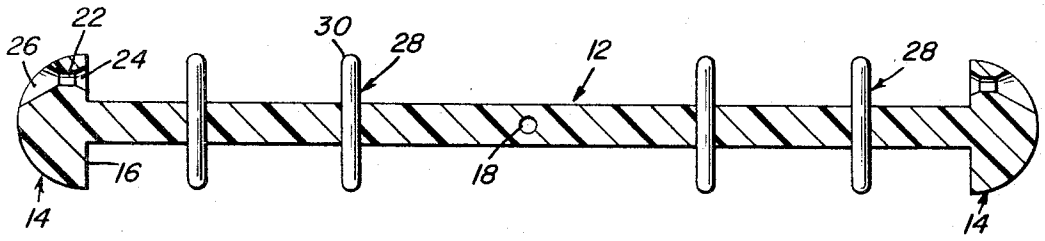


Fig. 3



Harry D. Greaney
John E. Sullivan
INVENTORS

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

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STRING WINDING DEVICE

Harry D. Greaney, 26 Pearl St., and John E. Sullivan, 46 Clinton Ave., both of Holyoke, Mass. 01040

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The instant invention is generally concerned with the storage of large amounts of string or cable, and more particularly relates to a device upon which the string can be rapidly and efficiently wound.

Basically, it is a primary object of the instant invention to provide a string winding device which can be conveniently utilized for winding all types of strings, cables, wires, and even kitting yarn.

A further object is to provide a string winding device upon which a maximum amount of string can be wound in a non-tangling manner and in a manner which enables the string to be quickly dispensed therefrom.

In conjunction with the above object, it is also a significant object of the instant invention to provide a device upon which the string can be rapidly and simply wound by a simple manipulation of the device.

Furthermore, it is an object of the instant invention to provide a string winding device which is of a simple though highly sturdy nature capable of accommodating a maximum amount of wound string within a minimum amount of space.

In addition, it is a significant object of the instant invention to provide a string winding device which includes means for guiding the string during the winding thereof, means for maintaining the string in a predetermined position on the winding device, and means for enabling an anchoring of the opposite ends of the string.

Basically, the device of the instant invention consists of an elongated rectangular rod having a transverse string hole or passage centrally therethrough and a pair of enlarged semi-spherical heads at the ends thereof. The center transverse passage has an enlarged countersunk portion at one end thereof so as to form a seat for the knotted end of the string which in turn passes through the central passage so as to anchor this end of the string with the string subsequently being wound substantially longitudinally along the bar and over pegs or pins projecting laterally from the bar to both sides of the central passage. As the second end of the string is approached, the string is passed through either of two passages, one in each of the semi-spherical heads, and knotted at the outer end thereof, this knotted end also being positioned within a countersunk portion.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the string winding device of the instant invention;

FIGURE 2 is a view similar to FIGURE 1 schematically illustrating the various paths which might be taken by the string upon being wound on the device; and

FIGURE 3 is an enlarged longitudinal cross-sectional view through the device.

Referring now more specifically to the drawings, reference numeral **10** is used to generally indicate the string winding device comprising the instant invention. This device, which may be of any suitable lightweight metal, wood or rigid plastic, includes an elongated rectangular bar **12** which terminates, at the opposite ends thereof, in enlarged semi-spherical heads **14**. These heads **14**, either integrally formed with the bar **12** or rigidly secured thereto, are outwardly directed along the longitudinal axis of the bar **12** and have inwardly facing flat circular faces **16** which project laterally beyond the bar **12** peripherally thereof.

The bar **12** includes a central passage or opening **18** extending transversely therethrough at the center thereof, this passage having an enlarged or countersunk portion **20** at one end thereof.

Each of the semi-spherical enlarged heads **14** also includes an elongated passage or hole **22** therethrough at a point spaced outwardly from the bar **12** and extending generally parallel to the bar **12**. Each of these passages **22** includes, at the inner end thereof, a countersunk portion **24**, and at the outer end thereof, an enlarged countersunk portion **26**.

Finally, the bar **12** is provided with, between the central passage **18** and each head **14**, a pair of spaced pins or pegs **28** spaced longitudinally along the bar **12** and projecting completely through the bar **12** so as to extend beyond the opposite sides thereof, these pins or pegs **28** being orientated perpendicular to the axis of the central passage **18**. Each of the pins or pegs **28** is of course rigidly fixed to the bar **12** and has smoothly rounded outer ends **30**. Incidentally, it should be appreciated that, if so desired, each of the pins or pegs **28** can be formed in two separate portions, these portions being secured to opposite sides of the bar **12** and projecting therefrom, rather than being formed of a single elongated pin.

In using the device **10**, a first end of the string **32** is passed through the central passage or hole **18** and knotted, as at **34**, this knot being set into the countersunk portion **20**. Next, the string is wound in any suitable manner longitudinally along the bar **12** from one side of the central passage **18** to the other with the string **32** passing over the projecting portions of the pegs **28** as well as crossing over the bar itself, the device **10** being held at the center thereof and manipulated by a rotating of the wrist in substantially the same manner utilized in winding kite string on a stick. While of course not limited thereto, it is contemplated that the string follow one path for a specific number of loops and subsequently move to another path, the longitudinally spaced pairs of pegs to either side of the central passage **18** enabling a wide range of different paths while at the same time positively retaining the string against any tendency for slippage along the bar **12**, thereby maintaining the proper orientation of the string for a rapid unwinding. As the second end of the string is approached, this end is passed through either of the passages **22**, the inner countersunk portion **24** facilitating the insertion of the string therein. The extreme outer end of the string **32** is then knotted and the knot set into the enlarged countersunk portion **26** in a manner so as to prevent any accidental disengagement thereof.

The semi-spherical ends **14**, as will be appreciated, allow the device **10** to be rapidly manipulated both during the winding and unwinding without any danger of the string catching on these ends, and at the same time acting in the manner of a shoulder for preventing any possibility of the string **32** slipping off the ends of the bar **12**. In addition, it will be noted that these ends **14** project radially outward from the bar **12** substantially the same distance as the pegs **28** and, in this manner, will tend to enclose and protect the string wound on the device **10** should the wound device, for example, be dropped.

Referring specifically to FIGURE 2, it will be noted that several of the paths which can be taken by the string **32** have been schematically illustrated thereon, it of course being appreciated that several loops of the string **32** can be taken along each path between two or more projecting portions of the pegs or pins **28**. For purposes of clarity, small arrows have been provided so as to illustrate a proposed series of different paths which can be taken by

the string 32 so as to provide for the placing of a substantial amount of string in a systematic and untangled manner on the device 10.

From the foregoing, it will be appreciated that a highly novel string winding device has been defined, this device incorporating simplicity and ease of manipulation in conjunction with a construction which enables the efficient winding of a maximum amount of string within a minimum amount of space.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A string winding device comprising an elongated rigid bar, said bar having a transverse string anchoring passage extending centrally therethrough, string-retaining means projecting laterally from said bar at longitudinally spaced points therealong, said string-retaining means being located on opposite sides of the central passage and projecting laterally beyond opposite sides of said bar, enlarged heads fixed to the opposite ends of said bar, said heads being semi-spherical in shape, and an elongated string anchoring passage extending through each semi-spherical head generally parallel to the bar and laterally outward therefrom.

2. The device of claim 1 wherein both ends of the passage through each semi-spherical head are countersunk.

3. A string winding device comprising an elongated rigid bar, said bar having an enlarged head fixed to each end thereof, said bar having a string anchoring passage passing transversely through approximately the center thereof, a pair of aligned rigid members fixed to the bar between the central passage and each head, said aligned rigid members projecting laterally beyond opposite sides of said bar and constituting string-retaining means, and an elongated string anchoring passage extending through at least one of said enlarged heads.

4. The device of claim 3 including a second pair of aligned rigid members fixed to the bar between the central passagge and each head, said second pair of members

being longitudinally spaced from the first pair of aligned members on the corresponding portion of the bar and similarly projecting laterally beyond both sides of the bar, said heads being semi-spherical in shape.

5. A string winding device comprising an elongated rigid bar, said bar having a transverse string anchoring passage extending centrally therethrough, string-retaining means projecting laterally from said bar at longitudinally spaced points therealong, said string-retaining means being located on opposite sides of the central passage and projecting laterally beyond opposite sides of said bar, enlarged heads fixed to the opposite ends of said bar, and an elongated string anchoring passage extending through each enlarged head generally parallel to the bar and laterally outward therefrom.

6. A string winding device comprising an elongated rigid bar, said bar having a string anchoring means centrally thereon, string-retaining means projecting laterally from said bar at longitudinally spaced points therealong, said string-retaining means being located on opposite sides of the central string anchoring means and projecting laterally beyond opposite sides of said bar, enlarged heads fixed to the opposite ends of said bar, and an elongated string anchoring passage extending through at least one of said enlarged heads generally parallel to the bar and laterally outward therefrom.

7. The device of claim 6 wherein said string anchoring means comprises a transverse passage defined centrally through said bar.

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FRANK J. COHEN, *Primary Examiner.*

W. S. BURDEN, *Assistant Examiner.*