C. F. HAYS.

GRASS ROPE REEL.

APPLICATION FILED FEB. 8, 1919.

1,329,240. Patented Jan. 27, 1920.

Fig. 1.

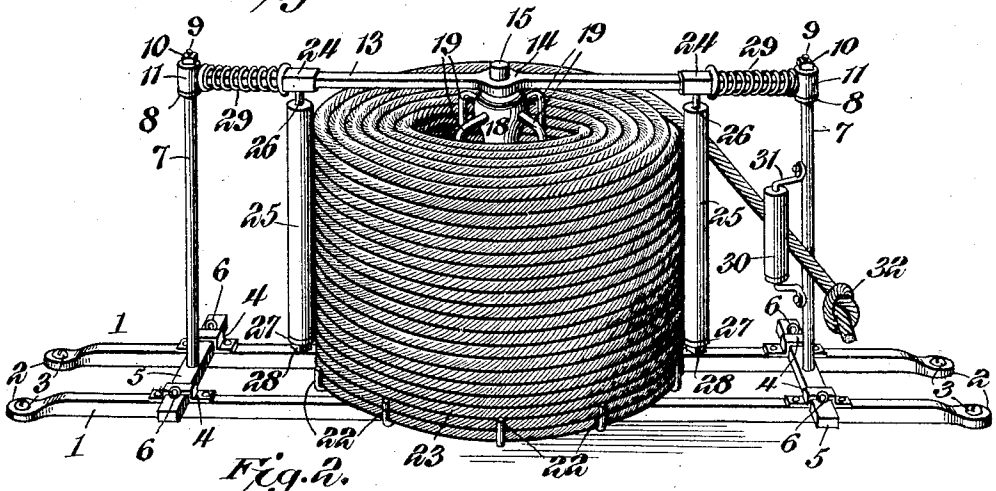


Fig. 2.

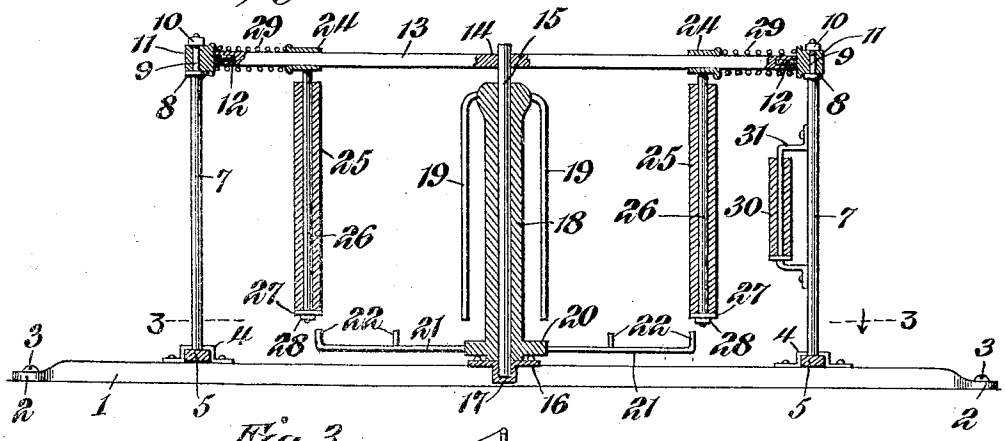
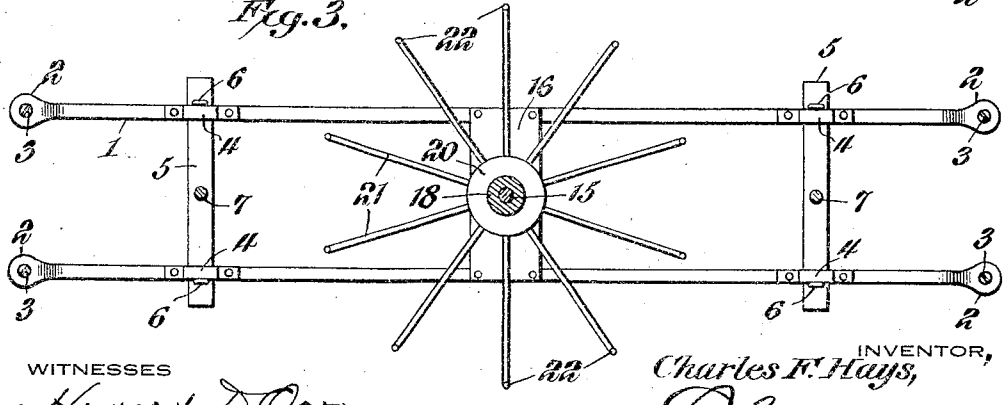


Fig. 3.



WITNESSES

Howard D. Orr.

F. T. Chapman.

INVENTOR,

Charles F. Hays,

BY

E. G. Siggers.

ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES F. HAYS, OF COTTAGEGROVE, TENNESSEE.

GRASS-ROPE REEL.

1,329,240. Specification of Letters Patent. Patented Jan. 27, 1920.

Application filed February 8, 1919. Serial No. 275,839.

To all whom it may concern:

Be it known that I, CHARLES F. HAYS, a citizen of the United States, residing at Cottagegrove, in the county of Henry and State of Tennessee, have invented a new and useful Grass-Rope Reel, of which the following is a specification.

This invention has reference to reels for grass rope, and its object is to provide a reel particularly adapted for such rope, although not necessarily confined in its use to the particular type of rope named.

In accordance with the invention there is provided a rotatable rope support with a central core upon which a coil of rope is mounted and from which the outer end is taken through a suitable guide. Spring-pressed rollers are provided on opposite sides of the coil when mounted on the rotatable part of the reel, these rollers constantly engaging the opposite sides of the coil, thus holding the turns of the coil of rope in upright series, the rollers automatically approaching each other as the coil of rope decreases in diameter on being unwound.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing, but may be changed and modified so long as such changes and modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:—

Figure 1 is a perspective view of the reel with a coil of rope thereon.

Fig. 2 is a longitudinal upright section of the reel, with some parts shown in elevation and the coil of rope omitted, but with the holding rollers spaced as though the coil of rope were present.

Fig. 3 is a section on the line 3—3 of Fig. 2, the coil of rope being omitted.

Referring to the drawing, there is shown a base or support composed of elongated bars 1 having eyes 2 at the ends whereby the bars may be secured to a floor or the like by screws 3 or other fastening means passing through the eyes, thereby holding the bars in substantially parallel spaced relation. Near each end, each bar 1 carries a yoke 4 through matching ones of which cross strips 5 are passed, the strips being traversed by cotter pins 6 or other suitable means holding the strips 5 against longitudinal movement. Erected on each strip 5 is a post 7 rising to an appropriate height. Each post 7 may terminate at its upper end in a shoulder or flange 8 from which projects a reduced extension 9 of the post 7, such extension 9 being threaded for the reception of a nut 10. Traversed by the extension 9 and resting on the flange or shoulder 8 is a block 11 having a threaded stem 12 screwed into one end of a rod 13 of a length to extend between the posts 7 with the blocks 11 at its ends resting on the shoulders 8 and traversed by the extensions 9 of the posts. The rod 13 has an enlargement 14 intermediate of its ends, which enlargement has a passage therethrough to receive the upper end of an arbor or spindle 15. Between the ends of the bars 1 and fast to each is a cross plate 16 formed or provided with a step-bearing 17 for the lower end of the arbor 15.

Carried by the arbor or spindle 15 is an elongated hub 18 provided with depending arms 19 secured at their upper ends to the upper end of the hub 18. The lower end of the hub 18 has a flange 20 from which radiate other arms 21, each terminating at the outer end in an upturned finger 22. The hub 18 with the pendent arms 19 and radiating arms 21 with their terminal fingers 22 constitute a support for a coil 23 of rope, specifically grass rope. The bottom turns of the coil of rope are carried directly by the arms 21 with the fingers 22 exterior to the coil and the coil rising to a suitable height. The coil 23 is held on the reel by the fingers 19 which extend down into the usual axial core space of the coil.

Mounted to slide on the rod 13 are short sleeves 24, the rod 13 and sleeves 24 being of such shape that the sleeves can slide on the rod without turning thereon, or the sleeves may be held in any other suitable manner on the rod to avoid turning on the rod. Each sleeve 24 is provided with a roller 25 carried by a spindle 26 fast to the sleeve in pendent relation thereto. The roller is held on the spindle by a washer 27 and a nut 28 or in other appropriate manner. Surrounding the rod 13 between each sleeve 24 and adjacent block 11 is an expansion spring 29 tending to force the sleeve 24 toward the central portion 14 of the rod

13, thereby imparting a like tendency to the roller 25 to approach the central portion of the rod 13. This results in maintaining the rollers 25 at all times pressed against opposite sides of the coil 23 of rope so as to resist any tendency of the coil of rope to collapse when on the reel. The outer end of the coil of rope is carried between one of the posts 7 and a loose roller 30 carried by a journal bracket 31 fast to the post. The end of the coil of rope is prevented from escaping from between the roller 30 and post 7 carrying it by tying a simple knot 32 in the end of the rope.

As rope is unwound from the coil 23 and the dimensions of the latter are thereby reduced, the rollers 25 automatically follow up the reduction in dimensions of the coil so that such coil of rope is always under sufficient pressure to resist any liability of the coil collapsing or becoming entangled. When a desired amount of rope is withdrawn from the coil such amount may be cut off and then the free end which projects through and beyond the space between the roller 30 and adjacent post 7 has another knot 32 tied therein to prevent any liability of the rope becoming loose.

The reel as a whole is of simple construction, readily assembled or dismantled and sufficiently strong for the purpose, while light in weight. A new coil of rope is readily placed in position, since the rod 13 can be very easily removed to permit removal of the central guide 18 with its arms 19 and the rollers 25, and the rod 13 with the parts carried thereby may be as readily replaced after a new coil of rope has been installed.

The coil is supported on the reel to rotate about an upright axis and the turns of the coil are constantly held, irrespective of the amount of rope taken off the coil, by the rollers 25 which have a constant tendency to approach toward the axis of the coil, thus compensating for reduction in diameter of the coil.

What is claimed is:—

1. A reel structure for a coil of rope, comprising a base, posts erected thereon at spaced points, a bar carried by and connecting the posts, a spindle journaled in the bar and base of the reel structure, a core member carried by the spindle, arms carried by the spindle and constituting a support for a coil of rope, and rollers carried by and slidable along the bar and having springs associated therewith tending to force the rollers toward the axis of rotation of the spindle.

2. A reel structure for a coil of rope, comprising base, posts erected on the base in spaced relation, a bar carried by the upper ends of the posts and holding them in spaced relation, a spindle extending between the bar and base and carried thereby, a rotatable support for a coil of rope carried by the spindle, rollers carried by and slidable along the bar toward and from the spindle and in position to engage the exterior of a coil of rope on the support, and springs on the bar constantly urging the rollers toward the spindle.

3. A reel structure for a coil of rope, comprising a base, posts erected on the base in spaced relation, a bar carried by the upper ends of the posts and holding them in spaced relation, a spindle extending between the bar and base and carried thereby, a rotatable support for a coil of rope carried by the spindle, rollers carried by and slidable along the bar toward and from the spindle and in position to engage the exterior of a coil of rope on the support, and springs on the bar constantly urging the rollers toward the spindle, one of the posts having means thereon for holding the outer terminal portion of the coil of rope.

4. A reel structure for a coil of rope, comprising a base, posts erected on the base in spaced relation, a bar carried by the upper ends of the posts and holding them in spaced relation, a spindle extending between the bar and base and carried thereby, a rotatable support for a coil of rope carried by the spindle, rollers carried by and slidable along the bar toward and from the spindle and in position to engage the exterior of a coil of rope on the support, and springs on the bar constantly urging the rollers toward the spindle, one of the posts having means thereon for holding the outer terminal portion of the coil of rope, said holding means comprising a roller mounted on the post in parallel spaced relation thereto to pass the end of the rope and to guide said rope while being withdrawn from the coil of rope.

5. A reel structure for a coil of rope, comprising a base, posts erected thereon at spaced points, a bar carried by and connecting the posts, a spindle journaled in the bar and base of the reel structure, and rollers carried by and slidable along the bar and having springs associated therewith tending to force the rollers toward the axis of rotation of the spindle.

6. In a reel structure, the combination with a base, means for supporting a coil of rope upon the base, a plurality of rollers arranged on the outside of said coil, springs for forcing the rollers into contact with said coil, and means for supporting said rollers and springs in elevated relation to said base.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

CHARLES F. HAYS.

Witnesses:
W. B. Olds,
U. R. Moore.