

C. BERRY.
BALL OF TWINE, CORD, AND THE LIKE.
APPLICATION FILED JULY 26, 1909.

963,114.

Patented July 5, 1910.

Fig. 1.

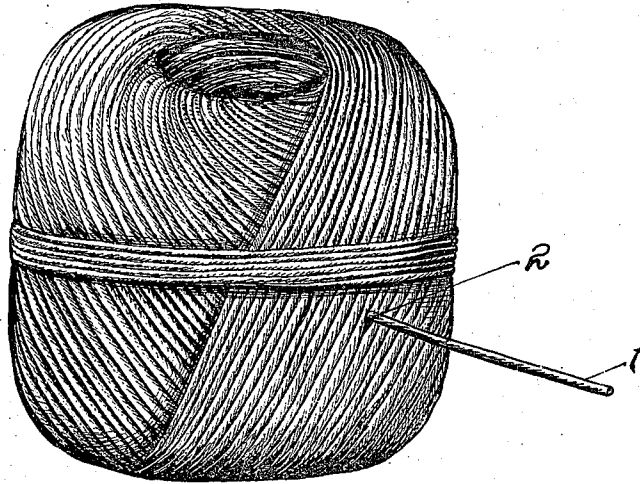
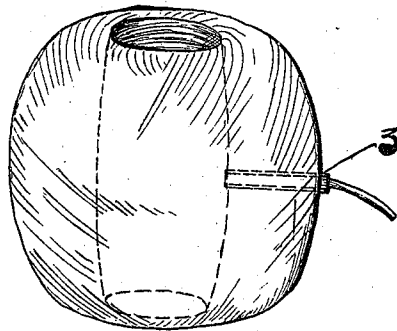


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES BERRY, OF BELFAST, IRELAND, ASSIGNOR TO LINEN THREAD COMPANY,
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BALL OF TWINE, CORD, AND THE LIKE.

963,114.

Specification of Letters Patent.

Patented July 5, 1910.

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To all whom it may concern:

Be it known that I, CHARLES BERRY, a subject of the King of Great Britain, residing at No. 10 Tokio Gardens, Belfast, Ireland, have invented certain new and useful Improvements in Balls of Twine, Cord, and the Like.

The process or method of unwinding a ball of cord from either the outside or the inside, as now practiced, is objectionable, as the cord frequently becomes matted, knotted, or unwound in bulk, by reason of its peculiar and special formation.

It is the object of my invention to overcome these objections, and to this end, my invention comprehends the production of a ball of cord or the like, adapted to be unwound from the center outward, having its inner end projected through the center of the bulk of the cord between its convolutions and protruding therefrom, so that when the cord is being drawn therethrough, the friction and resistance afforded by the adjacent convolutions will limit and tend to retard the movement or speed of unwinding the same, and prevent the formation and passage of knots or tangles.

In the accompanying sheet of drawing, I have illustrated in perspective Figure 1 a ball of twine embodying my invention; and in Fig. 2 a modification of my invention.

—1— indicates the inner end of the cord which is passed through the body of the ball at —2— between its convolutions, as shown.

It will be apparent that the limited space between the closely wound convolutions of the various layers, and the friction to which the cord is subjected as it is being drawn therethrough, will cause the interior layers and the convolutions thereof within the ball to retain their wound position, and prevent the loosening and coming away of the cord prematurely. Consequently, the unwinding of the cord will be accomplished gradually and evenly, thus obviating the liability or

possibility of withdrawing a bunch of the cord at one time, and also the loosening and matting of the layers, as well as the knotting of the cord.

Instead of merely passing the end through the ball, and in direct contact with the layers of the cord itself, I may thread the end through a small tube, which tube is itself inserted between the convolutions as shown in Fig. 2.

Having thus described my invention, what I claim as new herein and desire to protect by Letters Patent, is,

1. As a new article of manufacture, a ball of twine, cord, or the like, having its unwinding end passing through the body thereof, and between its convolutions.

2. As a new article of manufacture, a ball of twine, cord, or the like, having its inside end passed out through the body of the ball through the layers in frictional contact with its convolutions.

3. As a new article of manufacture, a ball of twine, cord, or the like, having its inside end passed out through the body of the ball between the convolutions thereof and at an angle to its axis.

4. As a new article of manufacture, a ball comprising graduated superimposed layers of twine, cord, or the like, having its unwinding end between and in frictional contact with the convolutions of the ball.

5. As a new article of manufacture, a ball of twine, cord, or the like, having one end passed through the side of the ball, and at an angle to its axis.

6. As a new article of manufacture, a ball of twine, cord, or the like, having its inside end passed out through the side of the ball at a point approximately equidistant from the ends, between the convolutions of the ball, and at an angle to the axis of the ball.

CHARLES BERRY.

Witnesses:

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