Aug. 11, 1931. H. A. CORBETT 1,818,694

TWINE BALL

Original Filed Oct. 28, 1927

Fig. 1.

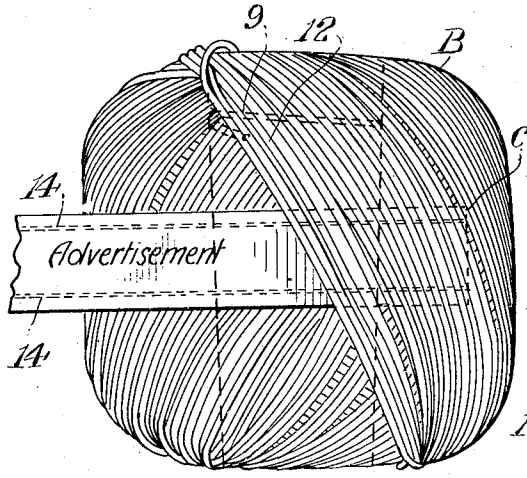


Fig. 3.

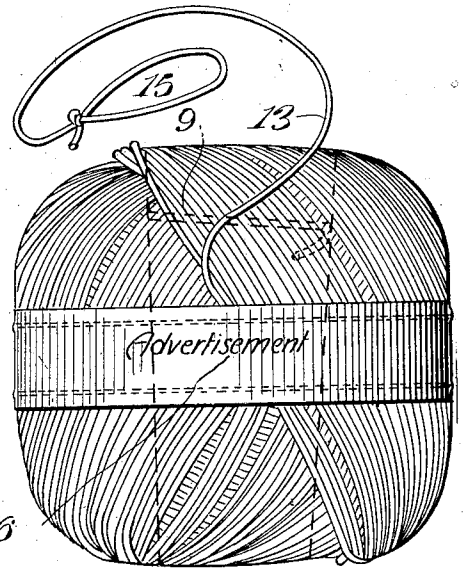


Fig. 2.

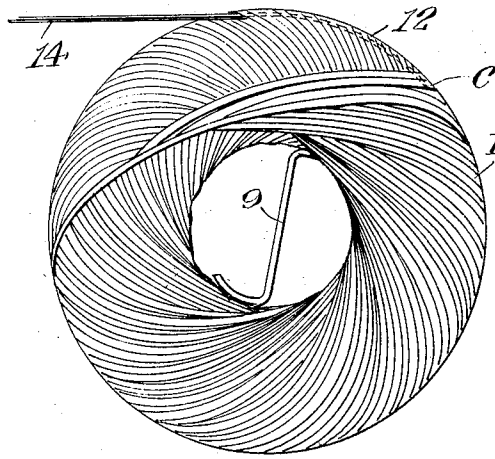
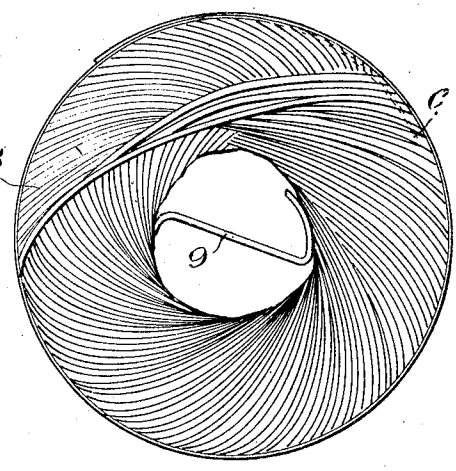


Fig. 4.



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UNITED STATES PATENT OFFICE

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TWINE BALL

Application filed October 28, 1927, Serial No. 229,405. Renewed January 12, 1931.

This invention relates to cordage packages and particularly to a ball of twine provided with an encircling band to retain the outer layer.

When twine balls are manufactured according to the most common present practice, a certain amount of twine is pulled out from the finishing end and wrapped several times about the circumference of the ball across the turns in the cover layer of twine so as to form a retaining band for the same, after which the end of the twine is forced beneath the band thus formed to prevent unraveling. According to another practice no encircling band at all is provided but the outer end of the cord is merely tucked beneath an adjacent surface turn of twine on the ball. When the ultimate consumer of the twine balled by either of the methods mentioned comes to use it he most frequently begins at the outer end, removing the band or unfastening the outer end, and allowing the twine to unravel and slip off in layers and waste.

Frequent efforts have been made to induce the consumer to use the twine from the inner end of the ball but usually without avail since the wrapping of the balls makes it more convenient for him to begin with the outer end and even when a ball is unraveled from the inner end the outer layers are likely to fall in toward the center before the ball is completely used up and hence become entangled so as to prevent further use from the ball.

According to the present invention this waste is eliminated or considerably reduced by the application of a band of paper or other material to the outer surface of the completed ball. This band preferably has considerable strength in the direction of its length so as to resist transverse tearing. If the material of which the band is made is not sufficiently strong for this purpose it may be reinforced by one or more strands of cord, stitching, or the like. The band thus reinforced serves to hold a strand beneath it which will take considerable strain, as for example for suspending the ball, without permitting tearing across the band. Where longitudinal edge reinforcing strands are used the flat strip or tape portion of the band may be made of relatively weak and inexpensive material such as light paper, the edge strands effectively taking any strain without permitting them to be transmitted to the band strip.

The band is also preferably provided with an adhesive surface next the ball so that each individual strand of the cover layer will be securely stuck to the band and held in place relative to adjacent strands and also held from falling in toward the center of the ball after the lower layers are removed. The band thus serves to strengthen or lend rigidity to the outer layers. The space defined along the band by the reinforcing strands also provides a convenient surface for printed matter such as directions or advertisements and trade marks of the manufacturer, whereas it has heretofore been difficult, if not impossible according to the common practice of packaging, for a manufacturer to properly identify his product in the hands of the individual consumer using less than carton lots. When such a band is provided about the ball it also will suggest to the consumer that the outer end of the ball is not to be disturbed but that unraveling is to be commenced from the inner end.

A specific form and certain objects of the invention will be apparent from the following description when taken with the accompanying drawings forming a part of this specification and in which:—

Fig. 1 is a side view of a ball of twine showing the manner of starting a band thereon;

Fig. 2 is an end view of the parts shown in Fig. 1;

Fig. 3 is a side view of a completed ball; and

Fig. 4 is an end view of the same.

In the drawings the letter B designates a ball of twine as a whole and the numerals 9 denotes the inner or starting end of the twine wound into the ball. The end 9 extends across the central cavity of the ball and as shown in Figs. 1 and 3 is located adjacent one end of the cavity, the end selected being that from which the end may be pulled without causing undue twist or kinking of the twine. When all but a few of the surface

turns 12 of the twine have been laid on the ball the end of a band C is fed forward so as to be caught by the remaining turns of twine placed upon the ball. It is not indispensable, according to this invention, that the end of the band be caught thus beneath the surface turns of twine on the ball but it is a preferable arrangement.

The band, if not inherently strong enough to resist tearing across, is provided with longitudinal reinforcement and, in the preferred form shown, this reinforcement comprises substantially parallel cords 14 secured adjacent each longitudinal edge of the tape. The inner surface of the band is preferably coated with an adhesive substance for attachment of the reinforcing cords and this surface will be dampened as the band approaches the ball so that each turn of the surface layer of twine on the ball will be firmly attached to the band. This will prevent dispacement of the turns with respect to each other and will also prevent such turns from falling in toward the center of the ball when the under layers of twine have been removed. The band, after passing completely around the ball over the surface turns of twine, will be secured or stuck upon itself at its outer end.

The outer or finishing end of twine 13 on the ball as cut from the feeding device or alternatively a separate strand is preferably provided with a loop 15 for conveniently hanging up the ball when it is to be used. This provides a strong means of support since this outer end is caught beneath the band C and cannot cut across the reinforcing band when the ball is pulled against the loop on account of the reinforcing cords provided on the band.

Advertisements or directions to the user may be printed on the spaces defined by the cord or cords of the encircling band as indicated at 16.

While one form of this invention has been illustrated and described particularly it is to be understood that various changes may be made and are contemplated within the limits of the prior art and the scope of the appended claims.

What I claim is:

1. An article of manufacture comprising a ball of twine provided with a mid-circumferential encircling band, said band being gummed on its inner side and stuck to the surface strands of twine on the ball and further being longitudinally reinforced along both its edges to prevent tearing across the band by pull upon a strand positioned therebeneath.

2. An article of manufacture comprising a ball of twine provided with a mid-circumferential encircling band, said band being longitudinally reinforced along both its edges by substantially parallel strands adhering to the under surface of the band.

3. An article of manufacture comprising a ball of twine provided with an encircling band which is reinforced by longitudinally running strands to avoid cross-tearing of the band.

4. An article of manufacture comprising a ball of twine provided with a reinforced encircling band, said band being caught at one end beneath the surface covering turns of twine, extending therefrom completely around the ball and being secured upon itself at its other end.

5. An article of manufacture comprising a twine ball provided with an encircling band which is reinforced by transversely spaced longitudinal strands, and a strand caught beneath said band, said strand extending beyond said band to furnish a means of support for the ball while it is being unraveled from the inside and the longitudinal reinforcement preventing cross-tearing of the band by said ball-supporting strand when a pull is put thereon.

6. As an article of manufacture, a twine ball provided with an encircling band adhering to the outer layer of twine in the ball, said band comprising a paper tape and reinforcing strands secured to the under surface thereof, said strands being substantially parallel with each other and with the longitudinal edges of the tape and spaced apart so as not to interfere with the placing of printed matter on the tape, said reinforcing strands being large enough to provide considerable strength but not so large as to prevent efficient adhesion of the band to the ball, and a ball-supporting strand held beneath said band and having an end extending therefrom for attachment to a support, the reinforcing strands preventing cross-tearing of said band by said supporting strand, and adhesion of the band to the ball preventing lateral displacement of the band when a pull is put on said supporting strand as well as supporting the outer layers of twine as the ball is unraveled.

In testimony whereof, I have signed my name to this specification this twenty-fifth day of October, 1927.

HERBERT A. CORBETT.