The present invention relates to holders for yarn packages, particularly those to be used in creels for holding conical shaped packages. Heretofore it has been necessary to mount conical holders on a creel with their axes inclined to the horizontal, in order to prevent the packages from falling off, and in consequence, valuable space in the creel has been sacrificed in order to provide the proper clearance between packages.

According to my invention, the cone holders are fastened to the creel uprights with the axes of their spindles horizontal, and frictional means are provided on the holders to maintain the packages in place without any danger of their falling off.

The invention also contemplates a novel means of fastening the wooden package holders to their supporting spindles, and the foregoing and other features of the invention will more fully appear in connection with the accompanying drawings, in which—

Fig. 1 is a view in side elevation of a conical yarn package on a holder embodying my invention.

Fig. 2 is a sectional view of an empty cone and a cone holder.

Fig. 3 is a sectional view on the line 3—3 of Fig. 2.

Fig. 4 is a perspective view of the holder and supporting spindle.

Like reference characters refer to like parts in the different figures.

Referring first to Fig. 2, the holder comprises the frustum of a cone 1 of wood, or other suitable material through the axis of which is a hole 2. The holder 1 is fastened to a supporting spindle 3, which passes through the hole 2 and which firmly holds the cone 1 in a manner that will be hereinafter described.

Referring more particularly to Figs. 3 and 4, the holder 1 provides three grooves 4, 4, 4, in its conical surface, these grooves coinciding with elements of the conical surface, and being spaced substantially 120° apart thereon. Fastened in the grooves 4, as, for example, by means of glue, are three lengths of rubber tubing 5, 5, 5, which serve to frictionally maintain a yarn package 6 on each holder, see Fig. 1. The cone 7 on which a package 6 is wound is generally made of fibre, and when a package 6 is pushed firmly onto a holder 1, the tubing 5 is compressed, and in trying to expand, grips the fibre of the cone 7 firmly and effectually prevents the package from falling off. When the cones 7 are empty, they can be easily pulled off the holders 1 by hand.

The spindle 3 provides screw threads 8 at one end, and at a point 9 of the screw threaded shaft, it is crushed or flattened, thus causing a threaded portion 10 to bulge outwardly on either side of the flattened portion 9. The spindle 3 is fastened to an upright 11 of the creel by means of a nut 12, and it will be observed that the bulging threads 10 connect with the nut 12 when it is tightened to firmly hold the spindle 3. The holder 1 being made of wood, or of some soft material such as aluminum or fibre, can be readily screwed onto the bulging threads 10 which act practically as a tap, and make grooves in the holder 1, and provide a very tight fit.

I claim:

1. In a device of the class described, a threaded spindle having a portion thereof flattened with the threads projecting beyond the remainder of the spindle and a holder for a yarn package having an opening to freely receive said spindle, the threads on the flattened portion of said spindle cutting into said holder to maintain it on the spindle.

2. In a device for holding a yarn package wound on a conical shell, a horizontal spindle carrying a frustoconical holder having equally spaced longitudinally extending slots and rubber tubes received in said slots on the holder for engaging the inside of said shell.
along their entire length to frictionally maintain the package in position.

3. In a device for holding a yarn package wound on a conical shell, a horizontal spindle carrying a frusto conical holder having equally spaced longitudinally extending slots and rubber tubes partially received and secured in said slots with portions of said tubes projecting beyond the surface of said holder to engage the inside of said shell, the compression of said tubes serving to frictionally maintain said shell in position on said holder.

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