In wound package holders as commonly used in knitting machines, a felt pad has been introduced between the base of the holder and the package, said felt pad supporting the entire weight of the package. In this arrangement it has been very difficult, especially when rayon yarn wound cop was used, to prevent the yarn from falling underneath the cop when the drawing tension stopped, and being nipped and broken when the drawing tension again starts. This binding and breaking of the yarn has been caused because of the weight of the cop and also because of the ridges which frequently occurred on the faces of the cop, tending to bind and break the yarn when they fell underneath the cop.

The object of my invention is to obviate this tendency of the yarn to fall underneath the package and be nipped and broken thereby, by providing a holder comprising a frame having rigid means for supporting the weight of the package and elastic means for lightly engaging and protecting the base of the package.

My package holder comprises, more particularly, a skeleton frame having a central uprising conical plug arranged to enter the cop cone with a snug fit for carrying the weight of the cop, said skeleton frame also having one or more pairs of peripheral side bars for mounting the elastic fabric bands in position to be lightly engaged and somewhat depressed by the base of the cop; means being provided for preventing the unintentional removal of the bands.

Practical embodiments of my invention are represented in the accompanying drawings, in which:

Fig. 1 represents in top plan one form of my improved cop holder mounted on a knitting machine table, the position of the cop being shown in dot and dash lines;

Fig. 2 represents a section taken in the plane of the line II—II of Fig. 1, looking in the direction of the arrows, the elastic fabric bands for lightly engaging and protecting the base of the cop being shown in the positions they assume when a cop is carried by the holder;

Fig. 3 represents a side view of the cop holder, the elastic fabric bands being shown in the positions they assume when no cop is carried by the holder;

Fig. 4 represents in top plan a modified form of holder;

Fig. 5 represents a side view of the same;

Fig. 6 represents a side view of a slightly modified form of holder.

Fig. 7 represents a detail vertical central section of another modified form of holder with the cop shown in dot and dash lines in operative position thereon.

The knitting machine table is denoted by 1 and the usual pin uprising therefrom by 2. The cop holder is shown as comprising a skeleton frame having a central hollow uprising conical plug 3 provided with a holder 4 for the insertion of the uprising pin 2 of the knitting machine table. From the base of this conical plug 3 diametrically opposed arms 5 and 6 project outwardly and upwardly. In the form shown in Figs. 1 to 3 inclusive the upper ends of these arms 5 and 6 are respectively provided with parallel side bars 7 and 8. The ends of these side bars are turned inwardly toward each other to form another pair of parallel side bars 9 and 10 respectively. The side bars 7 and 8 serve as removable mountings for a pair of endless elastic fabric bands 11 and 12. Similarly, the side bars 9 and 10 serve as removable mountings for another pair of endless elastic fabric bands 13 and 14 which cross the elastic bands 11 and 12 near the corners of the rectangular boundary formed by the four side bars. These bands may be made of any suitable elastic fabric material but are preferably made of knitted fabric. The ends of the side bars 8 and 9 at the corners of the rectangular skeleton frame are provided with uprising lugs 15 which serve as a means for retaining the crossed elastic fabric bands in position on the two pairs of side bars 7, 8 and 9, 10, against unintentional removal therefrom.

In the form shown in Figs. 4 and 5, the uprising ends of the arms 5 and 6 are provided with only the two parallel side bars 7 and 8.
the side bars 9 and 10 of the form shown in Figs. 1 to 3 inclusive being omitted.

In the form shown in Fig. 6, the lateral portions of each of the side bars are shown as upwardly inclined and as provided with inner shoulders 16 as well as the uprising lugs 15 at the ends of these side bars.

In the form shown in Fig. 7, the central conical plug 3 is omitted and the cop cone 20 is shown as resting on the base portion 21 of the holder.

To give the skeleton frame a firmer bearing on the knitting machine table 1 where the frames for smaller cops are used as in the forms shown in Figs. 4, 5 and 6, the base of the conical plug 3 may be provided with two diametrically opposed lugs 17, 18.

When the cop 19 is placed in position on the holder its cone 20 will snugly engage the conical exterior of the hollow plug 3 so that the said plug will carry the weight of the cop. However, before the cop and its cone are firmly seated on the hollow plug 3 the cop holder, the base of the cop will lightly engage and depress the elastic fabric bands, thus causing the bands to engage the base of the cop with a very light friction as well as protect the base of the cop from any liability of the yarn to fall underneath the same where it might become bound and broken.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention, and hence I do not intend to be limited to the particular embodiments herein shown and described, but

What I claim is:

1. A cop holder comprising a skeleton frame having a central cop cone engaging conical plug for carrying the weight of the cop, arms radiating from the plug and having upwardly turned ends, horizontally disposed parallel side bars carried thereby and elastic fabric bands removably mounted on said side bars for lightly engaging and protecting the base of the cop.

2. A cop holder comprising a skeleton frame having a central cop cone engaging conical plug, for carrying the weight of the cop, arms radiating from the plug and having upwardly turned ends, horizontally disposed parallel side bars carried thereby, elastic fabric bands removably mounted on said side bars for lightly engaging and protecting the base of the cop, and lugs at the ends of the side bars for preventing the unintentional removal of the bands therefrom.

3. A cop holder comprising a skeleton frame having a central cop cone engaging conical plug for carrying the weight of the cop, arms radiating from the plug and having upwardly turned ends, two opposite parallel side bars carried thereby and developed into two more opposite parallel side bars at right angles to the first two side bars and crossed elastic fabric bands removably mounted on said side bars for lightly engaging and protecting the base of the cop.

4. A cop holder comprising a skeleton frame having a central cop cone engaging conical plug for carrying the weight of the cop, arms radiating from the plug and having upwardly turned ends, two opposite parallel side bars carried thereby and developed into two more opposite parallel side bars at right angles to the first two side bars, crossed elastic fabric bands removably mounted on said side bars for lightly engaging and protecting the base of the cop, and lugs at the ends of the side bars for preventing the unintentional removal of the bands therefrom.

In testimony, that I claim the foregoing as my invention, I have signed by name this 25th day of Nov., 1930.

JOHN O. McKEAN.