Dec. 17, 1929. J. LOCK 1,740,309

BASE PROTECTOR AND DRIVER FOR BOBBINS AND THE LIKE

Filed Feb. 14, 1928

Fig. 1.

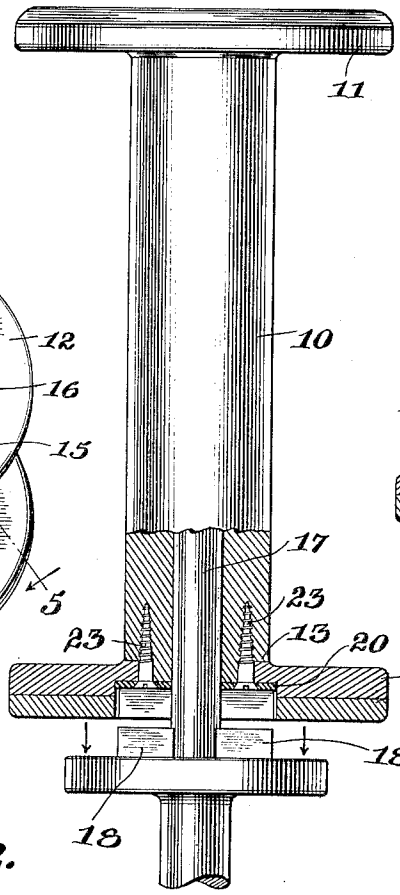


Fig. 4.

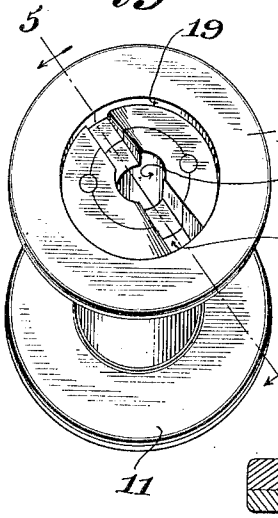


Fig. 5.

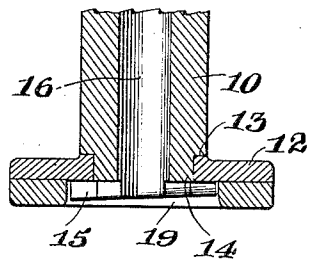


Fig. 2.

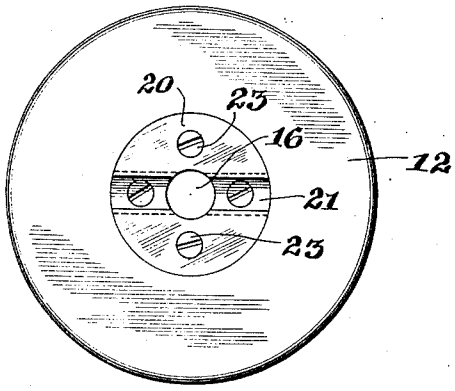
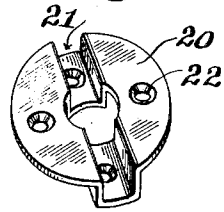


Fig. 3.



Inventor

Jack Lock

By

L. B. Morrill

Attorney

Patented Dec. 17, 1929 1,740,309

UNITED STATES PATENT OFFICE

JACK LOCK, OF GREENVILLE, SOUTH CAROLINA, ASSIGNOR TO JOHN E. LOCK, OF CHARLOTTE, NORTH CAROLINA

BASE PROTECTOR AND DRIVER FOR BOBBINS AND THE LIKE

Application filed February 14, 1928. Serial No. 254,229.

This invention relates to base protectors and drivers for bobbins and the like and has for an object to provide a member and the manner of using a member for the repair of old worn bobbins and also the equipment of new bobbins to protect the driving end of the bobbin from wear of the driving spindle and its associated parts.

In this specification the term "bobbins" is used in the broadest sense including all bobbins, spools or other devices for the winding or unwinding of yarns, threads or the like and is no limitation upon the constructions with which and upon which the invention may be employed and used. Also the drawings which will be hereinafter described are only conventional showings and are not in any way intended as limitations.

A further object of the invention is to provide a disk or similar device having a diametrically disposed furrow which said disk is attached to or inset into the base end of a bobbin to contact with and to take the drive from the spindle and its associated parts.

A further object of the invention is to provide a device of the nature which can be and is attached to the bobbin in such manner as to more securely connect the base of the bobbin to the barrel to prevent loosening or separation therefrom.

With these and other objects in view, the invention comprises certain novel parts, elements, constructions and functions as disclosed in the drawings together with mechanical and functional equivalents thereof, as will be hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a view showing a conventional bobbin or spool in side elevation, parts being broken away to show in diametrical section the base protector and driver.

Figure 2 is an inverted plan view of a bobbin or the like showing in plan the base protector and driver.

Figure 3 is a perspective view of the base protector and driver disassociated from the spool.

Figure 4 is a perspective view of the base of a spool without the base protector and driver attached thereto as it may appear prior to the application of the device and as worn by repeated use upon the spool.

Figure 5 is a diametrical sectional view through the worn bobbin as taken on line 5—5 of Figure 4.

Like characters of reference indicate corresponding parts throughout the several views.

According to the present practice, a bobbin or spool within the terms heretofore used comprise a barrel 10 with a head 11 and a base 12. The barrel 10, according to the present practice, is attached to the base 12 by forming a shoulder 13 with the reduced part 14 introduced into an appropriately formed opening in the base. The base is provided with diametrically positioned slot 15 which transects the spindle opening 16. According to the present practice, a spindle which is here conventionally shown at 17 is provided with diametrically extending lugs 18 which fit into the diametrical slot 15 of the base. The spool as an entirety is placed upon the spindle while the spindle is rotating at a very high rate of speed with the result that the lugs 18 cut and dig into the base to form an annular depression 19 and at the same time breaks down the shoulders and corners of the diametrical slot 15 so that eventually the slot becomes inefficient in its operation and the bobbin becomes greatly weakened by the cutting into the head. At this stage the protector, consisting of the disk-like member 20, is applied and where necessary further cutting is made into the head to accommodate the disk properly. The disk is provided with a furrow 21 which is the equivalent of the groove 15 of the head. This disk 20 is preferably made of metal or other wear resisting material so that the bobbin is not only restored to its original shape but its efficiency greatly augmented by the wear resisting nature of the disk itself. Furthermore, the disk is provided with a plurality of screw openings 22 into which screws 23 are introduced extending through some portion of the base 12 and into the barrel 10, thus rigidly and permanently securing

the base 12 to the barrel, preventing the separation of the parts and greatly strengthening the entire organization.

While the invention has been heretofore described as a repair proposition, it is to be understood that it is in no way limited to the repair of bobbins or the like but that new bobbins may be constructed originally by the use of the same device applied in exactly the same manner and for exactly the same purpose to function in exactly the same manner.

It will be understood that every part shown in the drawings and heretofore described is merely illustrative, that the invention is in no way limited by those parts illustrated which do not enter into the invention itself, and that the base protector and driver, which consists of the disk 20 with the furrow 21, may be varied materially from the exact type as shown which illustrates a device composed of stamped sheet metal, but it is obvious that it may be cast, forged or otherwise produced as may be found necessary, desirable or satisfactory.

What I claim to be new is:

The combination with a bobbin comprising a barrel and applied base, said barrel and base having a coinciding spindle opening, of a base protector and driver comprising a disk of wear resisting material inset into said base with a center opening coinciding with the spindle opening, fastening members inserted through said disk and said base into said barrel, and shoulders carried by the disk for engagement with propelling elements of a spindle.

In testimony whereof I affix my signature.

JACK LOCK.