W. E. BENNETT.

BOBBIN.

APPLICATION FILED OCT. 19, 1912.

Patented May 25, 1915.

1,140,868.

Fig. 1,

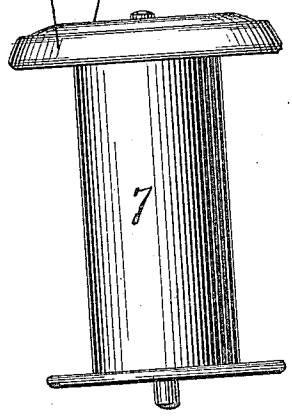


Fig. 2,

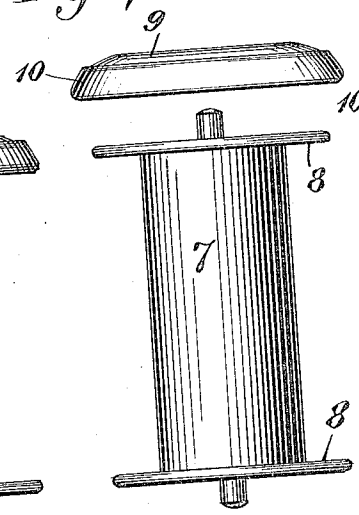


Fig. 3

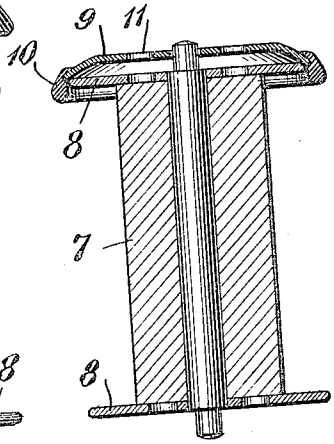


Fig. 4,

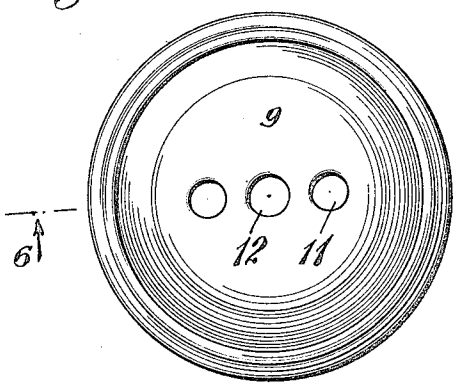


Fig. 5,

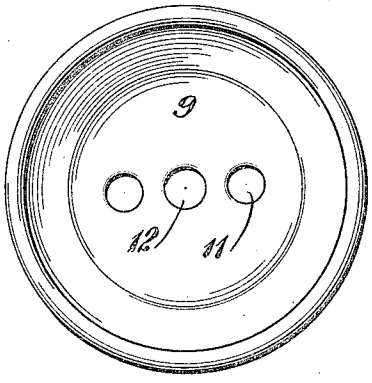
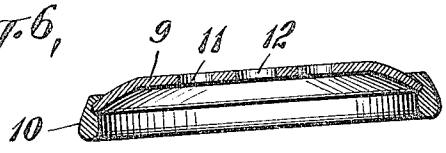


Fig. 6,



WITNESSES

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UNITED STATES PATENT OFFICE.

WALTER E. BENNETT, OF CARBONDALE, PENNSYLVANIA, ASSIGNOR TO CLOVER LEAF MANUFACTURING COMPANY, OF CARBONDALE, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BOBBIN.

1,140,868. Specification of Letters Patent. Patented May 25, 1915.

Application filed October 19, 1912. Serial No. 726,658.

To all whom it may concern:

Be it known that I, WALTER E. BENNETT, a citizen of the United States, residing at Carbondale, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Bobbins, of which the following is a specification.

This invention relates to bobbins of the type which are used to support thread while the thread is being drawn from the bobbin in the direction of the axis of the bobbin. The invention is directed to the provision of an improved bobbin of this character, the improvements involving the provision of a thread-guiding member by which the thread is guided as it is drawn from the bobbin and with which the danger of breakage of the thread is materially reduced. Bobbins of this character consist generally of a cylindrical body portion having flanged ends. In the use of these bobbins, it is a matter of very common occurrence for the edges of the end flanges of the bobbin to become scored or roughened to such an extent that, if the thread were drawn over one of the end flanges and in contact therewith, the thread might be broken with such frequency as to retard the progress of the work to a considerable extent.

The present invention involves the provision of a thread-guiding member for use in combination with a bobbin, which member is circular in form and of larger diameter than the end flanges of the bobbin, and consists of a disk of metal having a rim secured thereon and made of a non-metallic material, such as fiber, whose surface can be made quite smooth. Preferably the fiber rim of this thread-guiding member is extended laterally from the general plane of the member so that, when the member is placed upon one end of a bobbin, the fiber rim will extend down over the edge of the end flange of the bobbin.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the bobbin with the thread-guiding member thereon, Fig. 2 is a similar view showing the thread-guiding member raised from the bobbin, Fig. 3 is a section of the bobbin and member, and Figs. 4, 5 and 6 are top, bottom and cross-section views, respectively, of the thread-guiding member, the section of Fig. 6 being on line 6—6 of Fig. 4.

Referring to these drawings, a bobbin is shown in Figs. 1, 2 and 3 of a construction commonly used. This bobbin has a body 7 and end flanges 8. These end flanges in the present instance are shown as formed by metallic disks which are secured to the ends of the body portion 7 of the bobbin.

The thread-guiding member consists of a disk 9 of metal having a rim 10 of non-metallic material secured thereon, the member being of greater diameter than the end of the bobbin with which it is to be used. Preferably the rim 10 is made of fiber, and its surface is made smooth and given a high polish, so that in drawing the thread over it there will be little or no danger of the thread being broken by reason of its contact with the thread-guiding member.

In accordance with the method which I prefer to employ in making such a thread-guiding member as that illustrated in the drawings, a disk 9 of steel is provided which is cupped to an extent substantially greater than that shown in Figs. 3 and 6. This disk is then inserted in a ring of fiber, and by means of a suitable press is flattened out to an extent sufficient to carry its edge into a groove provided on the inner side of the ring 10. The disk 9 and ring 10 may thus be secured together so rigidly that the disk 9 may be used as a chuck for holding the ring 10 in a suitable machine, while turning the ring down to the shape desired for the rim of the thread-guiding member and giving its surface a high polish. Openings 11 are preferably provided in the disk 9 to facilitate mounting the disk with the ring thereon in a machine. The disk 9 is also provided with a central opening 12, through which an axial projection on the end of the bobbin may extend.

As shown in the drawings, the rim 10 of the thread-guiding member is extended laterally from the general plane of the thread-guiding member. By reason of this shaping of the rim, when the member is applied to the end of a bobbin, the rim will extend over the edge of the end flange of the bobbin so as to partially inclose the same. With the rim 10 so formed, the thread-guiding member readily centers itself upon

the end of a bobbin and completely protects the thread from contact with the edge of the end flange of the bobbin.

Having described my invention, what I claim as new therein and desire to secure by Letters Patent of the United States is:

The combination of a bobbin having a body and end flanges and a thread-guiding member formed separate from but placed adjacent to one end of the bobbin and consisting of a metallic disk having a fiber rim thereon presenting a smooth and polished peripheral surface, said disk having its edge entering a groove in the interior wall of the rim and said rim having its exterior surface smooth and highly polished, substantially as set forth.

This specification signed and witnessed this 4th day of October, 1912.

WALTER E. BENNETT.

Witnesses:
R. E. MARCY,
A. J. THOMAS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."