

No. 632,132.

Patented Aug. 29, 1899.

H. A. MACK.
BOBBIN.

(Application filed Oct. 8, 1898.)

(No Model.)

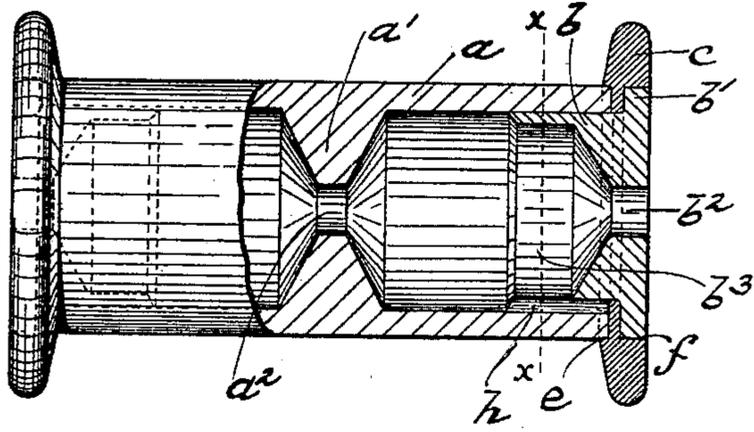


Fig. 1.

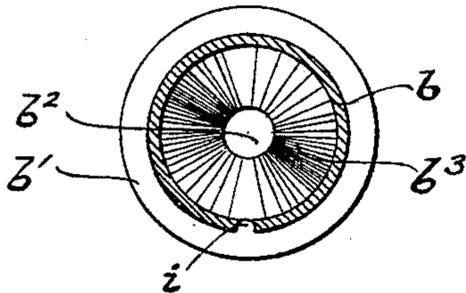


Fig. 2.

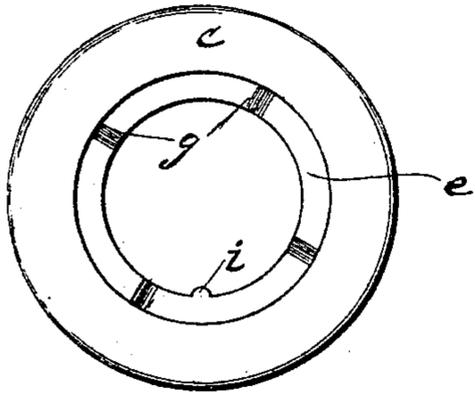


Fig. 3.

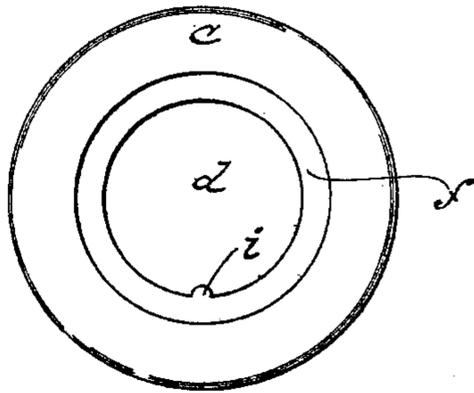


Fig. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY A. MACK, OF WEATHERLY, PENNSYLVANIA, ASSIGNOR TO THE H. A. MACK WOOD WORKING COMPANY, OF SAME PLACE.

BOBBIN.

SPECIFICATION forming part of Letters Patent No. 632,132, dated August 29, 1899.

Application filed October 8, 1898. Serial No. 692,983. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. MACK, a citizen of the United States, residing in Weatherly, in the county of Carbon and State of Pennsylvania, have invented certain new and useful Improvements in Bobbins; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My present invention relates to bobbins for silk or other filaments; and the object of the invention is to provide a bobbin which shall constitute an improvement generally in so far as strength and simplicity of construction and reliability of operation and durability are specially concerned upon devices of this nature in present use, and particularly upon that shown and described in Letters Patent No. 584,594, granted to me June 15, 1897.

The invention consists in the improved bobbin and in the combination and arrangement of the various parts thereof, substantially as will be hereinafter more fully described and finally embodied in the clauses of the claim.

I have fully illustrated my invention in the accompanying drawings, wherein like letters of reference indicate parts correspondingly referred to in this specification, and in which—

Figure 1 is a side view of my improved bobbin, showing the same partly in section and partly in elevation. Fig. 2 is a sectional view of one of the bushings of my improved bobbin, taken on the line $x x$ in Fig. 1 and looking toward the right in said figure; and Figs. 3 and 4 are inside and outside face views, respectively, of one of the flanges of my improved bobbin.

In said drawings, a indicates a cylindrical barrel provided centrally with a strengthening-diaphragm a' , having a central orifice a^2 therethrough. At each end of and projecting into said barrel is a bushing b , having an annular head or flange b' and a central orifice b^2 in alinement with and substantially of the same size as the orifice a^2 of the diaphragm of the barrel. For the sake of lightness of

weight the bushing is cut away to form a chamber b^3 , properly formed in said bushing, so as not to materially detract from the strength of the latter.

c indicates the annular flange of the bobbin. Said flange is situated between the head of the bushing and the end of the barrel, and the opening d therethrough is approximately the diameter of the bushing, so that when the parts are in place the latter fits closely into said opening as well as in the end of the cylinder. Said flange is provided on one face, its inner one, with an annular and tubular recess e , into which extends and closely fits the end of the barrel. Said flange is also provided on its other or outer face with another annular and tubular recess f , which receives and into which closely fits the head b of the bushing.

It is to be noted at this point that the head of the bushing and the barrel are equal or approximately equal in diameter. It is also to be noted that the face of said head (or in other words, the entire outer face of the bushing) is just flush with the corresponding face of the flange c , so that it is impossible for the edges of said head, which is usually made of wood, to become split or broken off in use.

In order to properly unite the parts, (it must be emphasized that they closely fit together,) glue or other similar substance is applied upon all their contacting surfaces. The ends of the cylinder or barrel and the inner face of the head b' , as well as the corresponding portions of the surfaces of the flange c , may be roughened, or, better, provided with projections g , as shown in connection with the flange in Fig. 3, so that the glue may be aided in properly binding the parts together and obviating their relative rotation. Furthermore, if desired, the bushing and the flange may be provided the one with a recess h and the other with a projection i , adapted to engage each other, and thus prevent said flange from rotating about the bushing.

From the foregoing description it will be seen that I have provided a bobbin which is light, strong, durable, and compact, therein possessing all the qualities recognized by those skilled in the art as not only desirable but essential to a perfect bobbin.

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

1. In a bobbin, the combination of a cylinder or barrel, and an annular flange and a bushing situated at each end thereof, the latter projecting through the former and into said barrel and having an integral and annular sectionally rectangular flange or head, the outer faces of said bushing, its head and the flange being flush and forming a plane surface and said flange being provided with tubular recesses, one on each side, receiving said head and the end of the barrel, substantially as described.

2. In a bobbin, the combination of a cylinder or barrel, an annular flange and a bushing situated at each end thereof, the latter projecting through the former and into said

barrel and having an integral and annular sectionally rectangular flange or head, the outer faces of said bushing, its head and the flange being flush and forming a plane surface and said flange being provided with tubular recesses, one on each side, receiving said head and the end of the barrel, and an adhesive substance applied on the contacting surfaces of said flange, the bushing and the cylinder, said surfaces being provided with projections substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of October, 1898.

HENRY A. MACK.

Witnesses:

JOHN W. STEWARD,
ALFRED GARTNER.