June 17, 1947. O. LOBL 2,422,358

YARN BOBBIN

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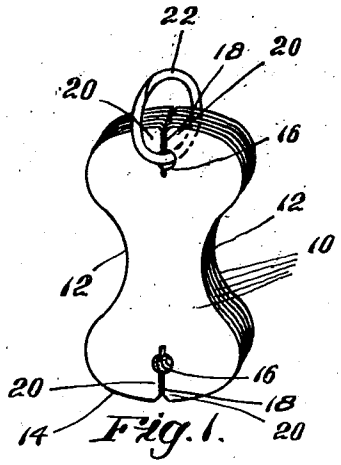


Fig. 1.

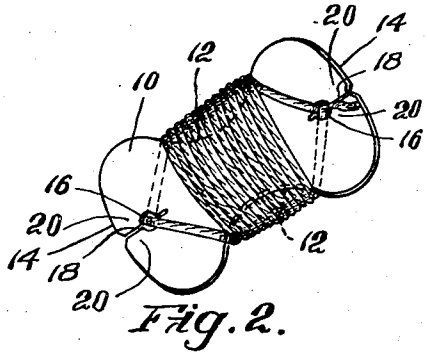


Fig. 2.

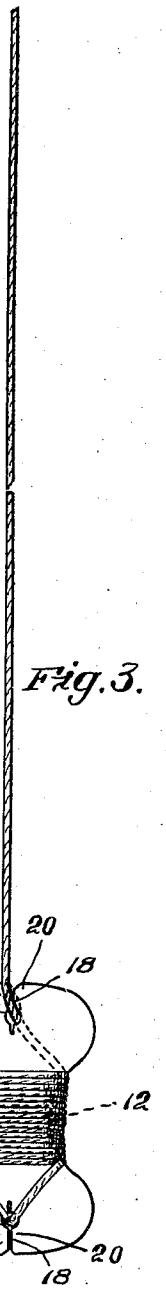


Fig. 3.

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YARN BOBBIN

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3 Claims. (Cl. 242—96)

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This invention relates to improvements in bobbins of the general type on which yarn, string or thread may be wound for convenient withdrawal. More particularly it provides such bobbins which may be removably grouped together on a holder with each bobbin of the group having means thereon facilitating withdrawal of a predetermined measured length of the material on the bobbin, such as yarn, for example. According to the invention, the individual bobbins of a group or set may have material of the same or different color or character wound thereon with predetermined measured lengths of the material on a bobbin engaged and held at the opposite ends of each measured length, so that, by disengaging one end of a measured length, the bobbin may be released or dropped to hang suspended at the opposite end of the measured length, with only that measured length unwound and conveniently available for use.

It is among the objects of the invention to provide yarn bobbins, and the like, from which the yarn, or other material readily may be withdrawn at intervals in predetermined short or relatively long lengths with assurance that no more than the predetermined length will be withdrawn at any one time to become tangled or snarled.

Another object is to provide a bobbin on which yarn or comparable material may be quickly and freely wound, as on a spool, with predetermined lengths of the wound yarn engaged, at opposite ends of each predetermined length, in means designed to releasably hold the yarn against unwinding, whereby release of one end of a predetermined length conditions the bobbin for unwinding or withdrawal of only that predetermined length.

A feature is that the bobbins are adapted to be grouped on a holder for individual removal as needed, with the various bobbins holding yarn of the particular color combination or characteristics needed for a design or pattern which is being developed, and with the individual bobbins having the predetermined lengths required of their respective colors or characteristics.

It is, moreover, my purpose and object generally to improve the structure and effectiveness of yarn bobbins and the like and particularly such bobbins from which yarn or other material is to be withdrawn in the process of hand-knitting, and for comparable purposes.

In the accompanying drawing:

Fig. 1 is a perspective view of a group or set of my improved bobbins removably held on a ring;

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Fig. 2 is a perspective view of one of the bobbins having yarn wound thereon for withdrawal in a plurality of predetermined lengths; and

Fig. 3 shows the bobbin of Fig. 2 suspended at the end of one unwound predetermined length of yarn.

Referring to the drawing, each bobbin 10 conveniently may be of suitably stiff and resilient sheet material, such as Celluloid or one of the available plastic materials, for example. Opposite side edges of the bobbin have concave curvature as at 12, and the opposite ends of the bobbin have convex curvature as at 14, so that the bobbin has a generally flat spool shape for receiving yarn or the like wound around the body portion between the ends of the bobbin. Adjacent to each end of the bobbin, a relatively small hole 16 extends through the bobbin, and a slit 18 extends from each hole 16 outward through the end edge to provide abutting resilient tongues 20 of the bobbin stock at opposite ends of the bobbin, each of which tongues may be flexed resiliently out of the plane of the adjacent tongue to permit a portion of the yarn to be passed along a slit 18 into a hole 16. Or the yarn may be left in the slit 18 and be pinched between two coacting resilient tongues 20.

It is a feature of the invention that yarn or the like may be wound on one of my improved bobbins and be secured at any desired intervals along the yarn so that only one predetermined length of yarn will be free for withdrawal at any one time. For example, ten or any other number of convolutions of the yarn may be wound around the body of the bobbin, followed by slipping a portion of the next convolution through a slit 18 into one of the end holes 16. Then another ten convolutions, for example, may be wound around the bobbin body, followed by another slipping of the yarn through a slit 18 into a hole 16. This procedure may be repeated until a desired total length of yarn is on the bobbin, after which the outer end of the yarn may be secured by engaging it in the pinch of one of the slits 18.

When the yarn is to be withdrawn from the bobbin for use in the process of hand-knitting, for example, disengagement of the pinched end of the yarn will free for withdrawal only a length of yarn extending back to the portion of yarn last slipped into a hole 16, and any unwinding must stop there until the portion last engaged in a hole 16 is released. If desired, the end of the yarn may be held while the bobbin is dropped thereby to unwind only whatever length has been predetermined. When this unwound portion of

yarn is used or nearly used, the portion of yarn last inserted in a hole 16 may be slipped out through the adjacent slit 18 and another ten or other predetermined number of convolutions will be thereby freed for unwinding.

It will be obvious that yarn may be wound on my improved bobbins so that any desired predetermined lengths of the yarn may be freed in succession as the knitting proceeds. Where a colored pattern is being worked, a series or set of the bobbins 10 conveniently may be removably held on a ring 22 or the like with yarn of the required colors on the respective bobbins, and with the required length of any particular color wound so that no more than that predetermined length will be released for unwinding at any one time. Hence, the invention not only avoids snarling and tangling of the yarn as it is withdrawn from a bobbin for use, but enables a predetermined planned initial winding of the yarn on the bobbins which greatly facilitates the actual process of knitting by ensuring that only a predetermined variable length of yarn will unwind from a bobbin in response to each releasing of an engaged portion of yarn from one of the holes 16. Furthermore, my improved bobbin can have an attractive stream-lined shape with the opposite ends identical and providing a yarn lock at each end in either of which the yarn may be slipped without any manual actuation of the locking elements excepting a mere tensioning of the yarn over a bobbin end to engage the yarn in one of the end slits without any catching of the yarn or other interference with its free slip into and along a slit and, if desired, into a retaining hole 16 at the inner end of a slit.

I claim as my invention:

1. A bobbin for holding yarn and the like, comprising a generally flat member of resilient sheet material having opposite side edges extending with concave curvature and having opposite end edges rounded with convex curvature, there being a relatively small hole adjacent to a said convex end edge of the bobbin and a slit extending inward to said hole from the adjacent convex end edge, thereby to provide oppositely disposed resilient tongues of the sheet material at an end of the bobbin, said bobbin being adapted to have yarn and the like wound thereon inward from said end hole with the convolutions passing around said concave side edges of the bobbin and with one predetermined convolution extending through said end hole on its course from one of said concave side edges to the other, thereby to limit unwinding of yarn from the bobbin to convolutions wound subsequent to said predetermined convolution until said predetermined convolution is released from said end hole.

2. A bobbin for holding yarn and the like, comprising a generally flat member having opposite side edges extending with concave curvature and having opposite convexly rounded end edges, there being a relatively small hole through said member adjacent to one of said convex end edges and of size only slightly larger than the thickness of the material to be wound on the bobbin, means providing an openable passage leading to said hole from the adjacent end edge of the bobbin, said bobbin being adapted to have yarn freely wound thereon inward of said end hole with the convolutions passing around said concave side edges of the bobbin, and said end hole being located and adapted to receive a predetermined convolution of the yarn slipped through said openable passage and extending through said hole on its course from one of said concave side edges to the other thereby to stop unwinding of yarn from the bobbin until said predetermined convolution is released from said hole.

3. A bobbin for holding yarn and the like, comprising a generally flat member having opposite side edges extending with concave curvature and having opposite convexly rounded end edges, there being a relatively small hole through said member adjacent to each of said convex end edges, means at each end portion of the bobbin providing an openable passage to each said hole from the adjacent end edge of the bobbin, whereby a selected number of convolutions of yarn may be freely wound around said side edges of the bobbin inward of said end holes and any predetermined convolution may be diverted and slipped through a said openable passage so as to extend through a said end hole on its course from one of said concave side edges to the other, thereby to limit free unwinding of yarn to convolutions wound on the bobbin subsequent to said predetermined convolution.

OTTO LOBL.