M. T. DE VINE.

SPOOL OR BOBBIN HOLDER.

APPLICATION FILED MAR. 27, 1916.

1,205,085. Patented Nov. 14, 1916.

FIG. 1

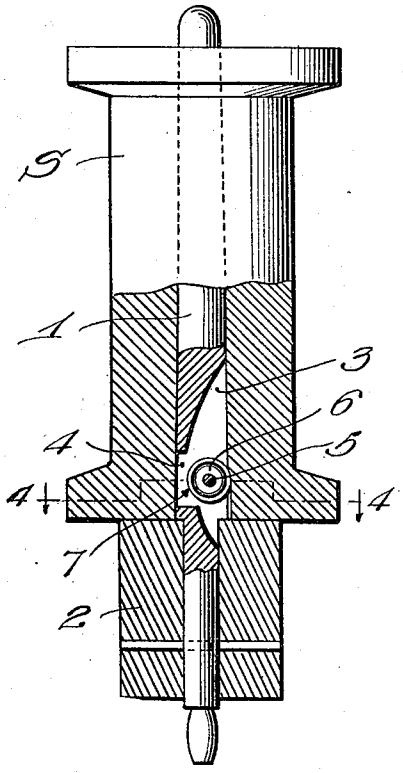


FIG. 2

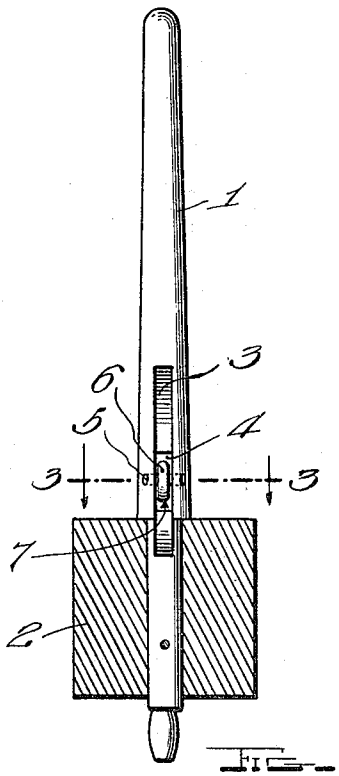


FIG. 5

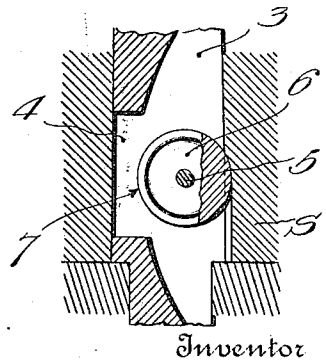


FIG. 4

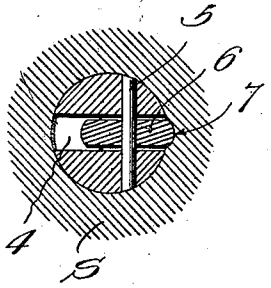
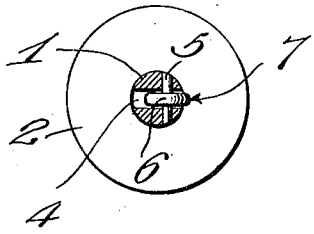


FIG. 3



Inventor

Witnesses

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SPOOL OR BOBBIN HOLDER.

1,205,085. Specification of Letters Patent. Patented Nov. 14, 1916.

Application filed March 27, 1916. Serial No. 87,034.

To all whom it may concern:

Be it known that I, MICHAEL T. DE VINE, a citizen of the United States, residing at Oakville, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Spool or Bobbin Holders; and I do 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.

This invention relates to new and useful improvements in means for securing a spool or bobbin in operative position upon a rotatable spindle, whereby the spool or bobbin may be easily applied to or removed from the spindle and yet will be rotated therewith and firmly held in proper position, during the winding, spinning, twisting or similar operation to which these devices are applied.

A further object of the invention is to provide a device of this character which is simple and durable in construction, inexpensive to manufacture and one which will be very efficient in operation.

With these and numerous other objects in view, my invention consists of the novel features of construction, combination and arrangement of parts which will be herein referred to and more particularly pointed out in the specification and claims.

In the accompanying drawings: Figure 1 is an elevation of my improved spool or bobbin holder, showing the device in operation, the locking part of this holder being shown in section; Fig. 2 is an elevation of the spindle without the spool or bobbin being placed thereon; Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 2; Fig. 4 is a detail horizontal section taken on the line 4—4 of Fig. 1; Fig. 5 is a detail central vertical section of the locking portions of the spindle and roller as shown in Fig. 1, the roller being shown partly in elevation.

In describing my invention I shall refer to the drawings in which similar reference characters designate corresponding parts throughout the several views and in which the numeral 1 designates a rotatable spindle, having the ordinary type of whirl 2 at its inner end rigidly connected therewith, and the spindle 1 is adapted to receive thereon a spool or bobbin S, all of these parts being of the ordinary and well known construction.

The spindle 1 is provided adjacent its inner end with a longitudinally extending groove 3 of increasing depth, from the front of said groove rearwardly until it terminates in an opening 4 adjacent the rear end of the spindle. Positioned between the sides of the groove 3, and spaced above the opening 4 is a transversely extending axle 5 which is fixedly mounted at its opposite ends, in the sides of said groove, and is positioned therein a short distance below the upper or top of the groove.

Rotatably mounted on the fixed axle 5 is a roller 6 which is provided with a rounded periphery 7 and said roller when in position is adapted to have its upper portion project above the top of the groove 3 and above the circumference of the spindle 1. The portion of the roller 6 that projects above the groove is sufficient to enable the same to frictionally engage and to bite into the bore of the bobbin or spool that is placed upon the spindle so as to securely hold the same in position. This projecting portion of the roller is due to the fact that the axle upon which the same is mounted is positioned a short distance below the top of the groove, whereby a portion of the roller owing to the size of the same, will necessarily project from the circumference of the spindle. The bore of the bobbin or spool S as placed on a spindle is adapted to snugly yet not tightly engage the circumference of said spindle adjacent its inner end whereby when the same is placed on the spindle, the roller will, owing to the fact that the spool is slightly resilient, bite into the bore of the same so as to securely lock the parts together. In the drawings, this engagement between the projecting portion of the roller and the bore of the spool or spindle is shown slightly exaggerated to emphasize the coaction between these parts.

In operation when it is desired to place the bobbin or spool upon the spindle, the same is slid thereon in the ordinary manner, and it will be obvious, that the bore of the spool adjacent one end will be engaged by the projecting portion of the roller 6 mounted in the groove in the spindle. Easy engagement of the roller with the spool is greatly facilitated by the rounded periphery of the same, and also by the fact that the roller is rotatably mounted, so that the spool may easily slide thereover. However, the

parts are locked sufficiently by this positioning to securely hold the spool in position for the purposes of its use.

The opening 4 beneath the roller 6 in the groove, in which the same is mounted, is for the purpose of rendering the same easily accessible so that it may be cleaned, or for any other desired purpose.

The type of spindle using my improved bobbin or spool holder will securely hold the same in position, and will also enable the bobbin or spool to be easily and quickly removed therefrom when desired. Sufficient locking engagement between the parts as above described, is formed however, to securely hold the bobbin or spool in position, and prevent the same from riding from the spindle upon the rapid rotation of the same.

From the foregoing description of the construction and operation of this invention, the use of the same will be readily understood, and it will be seen that I have provided a simple and efficient device of this character, for carrying out the objects of the invention.

I claim:

1. In a device of the class described, a spindle longitudinally grooved adjacent its inner end, a pintle extending transversely across said groove, and a rotatable roller positioned longitudinally with respect to the spindle in said groove and carried by the pintle, a portion of said roller projecting beyond the circumference of the spindle and adapted to frictionally and rotatably engage the bore of the spool or bobbin placed on the spindle whereby the same may be held in locked position.

2. In a device of the class described, a spindle having a longitudinally extending groove of increasing depth terminating in the aperture adjacent its inner end, a transversely extending shaft with its opposite ends fixedly mounted in the sides of said groove adjacent the top of the same and above the aperture, a roller rotatably mounted on said shaft and positioned longitudinally with respect to the spindle within the groove, and said roller having a rounded periphery with a portion thereof projecting from the circumference of the spindle and adapted to frictionally and rotatably engage the bore of a spool or bobbin placed on the spindle whereby the same may be held locked in position.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MICHAEL T. DE VINE.

Witnesses:
J. W. GOOLEY,
LOUIS STEMM.

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