F. L. SOULE.

BOBBIN HOLDER.

APPLICATION FILED APR. 9, 1918

1,297,029.

Patented Mar. 11, 1919.

2 SHEETS—SHEET 1.

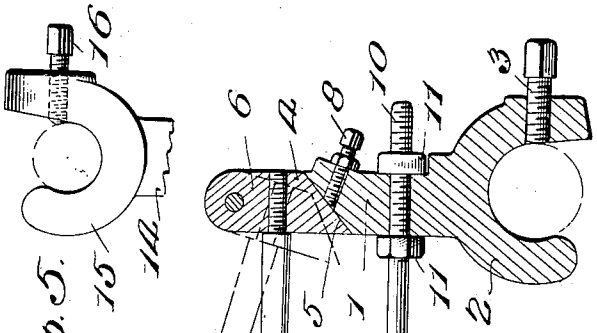

FIG. 5.

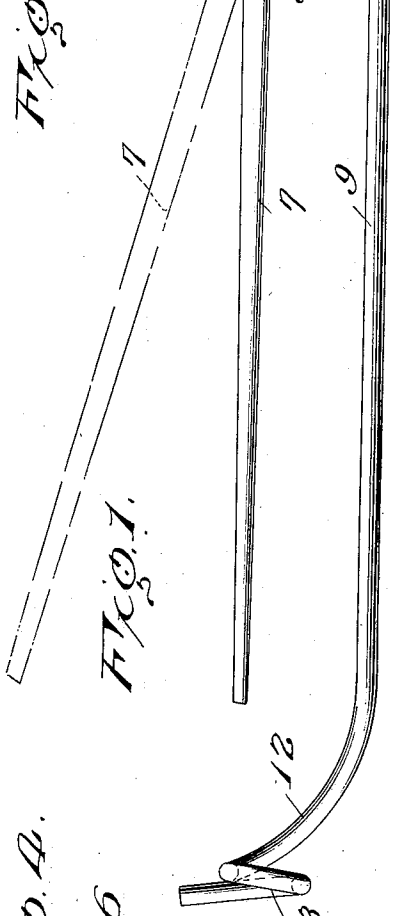

FIG. 1.

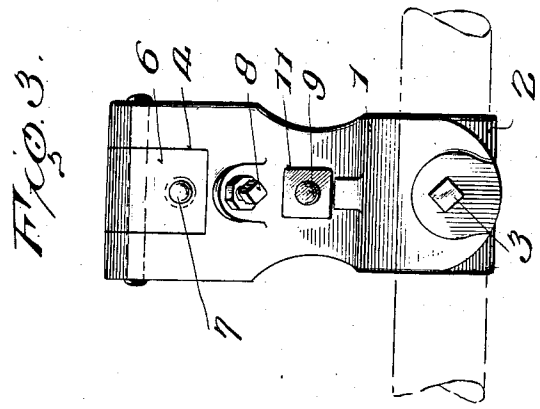

FIG. 3.

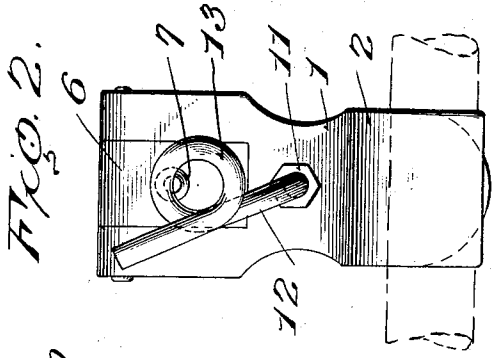

FIG. 2.

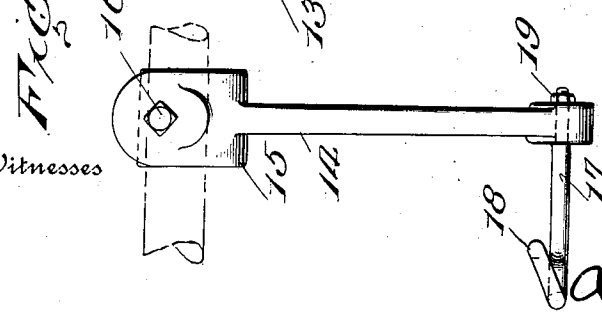

FIG. 4.

Witnesses

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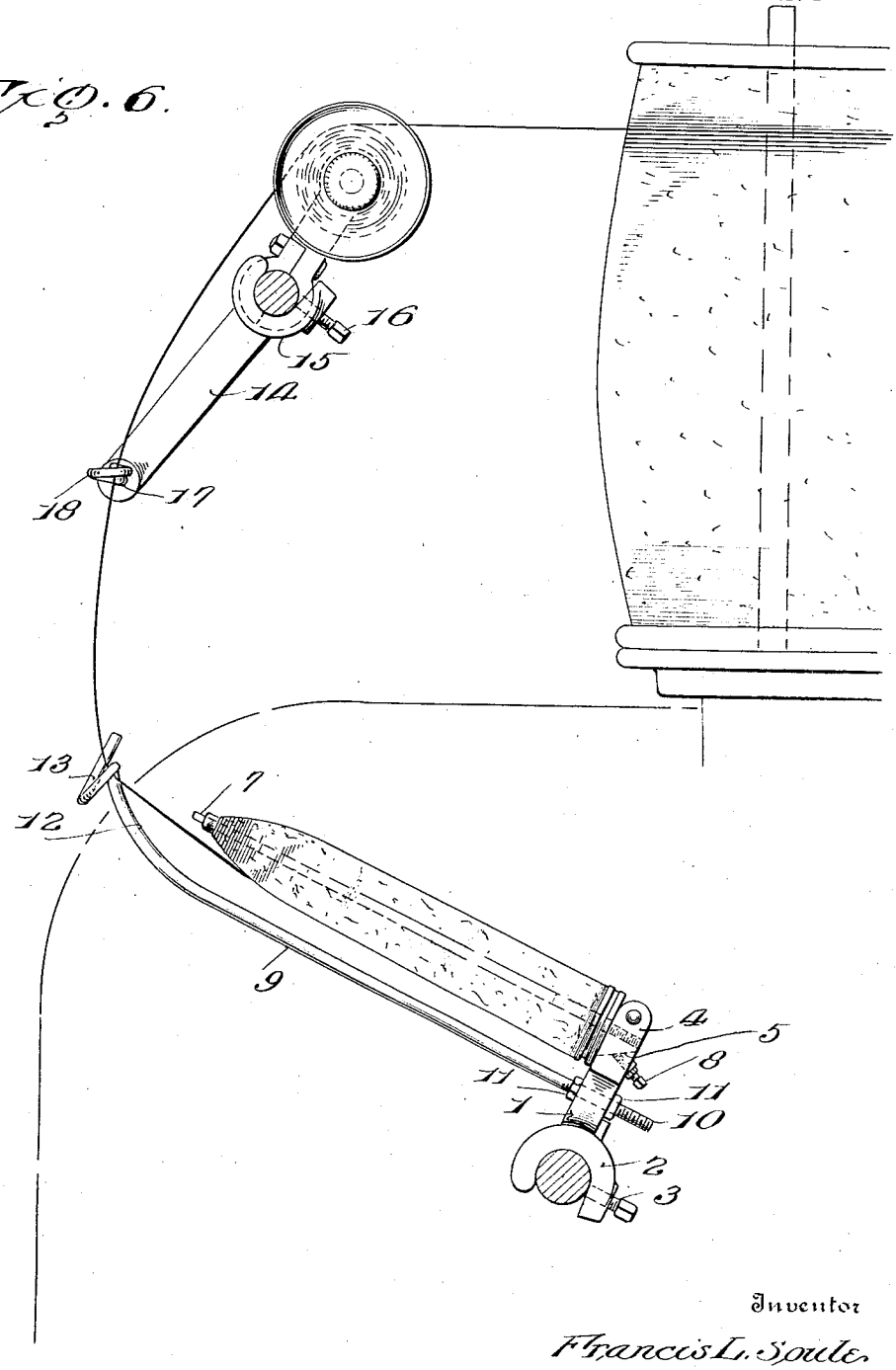
2 SHEETS—SHEET 2.

FIG. 6.



Witness

Inventor

Francis L. Soule.

By Lacey & Lacey, Attorneys

UNITED STATES PATENT OFFICE.

FRANCIS L. SOULE, OF WELLAND, ONTARIO, CANADA.

BOBBIN-HOLDER.

1,297,029. Specification of Letters Patent. Patented Mar. 11, 1919.

Application filed April 9, 1918. Serial No. 227,526.

To all whom it may concern:

Be it known that I, FRANCIS L. SOULE, a citizen of the United States, residing at Welland, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Bobbin-Holders, of which the following is a specification.

This invention has for its object the provision of simple, inexpensive, and efficient means whereby a bobbin or cop carrying filling yarn may be supported in proper position upon a spooling machine. A secondary object of the invention is to provide means for the stated purpose which will be suitable for use in connection with either single or multiple ply yarns and which will prevent the yarn from one bobbin from becoming entangled with the yarn from an adjacent bobbin. Other incidental objects of the invention will appear in the course of the following description.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a view partly in section and partly in elevation of the spindle and lower guide forming a part of my improved mechanism.

Fig. 2 is a front end elevation of the same.

Fig. 3 is a rear end elevation thereof.

Fig. 4 is an elevation of the upper guide.

Fig. 5 is an enlarged edge view of a portion of the upper guide arm.

Fig. 6 is a diagrammatic elevation showing the position of the parts on the spooling machine.

In carrying out my invention, I employ a bracket consisting of a body 1 having a yoke 2 at its lower end which is adapted to fit over the bobbin holding rod of a spooling machine and be secured thereto by a set screw 3 which is mounted in one arm of the yoke. The upper end of the body 1 is constructed with a recess or notch 4 having its lower wall inclined or beveled, as shown at 5, and in the said notch or recess is pivotally mounted a block 6 having the spindle 7 secured therein. The lower end of the block or head 6 is beveled to correspond to the lower wall of the notch or recess 4 and in the body of the bracket is mounted a set screw 8 in such position that its inner end may be adjusted to bear against the lower end of the block or head 6 and thereby hold the same and the spindle 7 in any desired position relative to the bracket. Through the body of the bracket between the yoke 2 and set screw 8, I insert the end of a guide wire or arm 9 which is preferably threaded, as shown at 10, so as to receive lock nuts 11 which may be turned home against the opposite faces of the bracket 1 and thereby firmly secure the guide arm in place. The guide arm projects from the bracket below the spindle to a point adjacent the front end of the spindle where it is turned toward the spindle, as indicated at 12, and then wound upon itself as to form a coil or eye 13, the upper side of which is approximately in the plane of the axis of the spindle.

Upon the guide rod in approximately the vertical plane of the bracket 1, I secure a guide arm 14 which is provided at one end with a yoke 15 adapted to span the guide rod and is equipped with a set screw 16 which is adapted to bear against the guide rod and thereby secure the arm in position. Through the free end of the guide arm 14 and relatively transverse thereto, is secured a guide wire 17 having its free end formed into an eye or coil 18, as shown and this guide wire with its eye, as well as the guide 13, will be preferably case-hardened so that they will resist the wear to which they are subjected by the passage of the yarn therethrough.

The brackets or supporting arms having been secured to the bobbin-holding rod and to the guide rod respectively, as above stated, the spindle may be raised as indicated in dotted lines in Fig. 1, and the wound bobbin or cop then slipped over the spindle until its basal end bears against the head or block 6 whereupon the weight of the bobbin and the spindle will return the parts to the position shown by full lines in Fig. 1. The set screw 8 may be adjusted so that the spindle will occupy the proper position relative to the eye 13 and also to compensate for the wear upon the head or block 6. The end of the yarn is then passed through the eye 13 and thence to and through the eye 18. the latter being adjusted so as to direct the yarn to the tension device which is provided upon the spooling machine inasmuch as it is held within the end of the arm 14 by a threaded stem and a nut 19 mounted thereon and turned home against the arm, and the arm 14 may also be adjusted around the guide rod as will be readily understood.

It will be readily noted from the foregoing description, taken in connection with

the accompanying drawings, that the yarn will be carried through and supported by two guides between the bobbin and spool or tension device so that it will be held therein and spaced from the yarn from adjacent bobbins and, consequently, cannot become entangled therewith. My devices are exceedingly simple in construction and operation and may be applied to any spooling machine. The bobbin or cop remains stationary and cannot jump off the holder and it may be applied to the spooling machine in exactly the same position as the warp bobbin holder is now generally secured so that the operator is not required to bend to reach the bobbin or cop as is necessary with most machines for spooling the filling yarn.

Having thus described the invention, what I claim as new is:

1. A bobbin holder comprising a bracket, a block pivoted in the end of the bracket, a spindle secured rigidly in and projecting laterally from said block, a stop adjustably mounted in the bracket to engage the end of the block and hold the same in a set position, and a guide arm secured rigidly to and projecting laterally from the bracket below the spindle and provided with an eye beyond the end of the spindle.

2. A device for the purpose set forth comprising a bracket, a spindle carried by the end of the bracket, and a guide arm projecting from the bracket below the spindle and extending to a point adjacent the free end of the spindle and having its free end turned toward the axis of the spindle and coiled to form an eye alined with said axis.

3. A device for the purpose set forth comprising a bracket, having a notch in one end, the base of said notch being inclined, a block pivoted in said notch and having its edge inclined to correspond to the inclined base of the notch, a spindle carried by and projecting from said block, a set screw mounted in the bracket and projecting into the notch through the inclined wall thereof, and an arm projecting from the bracket below the spindle and provided at its front end with an eye arranged in alinement with the spindle and beyond the end of the same.

In testimony whereof I affix my signature.

FRANCIS L. SOULÉ. [L. S.]