

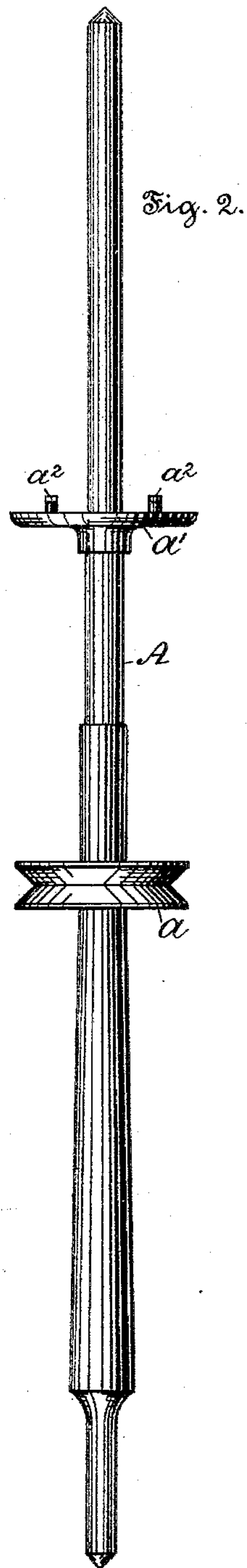
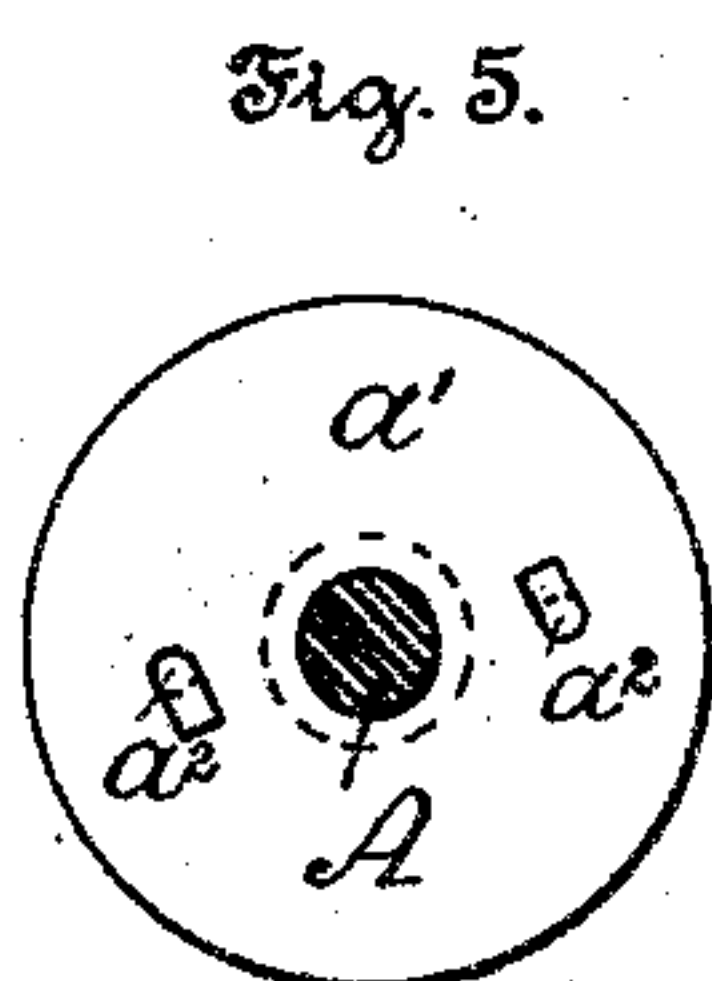
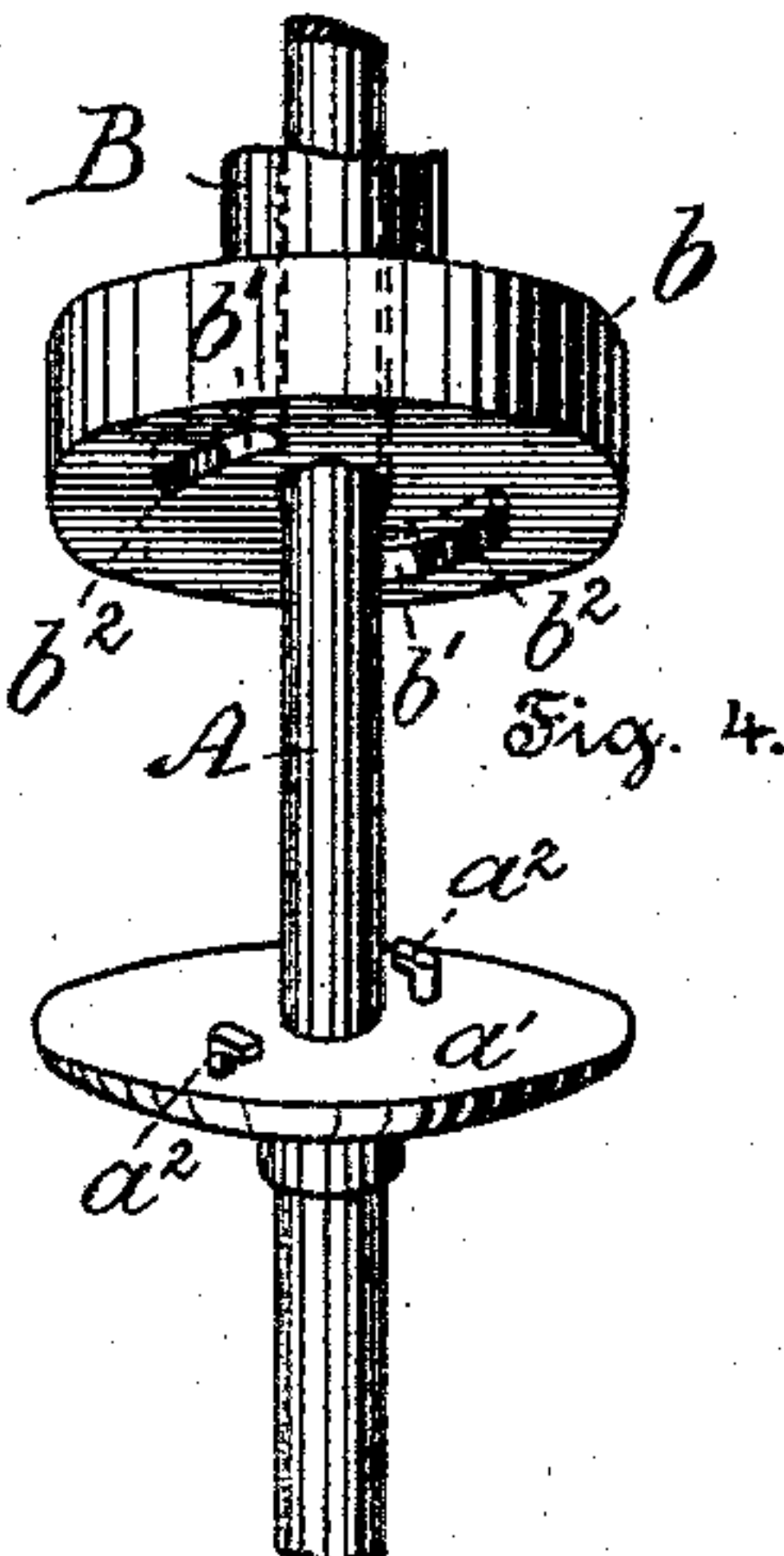
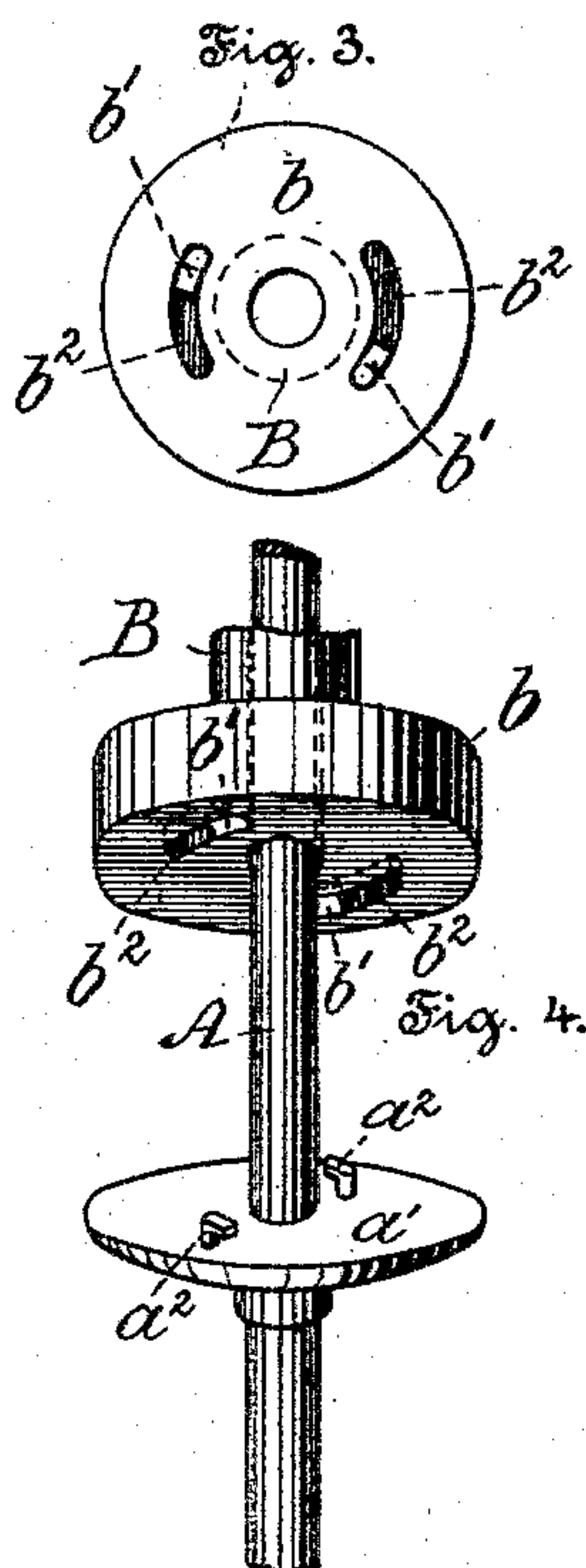
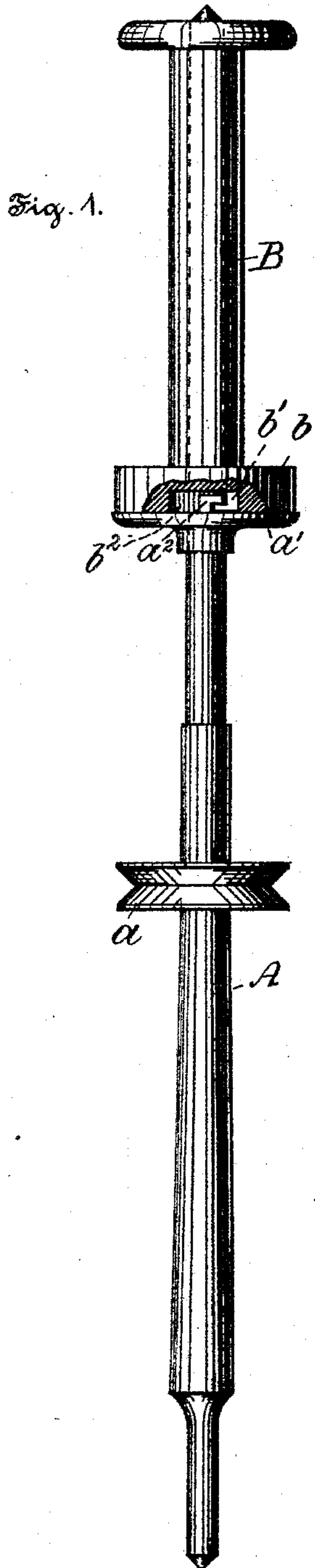
(No Model.)

J. B. MAWSON.

BOBBIN HOLDER FOR SPINDLES OF SPINNING MACHINES.

No. 411,926.

Patented Oct. 1, 1889.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN B. MAWSON, OF PHILADELPHIA, PENNSYLVANIA.

BOBBIN-HOLDER FOR SPINDLES OF SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 411,926, dated October 1, 1889.

Application filed February 21, 1889. Serial No. 300,717. (No model.)

To all whom it may concern:

Be it known that I, JOHN BOWNESS MAWSON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Spindles and Bobbins for Spinning-Machines, of which the following is a specification.

My invention relates to bobbins and spindles used in spinning-machines for spinning all kinds of yarns, silk, and other analogous material. The object of the same is to provide means of simple construction and effective in operation whereby the bobbin when revolved by its spindle is held in contact with the same, and which means prevent any raising or jumping of the bobbin from its rest when the latter is running at a great speed.

Heretofore the bobbin-rest of the spindle was provided with two pins projecting a short distance above the surface of the bobbin-rest, and which pins engaged with grooves provided in the lower head or disk of the bobbin. This construction is very objectionable, as the bobbin is liable to raise or jump from its seat, whereby the pins disengage from the grooves provided in the bobbin-head, leaving the bobbin either at a standstill, whereby the yarn is caused to slack and kink, or the bobbin is rotated irregularly, giving great waste of yarn, labor, and other trouble. A further objection is that the pins and edges of the grooves wear out so easy, which is also due to the raising and slipping of the bobbin on its spindle and bobbin-rest. Many attempts have been made to overcome these objections; but, so far as I am aware, no one has met with success. Some have designed devices such as springs and spring-latches; but as they are liable to get out of order, and owing to their great expense, the same have not been brought into actual use. Others have provided dovetailed or T-shaped studs on the bobbin-rest of the spindle, which engage with similar-shaped grooves in the lower head of the bobbins; but as the dovetailed or other grooves are difficult to form, and, being formed in the wooden head of the bobbin, are liable to wear out quickly, they are also not practical. All these objections are avoided by my improved device, consisting simply of hooks provided in the bobbin-rest of the spindle and

also in grooves of the lower head or disk of the bobbin, which hooks interlock with each other when the spindle is revolved by its whirl from any suitable power by which a uniform twist or spinning of the yarn onto the bobbin is obtained.

My invention will be more fully understood taken in connection with the accompanying drawings, wherein I have fully illustrated the same, and in which—

Figure 1 is an elevation of a spindle with a bobbin applied thereto, a portion of the lower head being broken away to show the interlocking of two hooks. Fig. 2 is an elevation of a spindle, showing the whirl and the bobbin-rest provided with two hooks. Fig. 3 is a plan view of the lower head of the bobbin, showing concentric grooves, each provided with a hook. Fig. 4 is a perspective view showing a portion of the spindle with its bobbin-rest provided with two hooks and also a portion of a bobbin provided with concentric grooves, each having secured therein a hook; and Fig. 5 is a plan view of the bobbin-rest, showing the hooks in position.

Referring now to the drawings for a further description of my invention, A is the spindle, of the usual form.

a is the whirl by which the spindle A, and with it the bobbin B, is revolved, as readily understood.

a' is the bobbin rest or seat secured to the spindle A, and which rest a' is provided with two hooks a^2 , arranged on the same radius from the center of the spindle A and opposite each other, as shown in Figs. 4 and 5.

The bobbin B, with its lower head or disk b , is provided with two grooves b^2 , formed concentric to the spindle A, as shown in Figs. 3 and 4, which grooves b^2 have a sufficient depth to clear the hooked studs or hooks a^2 of the bobbin-rest a' . In these grooves b^2 and driven into the head b are the hooks b' , the hooked extremities of which are flush with the surface of the bobbin head or disk b . The grooves b^2 of the bobbin-head b are made long enough to allow a free passage of the entire length of the hooks a^2 of the rest or seat a' , as will be readily seen in reference to Figs. 1, 3, 4, and 5.

The operation is as follows: The empty bobbin B being slipped onto the spindle A in a well-understood manner, and power applied

to the whirl *a*, the hooks *a*² of the bobbin-rest *a*' and the hooks *b*' of the bobbin B will at once interlock, as shown in Figs. 1 and 4, and both hooks will be in contact with each other
5 until the machine or motive power is stopped, when the bobbin by its momentum is revolved farther around the spindle A, thus disengaging the respective hooks, leaving the attendant in charge to only slip off the spindles the
10 filled bobbin and onto the spindles the empty bobbins for another filling of yarn or other analogous material.

It will be readily understood that as long as power is applied to the whirl *a* the bobbin
15 B is prevented from rising or jumping from its seat *a*', and is kept in uniform contact throughout the filling thereof, avoiding thus much waste of yarn or other material to be spun or twisted, as well as labor and stopping
20 of machine.

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

1. A spinning-machine bobbin provided with two grooves concentric to the spindle to
25 which the bobbin is applied and in each of which grooves is partially concealed or inclosed a hook adapted to engage with a similar hook provided on a bobbin-rest of the spindle, substantially as and for the purposes
30 set forth.

2. A spinning-machine bobbin provided with concentric grooves, each having secured therein a hook, in combination with a spinning-machine spindle having a bobbin-rest
35 provided with similar hooks to those of the bobbin, said hooks adapted and arranged to interlock with each other, substantially as and for the purposes set forth.

In witness whereof I have hereunto set my
40 hand in the presence of two subscribing witnesses.

J. B. MAWSON.

Witnesses:

HERMANN BORMANN,
CHAS. KRAPPENSTEIN.