

No. 758,715.

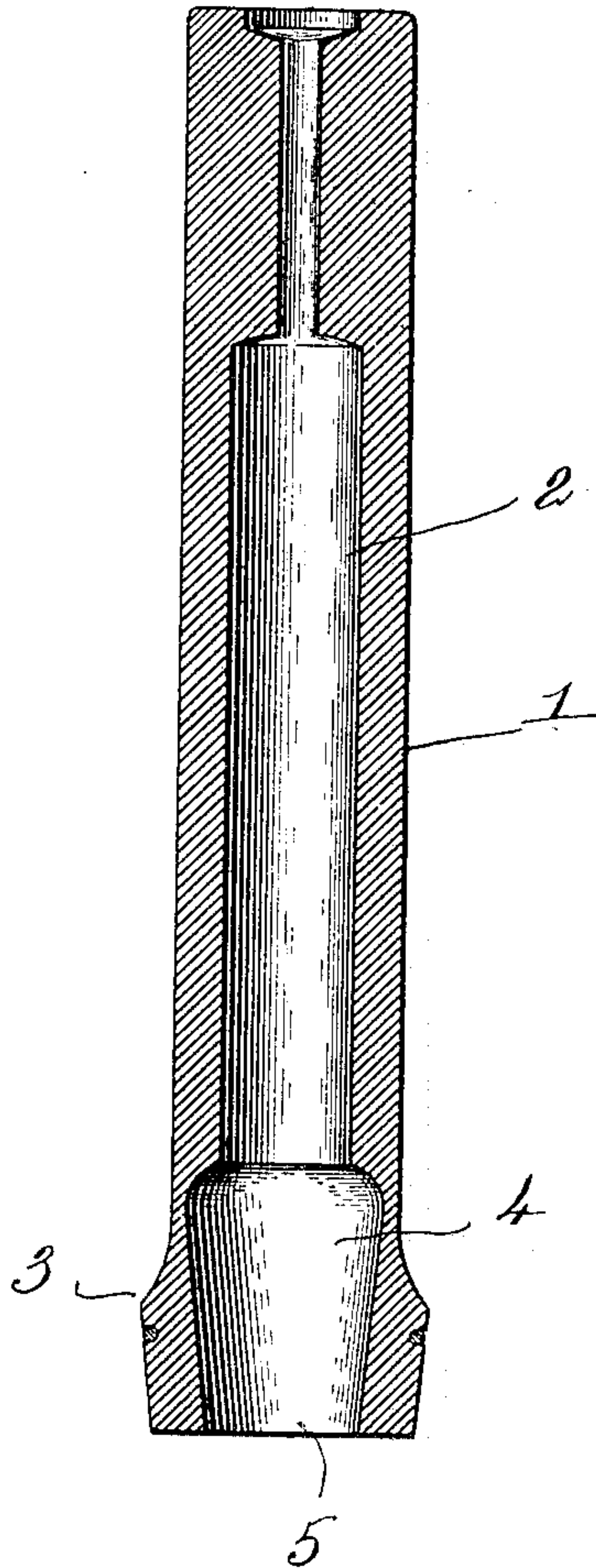
PATENTED MAY 3, 1904.

W. I. STIMPSON.  
BOBBIN.

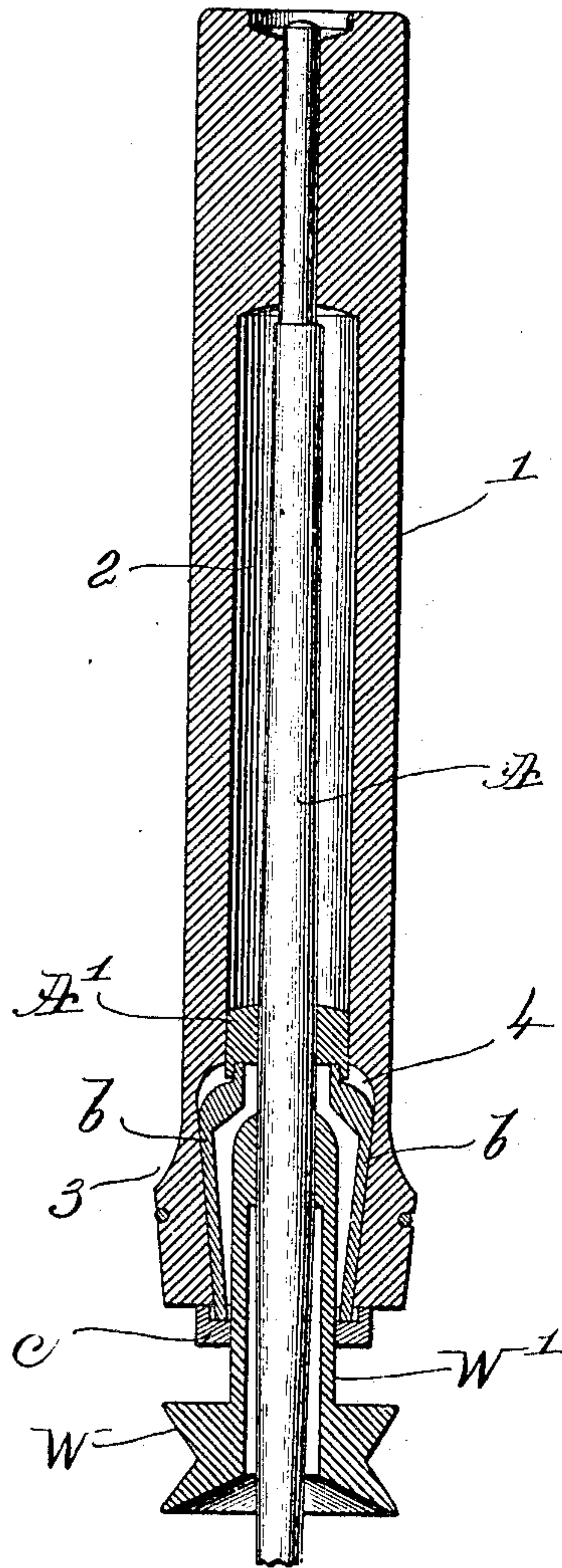
APPLICATION FILED FEB. 19, 1904.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



*Witnesses.*  
*Thomas Drummond.*  
*Warren D. Allen.*

*Inventor.*  
*Wallace I. Stimpson,*  
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*Attys.*



# UNITED STATES PATENT OFFICE.

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## BOBBIN.

SPECIFICATION forming part of Letters Patent No. 758,715, dated May 3, 1904.

Application filed February 19, 1904. Serial No. 194,430. (No model.)

*To all whom it may concern:*

Be it known that I, WALLACE I. STIMPSON, a citizen of the United States, residing in Milford, in the county of Worcester, in the State of Massachusetts, have invented an Improvement in Yarn-Receivers or Bobbins, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object the production of a yarn-receiver or bobbin particularly adapted for use with a spindle provided with centrifugally-acting bobbin-clutching means—such, for instance, as shown in United States Patent No. 734,747, dated July 28, 1903. In said patent the spindle is provided with clutching members, which are forced outward by centrifugal action when the spindle is rotated and which engage the walls of a chamber or socket in the base of the bobbin to thereby rotate the latter with the spindle.

All bobbins have a tendency to move upward on the spindle during the spinning operation, due to the vibration of the spindle. In my present invention I have so constructed the bobbin that the centrifugal action of the clutch members will positively act to hold the bobbin down on the spindle, as well as cause it to rotate therewith, irrespective of any vibrational movement of the spindle.

Figure 1 is a longitudinal sectional view of a yarn-receiver or bobbin embodying one form of my invention. Fig. 2 is a similar view showing the bobbin on a spindle of the character referred to to illustrate clearly the cooperation of the clutch members with my novel bobbin.

The yarn-receiver or bobbin 1, made of wood or other suitable material, has the usual central spindle-receiving bore 2, the shape or general construction of the exterior of the bobbin being immaterial so far as my present invention is concerned. At its lower end within the base 3 of the bobbin the bore is enlarged in any suitable manner to form an inverted frusto-conical chamber 4—that is, a chamber the diameter of which is greater ad-

jacent the bore than at the lower end of the bobbin, so that the side walls of the chamber converge toward its open end or mouth 5. By reference to Fig. 2 the utility of such chamber and the cooperation therewith of a centrifugally-acting bobbin-clutch will be manifest. In said Fig. 2 the spindle A, whirl W, and its sleeve W', the boss A', and collar c, providing controlling-raceways, and the cooperating bobbin-clutching members b may be and are all substantially as in Patent No. 734,747, hereinbefore referred to, the rotation of the spindle causing the clutching members b to fly outward and engage the interior of the yarn-receiver or bobbin. By making the chamber 4 larger at its upper end than at its mouth, as clearly shown in Fig. 1, the clutching members b spread out farther at their upper ends against the walls of the chamber. This causes their upper ends to "overhang," as it may be termed, and to act not only with outward pressure against the walls of the bobbin-chamber, but with a downward pressure as well, effectually holding the bobbin down on the spindle and overcoming any tendency of the bobbin to rise. The bobbins thus are held at the proper height on the spindles and are clutched thereto to be rotated by one and the same clutching means.

Any centrifugally-acting clutch device may be used with a bobbin embodying my invention provided such device is arranged to spread out or expand in conformity with and to engage the downwardly-convergent sides of the receiving-chamber in the bobbin.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A yarn-receiver or bobbin having a central bore enlarged at its lower end to form within the base of the bobbin a chamber of greater diameter adjacent the end of the bore than at the lower end of the bobbin, said chamber being adapted to receive and cooperate with a centrifugally-acting bobbin-clutching instrumentality.

2. A yarn-receiver or bobbin internally chambered at its base, the side walls of the

chamber converging toward the lower end of the bobbin, to coöperate with the inclined portions of centrifugally - acting bobbin-clutching members when the bobbin is placed  
5 upon a spindle.

3. A yarn-receiver or bobbin having an inverted frusto-conical chamber in its base, adapted to receive centrifugally-acting bobbin-clutching members, for the purpose set  
10 forth.

4. A yarn-receiver or bobbin having a central spindle-receiving bore enlarged at its

lower end to form an inverted frusto-conical chamber in the base of the bobbin, adapted to receive and coöperate with a centrifugally-  
15 acting bobbin-clutching instrumentality when the bobbin is placed upon a spindle.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALLACE I. STIMPSON.

Witnesses:

FRANK J. DUTCHER,  
F. E. NORCROSS.