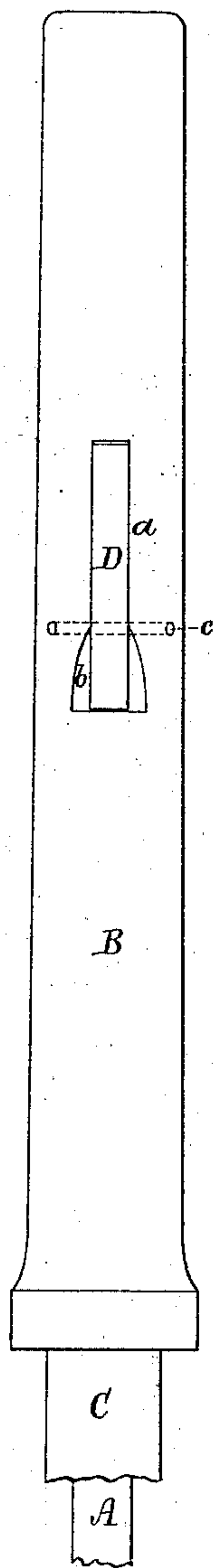
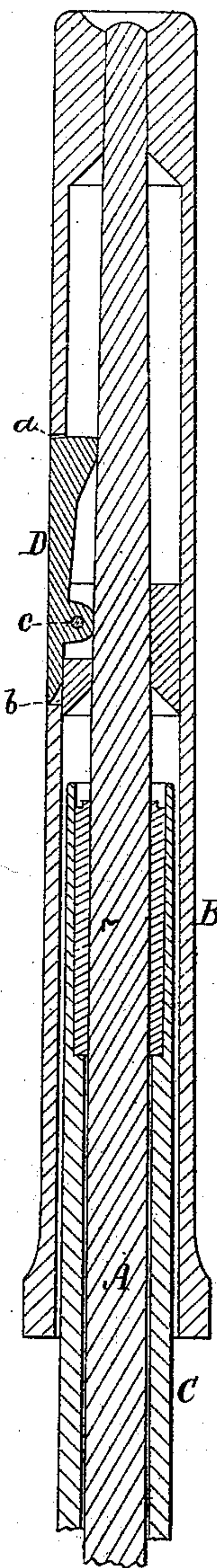


J. W. CUMNOCK.  
Yarn-Fastener for Bobbins of Spinning-Frames.  
No. 223,801.      Patented Jan. 27, 1880.

*Fig. 1.*



*Fig. 2.*



Witnesses  
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James W. Cumnock.  
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# UNITED STATES PATENT OFFICE.

JAMES W. CUMNOCK, OF CHICOPEE, MASSACHUSETTS.

## YARN-FASTENER FOR BOBBINS OF SPINNING-FRAMES.

SPECIFICATION forming part of Letters Patent No. 223,801, dated January 27, 1880.

Application filed November 7, 1879.

*To all whom it may concern:*

Be it known that I, JAMES W. CUMNOCK, of Chicopee, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Yarn-Fasteners for Bobbins of Spinning-Frames; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, and Fig. 2 a longitudinal section, of a spindle and its bobbin provided with my invention, the purpose of which is to expeditiously and securely fasten the yarn to the bobbin in the process of doffing.

The chief interruption that occurs in spinning takes place during the removal from the spindles of the full bobbins and the substitution therefor of empty ones. This operation is termed by spinners "doffing," and heretofore has usually consumed from ten to fifteen per cent. of the time employed per day in running a spinning-frame.

With my improvement the time for the doffing is reduced comparatively to half or less than half that usually heretofore consumed in the old practice, in which, to connect the yarn with the bobbin, such yarn had to be wound about the bobbin several times, and the bobbin, after being placed on the spindle, had to be revolved thereon more or less, in order to cause the loose yarn to be taken up.

With my improvement the spinner simply slips or passes the yarn under the fastener, and next places the bobbin on the spindle. In doing this latter the fastener becomes set upon the yarn, so as to connect it with the bobbin.

In the drawings, A denotes a ring-frame spindle; B, its bobbin, and C the spindle-bolster.

In carrying out my invention I make in the bobbin a suitable slot, *a*, and recess *b*, to receive the yarn-fastener D, which, in this instance, is a lever-catch, formed as shown, and turning freely upon a pivot or pin, *c*, going

through it and the bobbin transversely. The upper arm of the lever-catch is or should be heavier than the lower arm, and should also be so formed that, on the bobbin being pressed down to place on the spindle, the latter will press outward the said longer arm, so as to close the shorter arm of the catch upon the yarn when between it and the bobbin or the bottom of the recess *b*. When the bobbin is off the spindle the weight of the larger arm of the catch causes it to fall back within the bobbin and open the catch for the yarn to be laid under it.

I would remark that my invention is applicable to a spool as well as to a common ring-frame bobbin. The fastener, on being closed, comes flush with the curved outer surface of the bobbin and closes the slot in which it (the said fastener) may be situated.

I am aware that to a bobbin there has been applied a catch-spring for fastening the end of the thread at the beginning of the winding, such being as shown in the United States Patent No. 148,110, in which case the bobbin-body was not tubular to receive a spindle to operate in any manner to move the catch-spring.

I am also aware that a spinning-bobbin at its base has been provided with a metallic ring having spring flanges or lips, under which the yarn may be drawn in the operation of doffing, so as to hold the yarn to the bobbin, instead of doing so by winding the yarn about such on doffing taking place, all of which differ from my invention, as will readily be perceived.

What I claim as my invention is—

The combination, with a spool or bobbin, of the yarn-fastener, substantially as described, adapted to be operated by the spindle, essentially as and for the purpose set forth.

JAMES W. CUMNOCK.

Witnesses:

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