

No. 762,422.

PATENTED JUNE 14, 1904.

J. E. LEMYRE.
BOBBIN.

APPLICATION FILED OCT. 30, 1903.

NO MODEL.

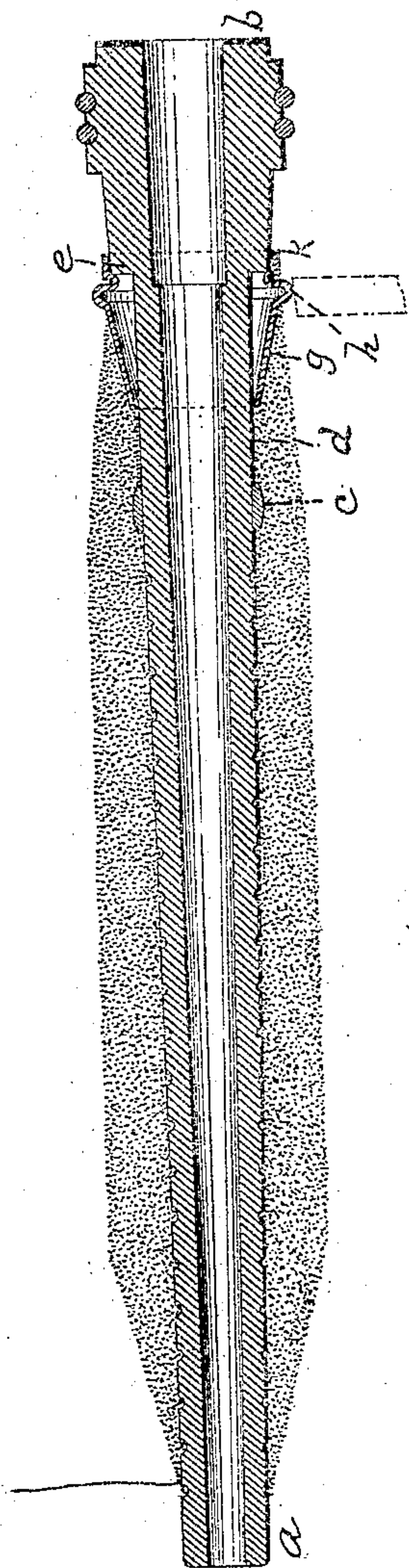


FIG. 1-

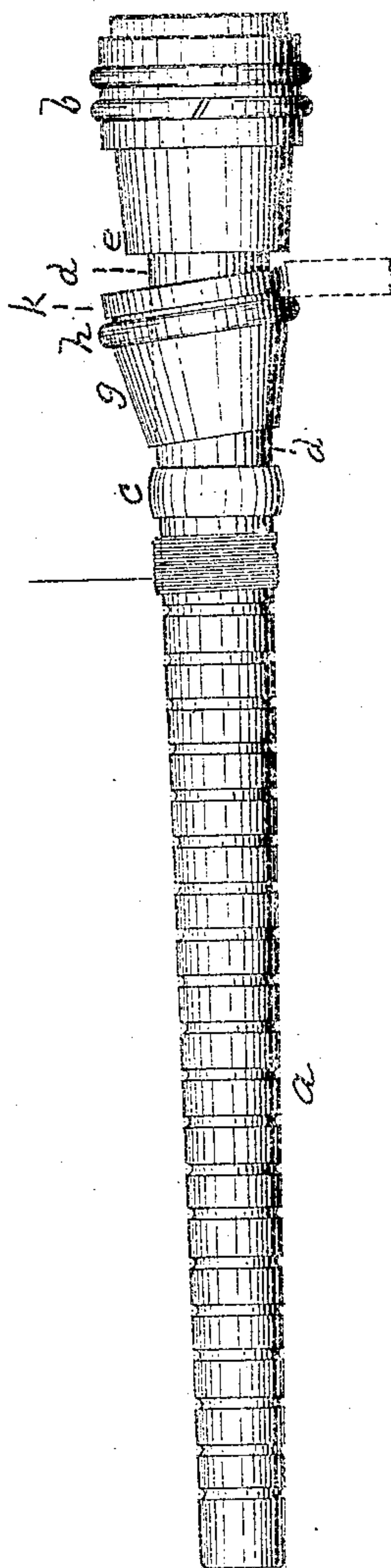


FIG. 2-

WITNESSES=

A. M. P. Emery.
A. L. Foster.

INVENTOR=

Joseph E. Lemyre.
By his Atty.

Henry W. Williams

UNITED STATES PATENT OFFICE.

JOSEPH E. LEMYRE, OF MANCHESTER, NEW HAMPSHIRE.

BOBBIN.

SPECIFICATION forming part of Letters Patent No. 762,422, dated June 14, 1904.

Application filed October 30, 1903. Serial No. 179,211. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH E. LEMYRE, a citizen of the United States, residing in Manchester, in the county of Hillsboro and State of New Hampshire, have invented a new and useful Improvement in Bobbins for Cotton-Looms, of which the following is a specification.

This invention relates particularly to bobbins of the style provided with a filling change, such as are used in the Draper looms. In bobbins of this style there is ordinarily left on the bobbin a large bunch of thread. This is for the reason that in bobbins of this character the feeler strikes the thread on the bobbin until it is sufficiently reduced to avoid the feeler and enable the bobbin to be thrown off. This throwing off occurs, however, when there is a considerable bunch of thread left at the point where the feeler strikes, such thread being, of course, wasted.

It is the object of this invention to do away with this waste and utilize almost all of the thread or yarn, so that when the bobbin is thrown off there is but very little thread left wound around it, and I accomplish this result mainly by the employment of a cone on the spindle, said cone receiving the blows of the feeler and being held in position by the thread until but little thread is left on the spindle, when the cone falls or yields and allows the bobbin to be thrown off.

The nature of the invention is fully described in detail below and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of the bobbin in a full condition. Fig. 2 is an elevation of the bobbin with the thread nearly unwound from it and the cone in a position to allow the bobbin to be thrown off. The location of the feeler is indicated in both figures by dotted lines.

Similar letters of reference indicate corresponding parts.

a represents the spindle, and *b* the head thereof. *c* is a metallic ring rigid on the spindle at a suitable distance from the head. The portion *d* of the spindle which lies between the ring *c* and the head *b* is substan-

tially of even diameter—that is, it does not slope up toward the head—and said head is hence provided at its inner end with an annular shoulder *e*. On this portion *d* is placed a hollow cone *g*, preferably of metal, said cone being tapered on its inner surface, as well as its outer surface, as shown in Fig. 1. The cone is formed up near its larger end with an annular rib *h*, and said end is of suitable size to overlap said shoulder *e*, as indicated by the portion *k*. The ring *c* confines the cone between it and the head of the spindle. When the spindle is loaded, the thread extends around it in the manner indicated in Fig. 1 and is wound around the cone *g* (whose portion *k* overlaps the inner edge of the head) until the thread covers the main portion of the cone up to the rib *h*. This rib is left bare and is so located that it will receive the blows of the feeler. As long as there is any thread left on the cone it will remain in the position indicated in Fig. 1; but when the thread is unwound therefrom the cone slips off from the head and falls loosely on the portion *d* of the spindle, thus offering no resistance to the feeler. In other words, the rib on the cone takes the place of the thread on the bobbin at that point. It will readily be seen, therefore, that while with bobbins as ordinarily constructed the bunch of thread which remains after the feeler ceases to strike it is quite large in my invention the thread is all unwound from the cone and only a small portion left on the spindle by the time the cone is released by the unwinding of the thread, so as to fall and leave a space into which the feeler flies without striking the cone. Hence when the picker throws off the bobbin with my construction there is but little thread left wound around it, while by the ordinary construction there must be a bunch of thread which is about as large as my cone. The ring *c* serves to limit the movement of the cone, but to allow it to tip in the manner indicated.

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

1. In a bobbin of the character described, a cone on and around the spindle near the head

and in the path of the feeler, said cone being adapted to be held rigidly by the thread until said thread is nearly or quite unwound therefrom and then to fall away from the path of said feeler, for the purpose set forth.

2. In a bobbin of the character described, the spindle provided with a suitable head; and the cone *g* normally loose on said spindle and provided with the annular rib *h* adapted when the yarn is wound around the main portion of the cone to extend into the path of the feeler, for the purpose set forth.

3. In a bobbin of the character described, the spindle provided with a suitable head; and the cone *g* normally loose on said spindle, provided with the annular rib *h* and outer end *k*, whereby when the yarn is wound around the main portion of the cone said outer end overlaps and rests on the head and said rib extends

into the path of the feeler, for the purpose set forth.

4. In a bobbin of the character described, the spindle provided with a suitable head; a ring rigid on the spindle at a short distance from the head; and a cone on and around the spindle between the ring and the head and in the path of the feeler, said cone being adapted to be held rigidly by the thread until said thread is nearly or quite unwound therefrom and then to fall away from the path of the feeler, for the purpose set forth.

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

JOSEPH E. LEMYRE.

Witnesses:

JOHN H. WHITTEN,
W. W. SIMMONS.