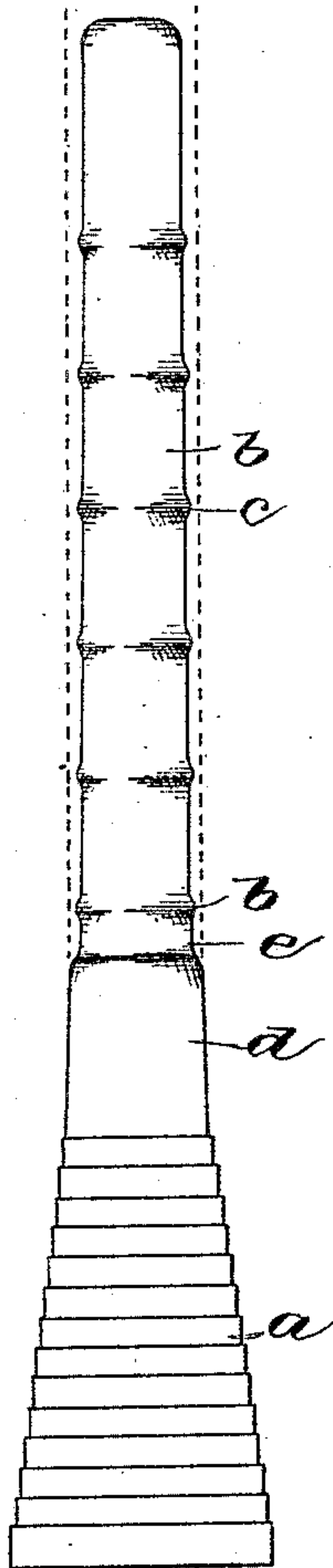


(No Model.)

A. CLAUS.
BOBBIN.

No. 412,163.

Patented Oct. 1, 1889.



Witnesses.
Howard A. Eaton.
Franklin Emery.

Inventor.
Adolph Claus,
by Lewis & Morgan
Attys

UNITED STATES PATENT OFFICE.

ADOLPH CLAUS, OF LOWELL, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO
JOSEPH S. LUDLAM, OF SAME PLACE.

BOBBIN.

SPECIFICATION forming part of Letters Patent No. 412,163, dated October 1, 1889.

Application filed February 26, 1889. Serial No. 301,244. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH CLAUS, of Lowell, county of Middlesex, State of Massachusetts, have invented an Improvement in Bobbins, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

In the use of bobbins in loom-shuttles it frequently happens that the yarn first laid upon the base of the bobbin in the formation of the cop fails to be delivered from the bobbin, and the operator to remove the base of the cop cuts through the yarn with the blade of a sharp knife to the surface of the bobbin; but in doing so the operator by carelessness cuts it and injures the bobbin, and in this way many bobbins are spoiled and have to be thrown away. The injury to the surface of the bobbin by the knife is a very serious objection, especially when the surface of the wood bobbin is enameled, so as to permit the yarn or cop thereon to be steamed before being put into the shuttle, for when the enamel is cut through the steam has ready access to the wood and soon spoils the bobbin. With bobbins as now constructed the operator has to use the knife, as stated, for the base of the cop frequently clings so closely to the base of the bobbin that it cannot be removed or unwound except by very considerable waste of time. To avoid the necessity of cutting the thread which fails to run off from the base of the bobbin and the consequent destruction of bobbins, as stated, I have constructed the bobbin in such manner that when the yarn in the cop is substantially or nearly exhausted, should it fail to run off it may be readily and easily drawn from the bobbin.

My invention therefore consists in a bobbin having a base and a barrel provided with cop-holding projections for a part of its length, a portion of the barrel next the small end of the base being substantially cylindrical or of a diameter slightly in excess of the greatest diameter of the barrel in the line of its holding projections, as will be described.

The drawing shows a bobbin embodying

my invention. The base *a* of the bobbin is represented as truncated and shouldered, while the barrel *b* of the bobbin is provided with holding projections *c*; but the base of the bobbin and the barrel having holding projections may be of any usual construction. Between the portion *b* of the barrel of the bobbin and the base *a*, I have provided the bobbin with a substantially or nearly cylindrical portion *d*, which I call a "starting" portion, it terminating near one of the holding projections *b*. The diameter of the starting portion is slightly in excess of the diameter of the barrel of the bobbin, taken through its projections *b*. In the drawing I have shown two dotted lines at each side of the barrel, the said dotted lines being projected from the surface of the starting portion to better illustrate this difference in diameter.

When the thread or yarn is wound upon the bobbin herein described after the manner of the filling wind, as is well understood, the yarn, entering into the base of the cop after the base has been started and the portion *d* has been covered, enters the space *e* between the starting portion and the first one of the projections *b*. The yarn entering the space *e* when the cop is fully wound acts to prevent the pulling of the base of the cop off the small end of the bobbin.

When the bobbin is put into a shuttle, the thread is readily drawn off in usual manner; but the yarn covering the base of the bobbin and the starting portion *d* cannot move bodily in the direction of the length of the bobbin until after the thread wound into the space *e* has been unwound; but after that the operator, by grasping the base of the cop which at that time contains but little thread distributed in thin layer over the base *a*, and the starting portion *d* may readily force the base of the cop from the base of the bobbin and along the barrel thereof off the point of the bobbin, such being permissible, because of the greater diameter of the starting portion *d* as compared with the diameter of the barrel of the bobbin in the line of its holding projections.

I claim—

A bobbin having a base and a barrel provided with holding projections, and with a starting portion between the barrel and base,
5 the said starting portion being of greater diameter than the barrel in the line of its holding projections, substantially as described.

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

ADOLPH CLAUS.

Witnesses:

CHAS. F. CARR,
F. F. PACKARD.