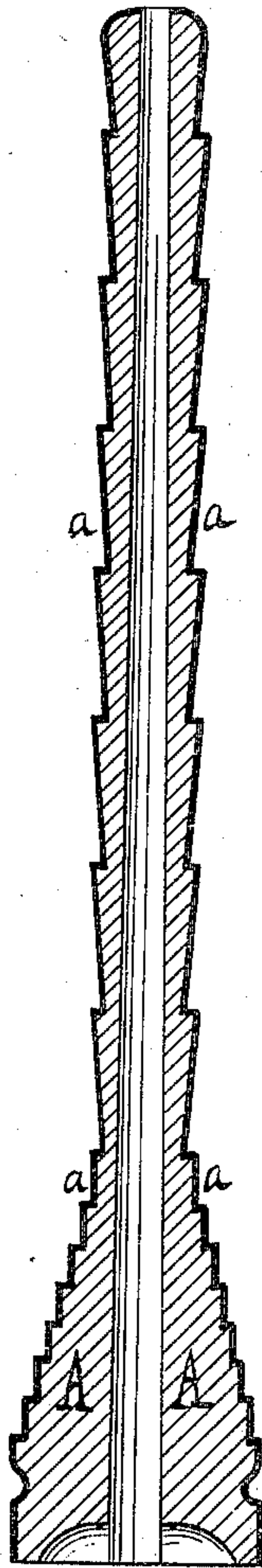


(No Model.)

L. STONE.
SPOOL AND BOBBIN.

No. 335,783.

Patented Feb. 9, 1886.



WITNESSES,

Warren R. Perce

May M. Hallett

INVENTOR,

Lorenzo Stone

UNITED STATES PATENT OFFICE.

LORENZO STONE, OF PROVIDENCE, RHODE ISLAND.

SPOOL AND BOBBIN.

SPECIFICATION forming part of Letters Patent No. 335,783, dated February 9, 1886.

Application filed May 11, 1885. Serial No. 165,140. (No model.)

To all whom it may concern:

Be it known that I, LORENZO STONE, of the city and county of Providence, in the State of Rhode Island, have invented a new and
5 useful Improvement in Spools and Bobbins; and I declare the following to be a specification thereof, reference being had to the accompanying drawing.

The figure is a central longitudinal section
10 of a bobbin embodying my improvement.

My invention relates to the wooden spools and bobbins commonly used in the manufacture of textile fabrics; and it consists of a
15 wooden spool or bobbin having a baked enameled surface, for the purpose hereinafter set forth.

My invention is applicable to spools and bobbins of whatever style and shape. In the drawing I show a bobbin, A, shaped as a
20 series of truncated cones. The entire outer or exposed surface is covered with a layer, *a*, of Japan enamel, which is applied and baked thereon in the manner familiar to enamelers. The coating of enamel is represented in the
25 drawing by a heavy black line along the sides of the bobbin.

It is necessary that a spool or bobbin should have a firm and smooth surface; hence it is usual to make them of hard wood; but such
30 unprotected wooden surface is apt to be cut by the yarn and to wear irregularly or to splinter, thereby becoming impaired or useless. Sometimes they are made of wood covered with metal, and occasionally they have
35 been made entirely of metal; but such are objectionable because of the weight. The purpose is to secure so smooth a surface that the yarn will not catch upon the spool or bobbin in unwinding. By my improvement I obtain
40 such a surface, as the Japan enamel when applied in its liquid state is smooth and uniform, and when baked it becomes a peculiarly hard, tough, and durable substance of admirable wearing qualities. The enamel is not
45 cut by the yarn, but continues smooth and

firm, though long used. I am able thus to make my spools and bobbins of a cheap light wood, as its fiber is wholly covered and protected, and yet to have a wearing-surface equal to metal in smoothness and durability, but without the weight of metal. 50

When wet yarn is used upon wooden spools or bobbins, as in the manufacture of woolens, the moisture is apt to cause the wood to swell, and the cop is consequently bound upon the
55 spool or bobbin, thereby causing an unequal tension of the yarn or breakage. My improved spools and bobbins are not subject to this disadvantage, because the enamel is water-proof and remains wholly unaffected by moisture. 60

Another difficulty sometimes experienced in the use of wooden bobbins is, that they take oil from the spindle upon which they are mounted and become saturated with the oil. The result is, that the yarn is stained and
65 greased, and the cloth is damaged and unsalable. In the use of my improved bobbin this difficulty is avoided, as the enamel is impervious to the oil.

I am aware that it is not new to make bobbins of wood or paper and to cover the same
70 with a coating of paint, oil, varnish, glue, and glycerine, ethereal japans, or other similar substances or compounds which are hardened by evaporation. My invention differs from
75 all such in the fact that by the action of artificial heat the enameling composition is developed and vulcanized into a tenacious, coherent, and impervious coating, adapting it to the purposes hereinbefore specified. 80

I claim as a novel and useful invention and desire to secure by Letters Patent—

A wooden spool or bobbin having a baked enameled surface, substantially as and for the purpose described.

LORENZO STONE.

Witnesses:

WM. B. W. HALLETT,
WARREN R. PERCE.