

# UNITED STATES PATENT OFFICE.

CHARLES E. NUTTING, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO  
DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION  
OF MAINE.

## METHOD OF MAKING MOISTURE-REPELLENT BOBBINS.

No. 797,702.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed July 25, 1904. Serial No. 217,909.

*To all whom it may concern:*

Be it known that I, CHARLES E. NUTTING, a citizen of the United States, and a resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Methods of Making Moisture-Repellent Bobbins, of which the following is a description.

Wooden bobbins have been treated in various ways to prevent the moisture to which they are constantly subjected from entering the pores and swelling the bobbins, with a shrinkage of the same when permitted to dry out. This shrinking and swelling not only affects the fit of the bobbin on the spindle, it being sometimes too tight a fit and at other times too loose, but it also has a very decided tendency to split the wood, rendering the bobbin worthless. Hot grease has been used to fill the pores of the wood, waterproof enamel has been applied, and still another method employed is to soak the bobbins in oil and then to apply a coat of shellac. In the course of my experiments to make such bobbins still more repellent to moisture in a simple and inexpensive way I have discovered that extremely good results are obtained by first thoroughly soaking the bobbin in very thin shellac and thereafter applying a final coat or surfacing of thick shellac.

In practicing my invention I prepare a bath of very thin shellac—say of about the consistency of water—and completely immerse therein the bobbins to be treated, permitting them to soak therein till the air has been practically driven out of the pores of the wood and its place taken by the shellac. The thoroughly-impregnated bobbins are then removed from the bath, the surplus shellac being permitted to run or drip off, and when the bobbins are dry they are given a final

coating or surfacing of thick shellac possessing considerable body. This coating is applied in any suitable manner, conveniently by dipping. Such final coating when dry forms a hard smooth surface or skin extending unbrokenly over the entire surface of the bobbin, presenting no projections or rough portions on which the yarn may catch and effectually preventing the access of moisture to the bobbin. Should this external coating crack, the thin shellac which has filled and hardened in the pores prevents the entrance of moisture to the bobbin, so that its size remains constant and a uniform fit on the spindle is secured.

I find that the bath in which the bobbins are soaked must be very thin shellac, in order that the pores may be thoroughly impregnated or filled to avoid the formation of merely a thin surface skin.

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

The herein-described method of treating wooden bobbins to make them moisture-repellent, which consists in completely immersing and permitting the bobbin to soak in thin shellac until the air has been expelled from its pores and the latter are filled with the thin shellac, removing the soaked and shellac-impregnated bobbin, and finally coating the same with thick shellac.

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

CHARLES E. NUTTING.

Witnesses:

GEORGE OTIS DRAPER,  
FRANK E. DODGE, Jr.