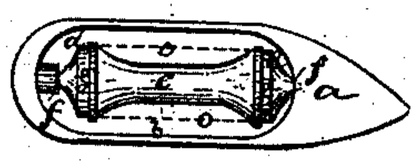
D. M. CHURCH.

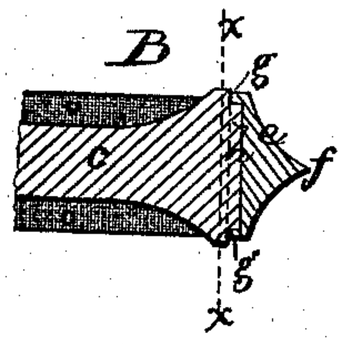
SPOOL OF THREAD FOR SEWING MACHINE SHUTTLES.

No. 105,778. Patented July 26, 1870.

A



B



Witnesses
S. B. Ridder.
C. Warren Brown.

D. M. Church
by his Attys
Crosby, Gaffield & Fowler

United States Patent Office.

D. M. CHURCH, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND TIMOTHY MERRICK, OF SAME PLACE.

Letters Patent No. 105,778, *dated July* 26, 1870.

IMPROVEMENT IN SPOOL OF THREAD FOR SEWING-MACHINE SHUTTLES.

The Schedule referred to in these Letters Patent and making part o tne same.

To all whom it may concern:

Be it known that I, D. M. CHURCH, of Holyoke, in the county of Hampden and State of Massachusetts, have invented an Improvement in Sewing-machine Shuttle-Bobbins; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention, sufficient to enable those skilled in the art to practice it.

United States Letters Patent No. 78,057, were granted May 19, 1868, on an improvement in sewing-machine shuttle-bobbins, the invention having been made by me, and the patent being now owned by me.

Such improvement consisted in combining with a bobbin two detachable metal caps, provided each with a center point or pivot on its outer side, and on its inner side being made with a peripheral flange, which fitted over the end or head of the bobbin, the center points forming the pivots upon which the bobbin rotates in the shuttle, and the flanges securing the metal caps upon the bobbin-heads. The flange of each cap extended around or encompassed the whole cylindrical end of the spool-head, and, consequently, the spool-heads had to be made of a less diameter, as the outer diameter of the cap-flange being made to fit into a shuttle, the head of the bobbin must be enough smaller to permit the flange to fit upon it.

For this reason the thread-holding capacity of the spool is diminished by such construction.

As it is a desideratum to have a shuttle-bobbin hold as much thread as possible, to obviate frequent change thereof, I have sought to so construct and apply these caps as to preserve the full size of the spool or bobbin-heads, and I accomplish this by making each head of its normal or full diameter, except at the outer extremity thereof, which I make slightly less in diameter, thus forming a shoulder or a boss over which the cap fits, the cap and the head of the spool thus being of the same diameter, (or the cap of slightly less diameter,) permitting the bobbin to be made and filled to the spool-holding capacity of the shuttle. I also make the bobbin solid.

It is this improved construction which constitutes my present invention.

The drawing represents a wound bobbin embodying the improvement, *o* indicating the thread.

A shows the bobbin applied to a shuttle.

B is a sectional view of one end of the bobbin and its cap, they being enlarged.

a denotes the shuttle.

b the bobbin-containing chamber.

c the bobbin, preferably made of wood.

d e the metal caps.

Each cap has an outwardly-projecting center-pin or pivot, *f*, and an inwardly-projecting peripheral flange, *g*.

The head of the bobbin is of full diameter on the line *x x*, but at the end of the bobbin the head is of less diameter, as seen at B, forming a boss, *h*, upon which the cap-flange fits, the perimeter of the flange being flush with the perimeter of the head, or not extending quite thereto.

It will thus be obvions that the thread-receiving capacity of the bobbin or spool is not impaired by the employment of caps made and applied in this manner, and that, in this respect, the invention is an important improvement upon the invention covered by my patent, to which I have above referred.

I claim—

As an article of manufacture, a spool of thread for shuttles, the spool containing the thread being made solid, and having, upon each end, a cap-receiving boss, *h*, adapted to receive and hold thereon metal caps, having pivotal centers, substantially as shown and described.

Executed December 23, 1869.

D. M. CHURCH.

Witnesses:

TIMOTHY MERRICK,

J. P. BUCKLAND.