## G. W. H. CURTIS. Bobbins for Sewing-Machine.

No. 166,348.

Patented Aug. 3, 1875.

FIG. I.



FIG. 2.



FIG.3.



FIG.4.



INVENTOR.

## UNITED STATES PATENT OFFICE.

GEORGE W. H. CURTIS, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN BOBBINS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **166,348**, dated August 3, 1875; application filed April 26, 1875.

To all whom it may concern:

Be it known that I, GEORGE W. H. CURTIS, of Brooklyn, county of Kings and State of New York, have invented certain Improvements in Sewing-Machine Bobbins, &c., of which the following is a specification:

This invention pertains to the class of devices used in sewing-machines for making embroidery-work or ornamentation by stitching; and it consists in making the bobbin or spool that carries the lower or shuttle thread of the machine with two or more grooves, or like a double spool or bobbin, so that two or more threads of the same or different colors may be used in combination with the needlethread, by which means a greater breadth may be given to the under thread, and thereby forms a surface well adapted for ornamentation.

Figure 1 is a view in perspective of a double bobbin for such work. Fig. 2 is a perspective view of the bobbin-case as used in those machines which employ a rotary hook. Fig. 52 is a segment of the bobbin-shell to show the tension devices, and Fig. 44 is a diagram to show how the stitching appears when made by the use of two or more under threads.

The bobbin or spool may be made in one piece, as shown at Fig. 1, and have as many grooves as at A and B, or divisions as required, or as can be used with the machine, and when so used may be inserted in a case or receiver, as shown at C, Fig. 2, and which is also provided with holes and a rib to form tension upon the threads, provided the machines do not have tension attached independently.

It is evident that said threads may be of different colors, and, if so, that they will preserve the same order relatively to each other in the formation of the ornament.

The design may be drawn on paper, and fastened upon the upper surface of cloth, as is now often done in embroidery where a single thread is used.

I claim-

A bobbin provided with two or more grooves for carrying the under thread for ornamental stitching, substantially as described.

GEORGE W. H. CURTIS.

Attest:

MEYRON PERRY, BOYD ELIOT.