

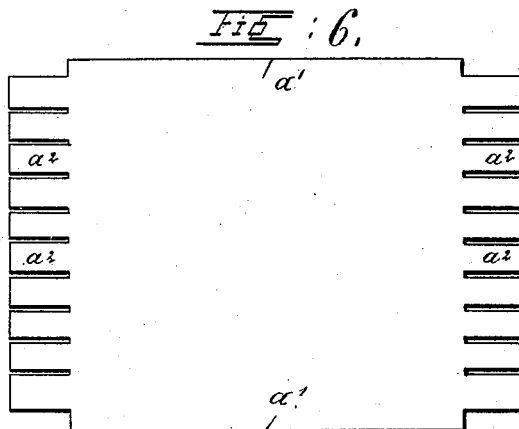
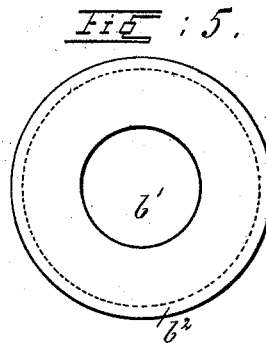
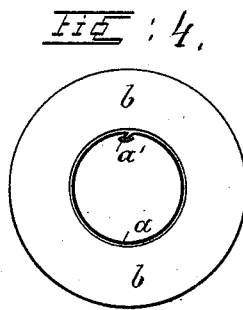
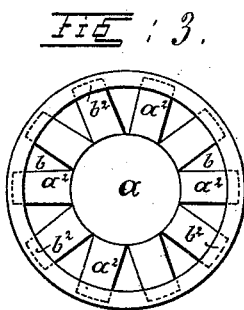
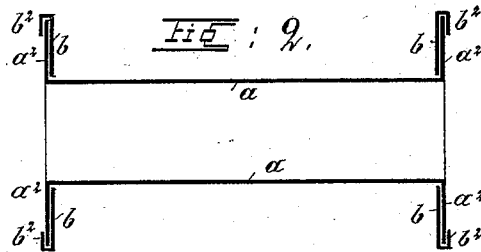
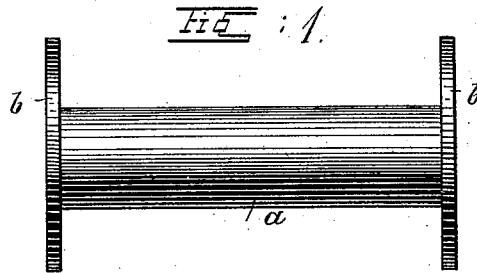
(No Model.)

C. BÖHRINGER.

STAMPED OR FOLDED METAL SHEET SPOOL FOR WINDING THREAD.

No. 492,657.

Patented Feb. 28, 1893.



Witnesses:
P. A. Hofman.
A. B. Degees

Inventor: Carl Böhringer
per G. Sittman,
Atty.

UNITED STATES PATENT OFFICE.

CARL BÖHRINGER, OF OFFENBURG, GERMANY.

STAMPED OR FOLDED METAL SHEET SPOOL FOR WINDING THREAD.

SPECIFICATION forming part of Letters Patent No. 492,657, dated February 28, 1893.

Application filed July 20, 1892. Serial No. 440,619. (No model.)

To all whom it may concern:

Be it known that I, CARL BÖHRINGER, a subject of the King of Würtemberg, residing in the city of Offenburg, Grand Duchy of Baden, Germany, have invented a certain new and useful Improvement in Stamped or Folded Metal Sheet Spools for Winding Threads, of which the following is a specification.

My invention consists in certain improvements in bobbins or spools and the process of construction of the same and it will be first fully described in connection with the drawings, and afterward specifically pointed out in the claims hereto appended.

In the accompanying drawings, Figure 1 is an elevation of a bobbin constructed in accordance with my invention. Fig. 2 is a central, longitudinal section through the same. Fig. 3 is an end view thereof. Fig. 4 is a cross section through the same. Fig. 5 is a view of one of the blanks out of which the heads are made and Fig. 6 is a view of the blank out of which the tubular body is made.

Like letters of reference mark the same parts wherever they occur in the several figures.

The blank (Fig. 6) out of which the body is made is turned into a tube and the edges a' a' lap seamed in any desired manner so that the tube cannot easily collapse, the joint appearing plainly in Fig. 4. The blanks for the heads are then passed over the ends of this tube, having a central opening b' of the diameter of the outside of the tube, to permit of this step. The teeth a^2 at the ends of the tube are now turned out at right angles to the tube and parallel to the head blanks and finally the edges b^2 of the head blanks are spun outward over these teeth flanges, thus securely attaching the parts together and forming a complete bobbin consisting of tubular body a and flanged heads b .

If desired, a disk of other material, at the proper time in the manufacture, may be placed on the tube so that, when the bobbin is finished, it will lie between the head b and the flanged teeth, thus making a firmer and more solid construction. Such an extra disk might also be so placed as to come on the outside of the tooth flange so as to give greater solidity and strength, and a better, smoother appearance to the ends and such disk might be of material suitable to be printed upon, to form the label, and could be printed either before or after putting it in place.

It will be seen that by my process my bobbin requires no solder and can be readily and cheaply made.

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

1. A bobbin consisting of a tubular body with toothed end flanges formed integral with the body and turned at right angles thereto and heads composed of washer disks having their edges turned over said flanges as set forth.

2. The bobbin herein described consisting of a lap seamed tubular body with end flanges composed of teeth turned outward at right angles to the body and heads composed of washer disks mounted on the body inside the tooth flanges and having their edges turned over said tooth flanges, as set forth.

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

CARL BÖHRINGER.

Witnesses:

DAVID EGLI,
ERNEST THERON.