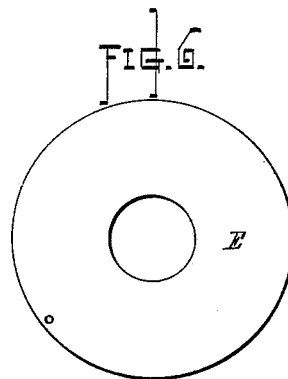
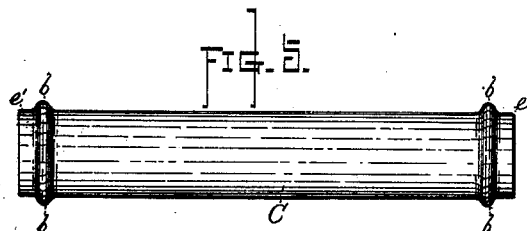
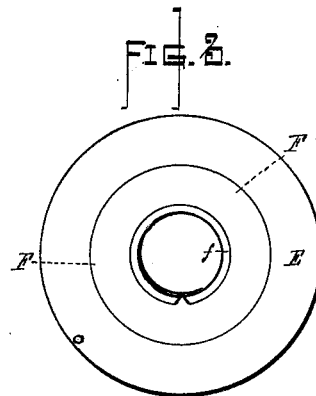
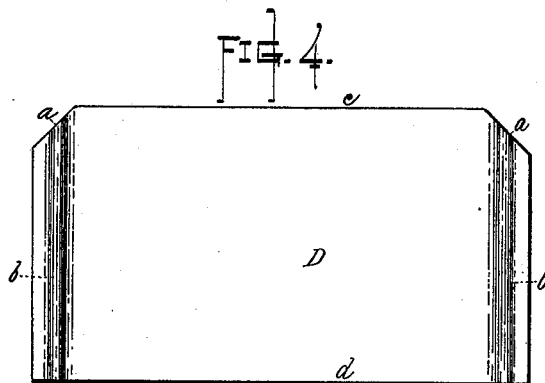
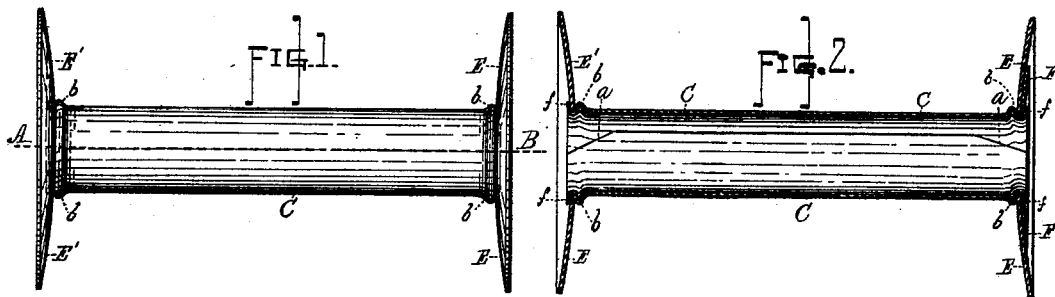


G. A. LAMBERT.  
Metallic Spool or Bobbin.

No. 213,761.

Patented April 1, 1879.



Witnesses;

Edwin E. Moore  
Harry A. Willard

Inventor;

George A. Lambert

# UNITED STATES PATENT OFFICE.

GEORGE A. LAMBERT, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO  
WASHBURN & MOEN MANUFACTURING COMPANY, OF SAME PLACE.

## IMPROVEMENT IN METALLIC SPOOLS OR BOBBINS.

Specification forming part of Letters Patent No. **213,761**, dated April 1, 1879; application filed  
March 8, 1878.

*To all whom it may concern:*

Be it known that I, GEORGE A. LAMBERT, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Metallic Spools or Bobbins for Holding Wire to be used in Binding Grain; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a side view of my improved metallic spool or bobbin. Fig. 2 represents a longitudinal central section on line A B, Fig. 1. Fig. 3 represents an end view, as will be hereinafter more fully described; and Figs. 4, 5, and 6 represent parts of the spool or bobbin as they appear in the different stages of manufacture.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

In the drawings, C represents the cylinder or barrel of the spool or bobbin, which is made in this instance from a piece of sheet metal, D, Fig. 4. The part D has its corners upon one edge cut off, as shown at *a a*, and is ribbed or grooved at each end, as shown at *b b*.

The edge *c*, when the part D is rolled into form shown in Fig. 5, laps under the edge *d*. Consequently when the heads E E' are slipped onto the projecting ends *e e'* of the barrel C, and the ends *e e'* are bent back or turned up against the ends of their respective heads, as fully shown in Figs. 2 and 3, close-fitting flanges *f* are formed, which securely hold the heads in place upon the barrel C, and that, too, without the flange *f* being double at any one point upon the outside of its head. (See Fig. 3.) The heads are first cut out in the form shown in Fig. 6, and then pressed or formed convex upon their inner sides, as shown in Figs. 1 and 2.

It will be observed that the heads are forced back firmly against the ribs *b b*, which keep them, in combination with the flanges *f*, securely and firmly in position.

For the purpose of enabling the manufacturer of the wire to easily secure his name and place of business, when desired, a tin or other thin metal disk, F, is placed upon one or both

of the projecting ends *e e'*, upon the outside or sides of the heads E E', so that when flanges *f* are turned up and pressed against the heads the auxiliary disk F will be permanently secured in position, as indicated in Figs. 2 and 3, where it is shown secured to the outside of head E.

If preferred, the corners *a a* may be left full, in which case the edges *c* and *d*, instead of lapping past each other, could be made to abut against each other. These bobbins or spools are filled with wire manufactured expressly to be used in binding grain by automatic mechanism combined with a reaper or harvester; and as the construction of the bobbin or spool is such that all the parts are made firm and strong, the parts D, E, and E', being cut from sheet metal, the wire can be wound on in a very even manner, which is a great advantage when the wire is being unwound in the operation of binding the bundles of grain, since kinking of the wire or irregularities in winding or unwinding the same is very apt to seriously interfere with the proper action of the binding mechanism.

I am aware that spools or bobbins have heretofore been made of metal, and metal and wood combined; but I am not aware that before my said invention spools or bobbins had been made wholly of sheet metal, first cut into pieces of the form represented in the drawings, and afterward combined together, as shown and described in the foregoing specification; and I further hereby disclaim the improvements and inventions described in the English Patents No. 2,104 of 1859 and 7,187 of 1836.

Having described my improvements in metallic spools or bobbins for receiving wire to be used in binding grain,

What I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

A metallic spool or bobbin for holding wire to be used in binding grain, constructed or made from the sheet-metal parts E E' F and barrel C, said parts being combined together in the manner shown and described, and for the purposes set forth.

GEORGE A. LAMBERT.

Witnesses:

EDWIN E. MOORE,  
HARRY A. WILLARD.