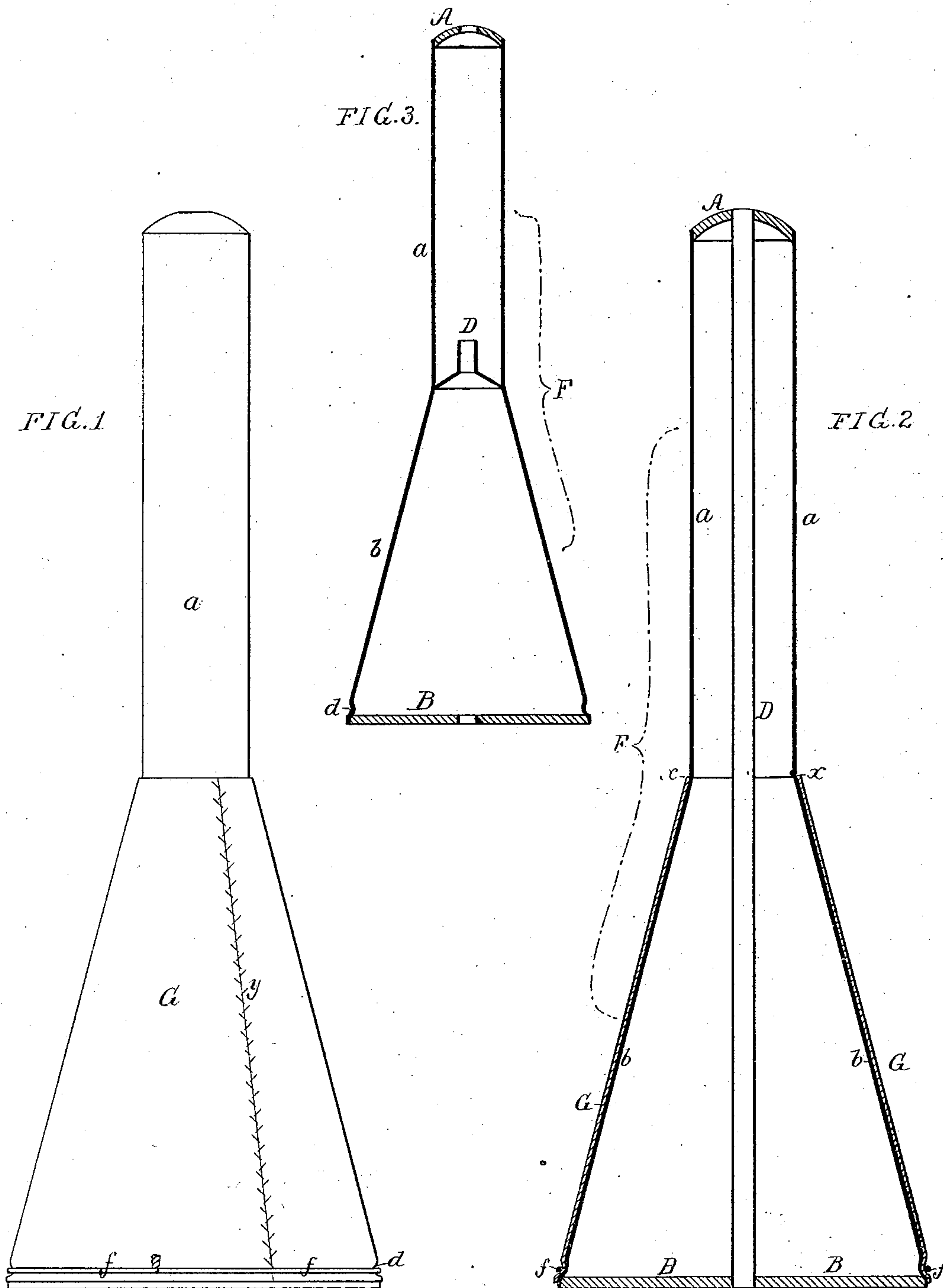


(No Model.)

E. MAERTENS.  
SHEET METAL BOBBIN.

No. 306,628.

Patented Oct. 14, 1884.



WITNESSES:  
David S. Williams  
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# UNITED STATES PATENT OFFICE.

EMILE MAERTENS, OF PHILADELPHIA, PENNSYLVANIA.

## SHEET-METAL BOBBIN.

SPECIFICATION forming part of Letters Patent No. 306,628, dated October 14, 1884.

Application filed September 27, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, EMILE MAERTENS, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Sheet-Metal Bobbins, of which the following is a specification.

The objects of my invention are to make a strong and serviceable sheet-metal bobbin or spool, to effect the proper support of the same upon its spindle, and to provide it with a sheathing or partial sheathing of textile fabric to insure the adhesion of the yarn at the commencement of the winding operation.

In the accompanying drawings, Figure 1 is a side view of a sheet-metal bobbin made in accordance with my invention; Fig. 2, a sectional view of the same, and Fig. 3 a view of another form of the improved bobbin.

Sheet-metal bobbins are preferable to wood for many purposes, especially when the yarn has to be steamed to prevent it from kinking, as the wooden bobbins in such cases are liable to warp and split, and the yarn is often injured by the varnish of the bobbin, or by the gum which exudes therefrom on the application of heat. The bobbin shown in Figs. 1 and 2 comprises the top and bottom disks, A and B, central tube, D, and outer shell, F, the latter comprising the upper cylindrical portion, *a*, and lower flaring portion, *b*. The disks A and B may be light castings, but are preferably struck or punched from comparatively heavy sheet metal, the top A being concavo-convex, and both disks having central openings, so that they can be applied to the opposite ends of the central tube, D, to which they are suitably secured by soldering or otherwise, the outer shell, F, being likewise secured to the outer edges of the disks. The shell F may be made from a single piece of sheet metal of the desired shape properly bent, and having its edges secured together; or said shell may be made in two parts, the upper part, *a*, consisting of a tube united at *x* to the lower or flaring part, *b*, of the shell, and the proper form being imparted to the latter by spinning, bending, swaging, or in any other available manner.

In order to properly retain the yarn on the

flaring portion *b* of the bobbin at the commencement of the winding operation, it is necessary to sheath or cover the same with textile material, so as to provide a surface on which the yarn will not slip. It has been usual in wooden bobbins to cover this portion by gluing a strip of cloth thereon; but when the bobbin is made of metal this is inadmissible; hence I form a cover, G, by taking a piece of cloth of the proper size and shape and uniting the edges of the same by sewing, as shown at *y*, so as to form a conical tube which snugly fits the portion *b* of the shell F; and just above the base B of the bobbin I crimp the said shell, thereby forming an external groove, *d*, for the reception of a cord or wire, *f*, whereby the cover G is secured. The central tube, D, serves to strengthen and stiffen the bobbin, and also to insure the proper guidance and support of the bobbin upon the spindle. In most cases the spindle does not extend through the bobbin; hence a short central tube for the reception of the upper end of the spindle, as shown in Fig. 3, may be substituted for the long tube D, if desired; but the latter is preferred on account of the increased strength which it imparts to the bobbin.

I claim as my invention—

1. The combination, in a sheet-metal bobbin, of the opposite heads A B, the outer shell, F, and the central guide-tube, D, forming a bearing for the spindle, as set forth.

2. The combination of the opposite heads A B, the outer shell, F, secured thereto, and the central tube, D, extending from head to head, and also secured thereto, as set forth.

3. The combination of the sheet-metal bobbin having a flaring base, *b*, with groove *d*, the conical cover G, having a seam, *y*, and the retaining cord or wire *f*, adapted to the groove *d*, as set forth.

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

EMILE MAERTENS.

Witnesses:

JOHN E. PARKER,  
HARRY SMITH.