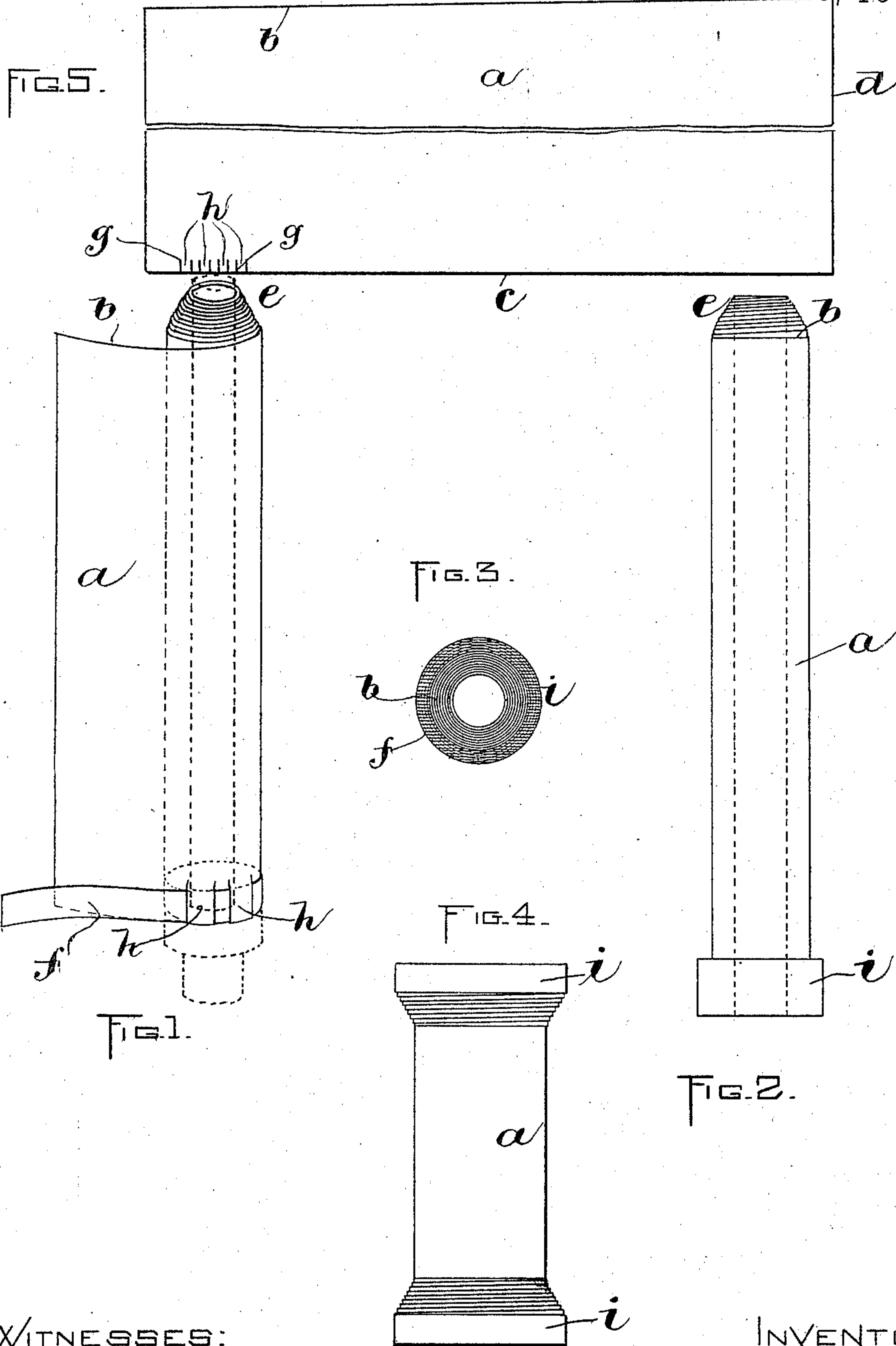


(No Model.)

J. C. FISHER.  
BOBBIN.

No. 577,736.

Patented Feb. 23, 1897.



WITNESSES:  
A. D. Harrison.  
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# UNITED STATES PATENT OFFICE.

JAMES C. FISHER, OF LAWRENCE, MASSACHUSETTS.

## BOBBIN.

SPECIFICATION forming part of Letters Patent No. 577,736, dated February 23, 1897.

Application filed March 21, 1896. Serial No. 584,239. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES C. FISHER, of Lawrence, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Bobbins, of which the following is a specification.

This invention relates to bobbins or spools for the reception of yarn or threads. Generally, as heretofore constructed, they have been formed of wood or similar material, so that they were not only heavy, but were always liable to split and crack, so as to catch the yarn or threads and break them. These are serious objections, as will be readily understood by one skilled in the art of winding; and it is my object to provide a bobbin which shall obviate them without adding to the cost of manufacturing the same.

To these ends, therefore, my invention consists of a hollow bobbin or spool formed by wrapping a long strip of paper or equivalent fibrous material upon a mandrel, one edge of the strip having been cut at an angle to the other opposing edge, so as to provide, when the tube has been formed, a beveled end; and it further consists in adding to such a bobbin or spool so formed one or more peripheral rings or flanges at the base or at the top, formed by wrapping thereon a small strip of paper or equivalent fibrous material, the end of which is connected to the tube in any suitable way.

Reference is to be had to the drawings and to the letters thereon, similar letters indicating similar parts or features, as the case may be.

Of the drawings, Figure 1 is a perspective view of a bobbin in the process of construction and showing the manner of connecting the end of the strip which forms the peripheral flange or base. Fig. 2 is a side view of a finished bobbin. Fig. 3 is an end view of the same. Fig. 4 shows a spool constructed in accordance with my invention. Fig. 5 shows a plan view of the strip before winding.

In carrying out my invention I provide a long strip *a* of stout Manila paper or other equivalent fibrous material suitable for the purpose. One edge, *b*, of the strip is cut at a slight angle to the other edge, *c*, for a purpose which shall soon become apparent. Both sides of the strip are coated with a proper cementing

compound, such as silicate of soda, sizing, or other desirable cement, and the edge *d* is placed upon a suitable mandrel. (Indicated by dotted lines in Fig. 1.) The strip is wrapped and wound upon the latter, and each convolution of the same is pressed closely upon the preceding one, so as to form solid walls. As the body of the bobbin is being formed the edge *b* retreats spirally from the end, so as to form, when finished, a beveled end *e*. The loose edge is then tightly cemented down, so as to form a smooth tube or body, and the latter may be dried and coated with shellac varnish or its equivalent; but generally before coating the bobbin with shellac I add the strip *f* to form a peripheral flange or base. The inner end of the strip may be secured in any suitable way, but I prefer to secure it as follows: Several cuts or incisions *g*, preferably four, are formed in the last convolution of the strip *a*, extending up from the lower edge. Then under the flaps *h h* thus formed the end of the strip *f* is cemented, and the said strip is wound on the end of the bobbin and forms, when completed, a base or peripheral flange *i*.

After the loose end of the strip *f* has been cemented down the whole completed bobbin may then be coated, as above set forth, so as to provide a smooth polished surface.

It will be understood that if the tube is to be made into a spool a peripheral flange, such as at *i*, may be formed at each end, and, if desired, the small strips forming the flanges may each have their inner edges at an angle to the outer edges, so that when the flanges are formed they are beveled on their inner ends, as shown in Fig. 4.

A bobbin or spool constructed in accordance with the foregoing is exceedingly tough and durable, is not liable to crack or break, and possesses the highest degree of efficiency for the purposes for which it is intended.

Having thus illustrated and described one form of my invention, so that any one skilled in the art can construct the same, what I claim is—

1. As a new article of manufacture, a hollow bobbin or spool having its body formed of a strip of fibrous material of a width equal to the length of the bobbin or spool, wound in convolutions, cemented together, one of the



longitudinal edges of the strip being at a slight angle to the other edge so as to form a beveled end, and its peripheral flange or base formed of a narrow strip of fibrous material  
5 cemented to the lower end of the said body, and having its end inserted under the edge of the last convolution of the body part.

2. As a new article of manufacture, a bobbin or spool having its body formed of a strip  
10 of fibrous material wound in convolutions, cemented together, said strip having incisions cut into one of its longitudinal edges in the last convolution, and a base or peripheral

flange formed of a strip of fibrous material having one end cemented under the flaps 15 formed by said incisions and wound and cemented thereon, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 4th day of 20 March, A. D. 1896.

JAMES C. FISHER.

Witnesses:

THOMAS MCDERNOTT,  
THOS. BEVINGTON.