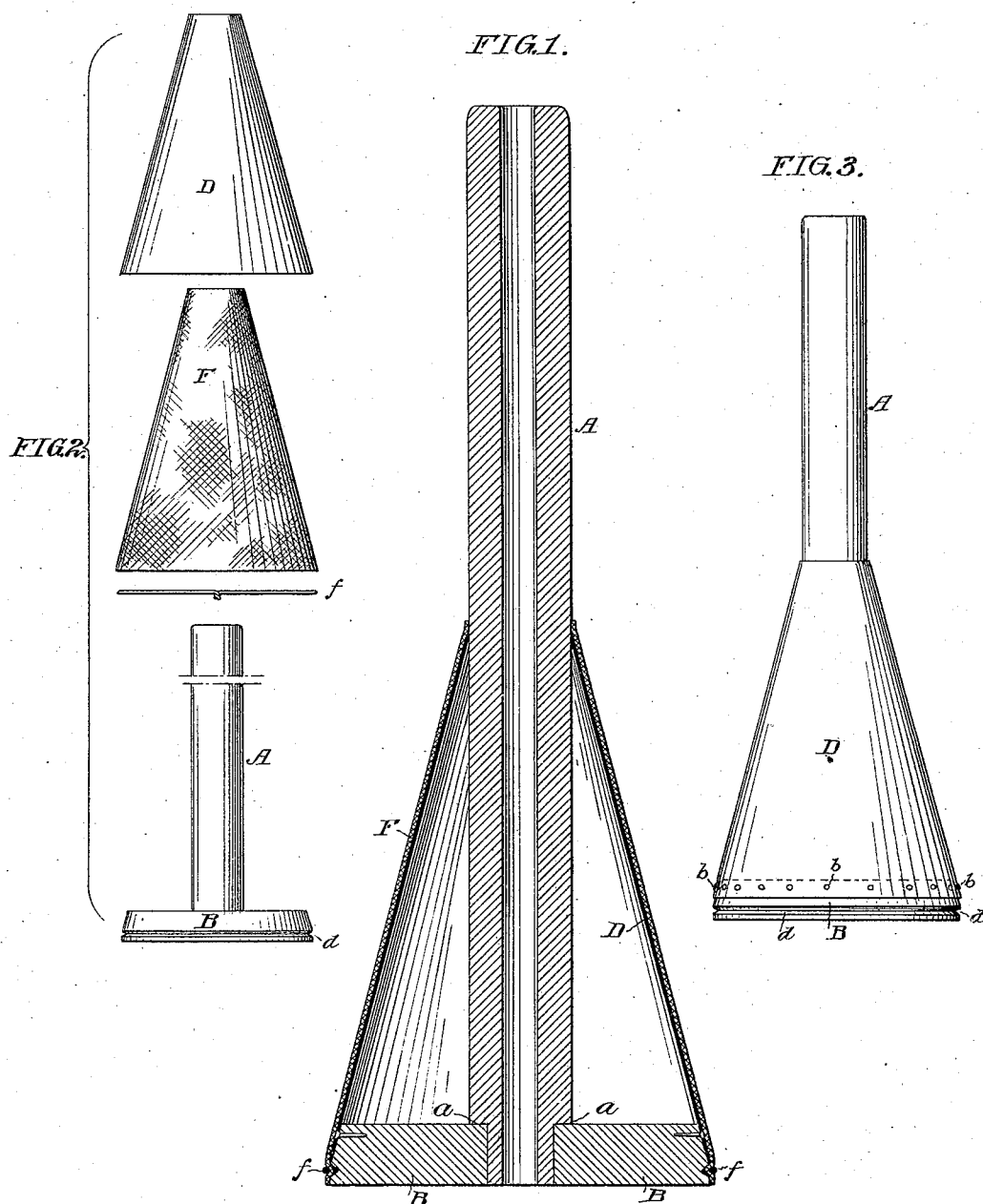


(No Model.)

R. BLACKBURN.
BOBBIN.

No. 576,022.

Patented Jan. 26, 1897.



Witnesses:
F. D. Goodwin
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Inventor:
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UNITED STATES PATENT OFFICE.

RICHARD BLACKBURN, OF NOTTINGHAM, ENGLAND.

BOBBIN.

SPECIFICATION forming part of Letters Patent No. 576,022, dated January 26, 1897.

Application filed June 12, 1895. Serial No. 552,599. (No model.)

To all whom it may concern:

Be it known that I, RICHARD BLACKBURN, a subject of the Queen of Great Britain and Ireland, and a resident of Nottingham, England, have invented certain Improvements in Bobbins, of which the following is a specification.

The object of my invention is to so construct a bobbin of large size as to decrease the weight of the same without impairing its efficiency; and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional view of a bobbin constructed in accordance with my invention. Fig. 2 is a side view, on a smaller scale, of the parts of said improved bobbin; and Fig. 3 is a view likewise on a smaller scale and illustrating the bobbin with the textile covering removed from the lower portion of the same.

The bobbin is composed of a central tubular stem A, of wood, reduced in diameter at its lower end so as to form a shoulder *a*, the reduced portion of the stem being adapted to a central opening formed in the wooden base B of the bobbin, in which it is firmly retained by glue or other cement, the shoulder *a* resting firmly upon the top of said base.

Surrounding the lower portion of the stem A and fitting snugly to the periphery of the upper half of the base B is a sheet-metal cone D, the upper end of which fits snugly against the stem *a*, while its lower portion is secured to the base B by means of nails or pins *b*, as shown in Figs. 1 and 3.

The periphery of the base B is flared to accord with the flare of the cone D, and in the lower portion of the base, beneath the lower edge of the overlapping metal cone, is formed a peripheral groove *d*.

Surrounding the metal cone D and securely cemented or otherwise united thereto is a conical textile envelop F, which may be composed of any available fabric and which extends both above and below the metal cone, the projecting upper portion of the envelop being united to the outer face of the central wooden stem A of the bobbin, while the projecting lower portion of said textile envelop

F is caused to enter the groove *d* in the wooden base by the pressure of a confining ring or band *f*, preferably of wire. By this means the textile envelop is firmly secured in its place and the sheet-metal cone is entirely inclosed, so that the yarn wound upon the bobbin can never come into contact with said sheet-metal cone, and hence cannot be stained by rust or otherwise injured by such contact.

The use of the hollow sheet-metal cone in order to form the flaring lower portion of the bobbin renders the latter much lighter than the usual solid wooden bobbins, while the use of wood for the central stem and base of the bobbin renders said bobbin preferable to one made entirely of sheet metal by reason of its less weight and cost and by preventing injury to the yarn, which is likely to result from contact with said sheet-metal surface, the latter being liable to oxidize in the damp atmosphere of a mill or by reason of the wetting of the bobbin in some of the various processes of manufacture in which it is likely to be used.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A bobbin consisting of a tubular wooden stem, a wooden base secured thereto, a sheet-metal cone surrounding the lower portion of the stem at its base, and secured to the latter, and a textile envelop for said cone, substantially as specified.

2. A bobbin consisting of a tubular wooden stem, a wooden base fitted thereto, a sheet-metal cone surrounding the lower portion of the same and partly overlapping the wooden base to which it is secured, and a textile envelop inclosing said sheet-metal cone and projecting below the same so as to be secured directly to that portion of the wooden base which is below the lower edge of the metal cone, substantially as specified.

3. The within-described bobbin consisting of a tubular stem of wood, a wooden base fitted to said stem, a sheet-metal cone surrounding the lower portion of said stem and partly overlapping the base to which it is secured, and a textile envelop inclosing said sheet-metal cone and projecting above and

below the same, the projecting upper portion
of said envelop being secured to the wooden
stem of the bobbin, and the projecting lower
portion of the envelop being secured to the
5 wooden base of the same, substantially as
specified.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

RICHARD BLACKBURN.

Witnesses:

GEO. W. BARRON,
WILLIAM MOSS.