

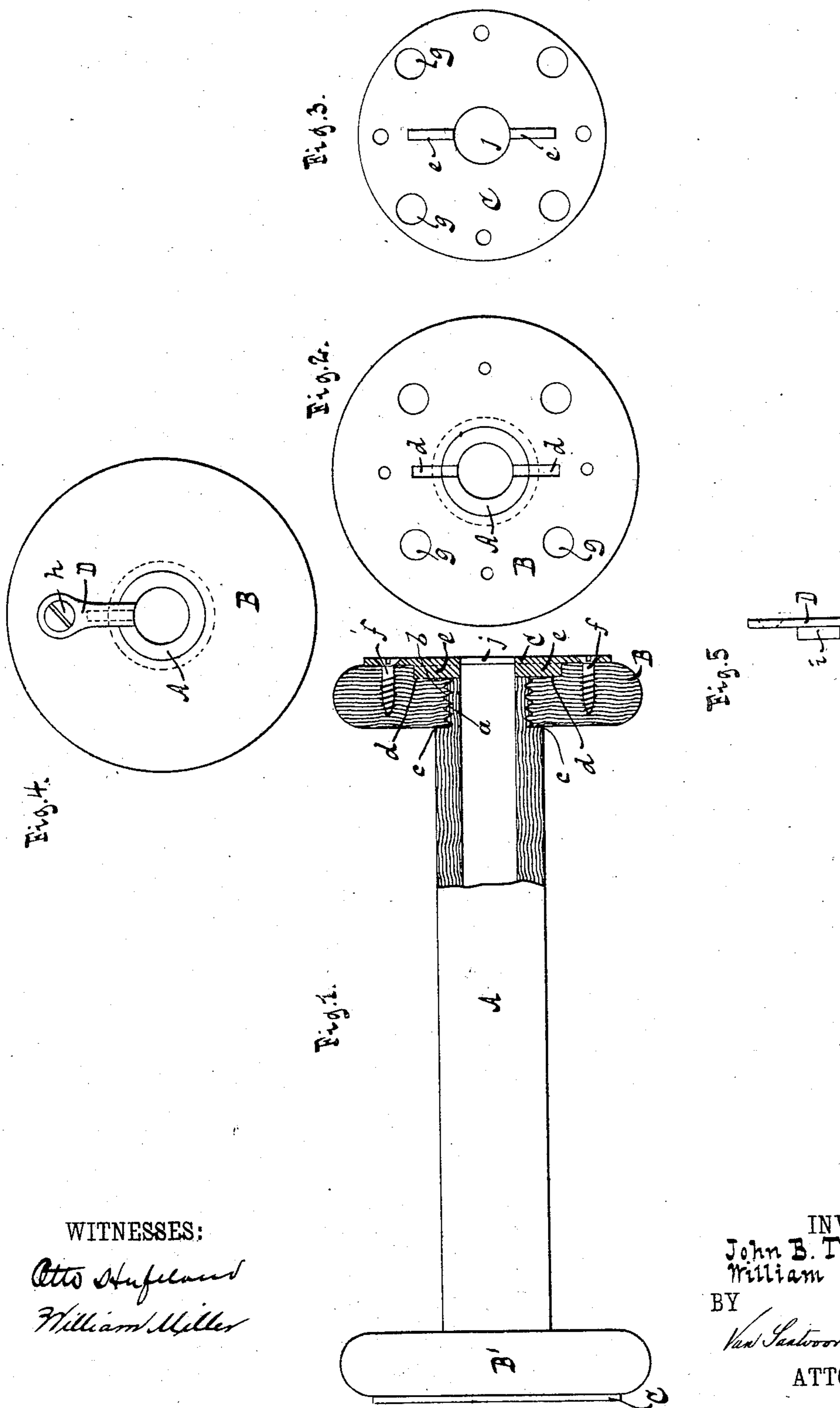
(No Model.)

J. B. THORWARTH & W. TUNSTILL, Jr.

BOBBIN.

No. 321,772.

Patented July 7, 1885.



WITNESSES:

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JOHN B. THORWARTH AND WILLIAM TUNSTILL, JR., OF BROOKLYN, N. Y.

BOBBIN.

SPECIFICATION forming part of Letters Patent No. 321,772, dated July 7, 1885.

Application filed March 12, 1885. (No model.)

To all whom it may concern:

Be it known that we, JOHN B. THORWARTH and WILLIAM TUNSTILL, Jr., both citizens of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Bobbins, of which the following is a specification.

Our invention consists in a bobbin the barrel of which has a screw-thread at its end, a head provided with an internal screw-thread fitting the thread on the barrel, radial grooves formed in the interior of the head and in the barrel, a metallic plate which is fastened to the head, and radial projections on the plate formed to engage with radial grooves in the head, which cross the threads on the barrel; and it also consists in the bobbin the barrel of which has a screw-thread at its end, a head provided with an internal screw-thread fitting the thread on the barrel, and a key which is fastened to the head and engages with grooves which cross the threads on the barrel and in the head.

In the accompanying drawings, Figure 1 represents our improved bobbin in partial longitudinal section. Fig. 2 is an end elevation with the metallic plate removed. Fig. 3 is an inverted plan view of the metallic plate. Fig. 4 is a plan view of a modification. Fig. 5 is a detached end view of the key which forms part of the modification.

Similar letters indicate corresponding parts.

In these drawings the letter A designates the barrel of the bobbin, which is made hollow, so that it can be placed upon its spindle in the usual manner, and B B' are the heads. The barrel A is provided on its ends with screw-threads *a*, and the heads B B' with internal screw-threads, *b*, which fit the threads *a* on the barrel, so that the heads can be screwed firmly down upon the shoulders *c*, formed at the base of the screw-threads on the barrel.

C C are metallic plates secured to each of the heads B B' by screws *f* or other suitable means, and provided with radial projections *e*, which engage corresponding radial grooves, *d*, formed in the heads, said grooves extending across the screw-threads of the heads and barrel. Into these plates C and in the bobbin-heads are formed holes *g*, which are engaged by the pins of the machine, whereby the rotary motion is imparted to the bobbin about its spindle. In order to protect the ends of

the barrel the holes *j*, which it is necessary to form in the plates C, are made no larger than the diameter of the hole in the barrel.

The heads of ordinary bobbins are usually screwed to the barrel in the manner shown in the drawings without any further means for securing them, so that during the working of the machine the heads of the bobbins are frequently unscrewed by the torsional stress exerted upon the same, thereby causing considerable delay and trouble. This is effectually prevented by our improvement in these bobbins, as it is evident that the head cannot turn while the radial projections in the metallic plate engage the radial grooves in the head. If only one head of the bobbin is subjected to a strain, the head not so subjected can be secured in the ordinary way.

In the modification shown in Figs. 4 and 5 the metallic plate C is dispensed with, and a key, D, is secured directly to the bobbin-head B by a screw, *h*, or other suitable means, which key is formed with a projecting part, *i*, which engages with grooves which cross the threads in the barrel and the head, whereby the head is prevented from turning as before.

What we claim as new, and desire to secure by Letters Patent, is—

1. A bobbin comprising a barrel having screw-threads at its end and radial grooves crossing said threads, a head provided with internal screw-threads fitting the threads on the barrel and having radial grooves corresponding with the grooves in the end of the barrel, and a metallic plate fastened to the head and provided with radial projections to engage the radial grooves in the barrel and head, substantially as described.

2. A bobbin the barrel of which has a screw-thread at its end, a head provided with an internal screw-thread fitting the thread on the barrel, and a key which is fastened to the head and engages with grooves which cross the threads on the barrel and in the head, substantially as shown and described.

In testimony whereof we have hereunto set our hands and seals in the presence of two subscribing witnesses.

JOHN B. THORWARTH. [L. S.]
WILLIAM TUNSTILL, JR. [L. S.]

Witnesses:

JOHN J. MAHONY,
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