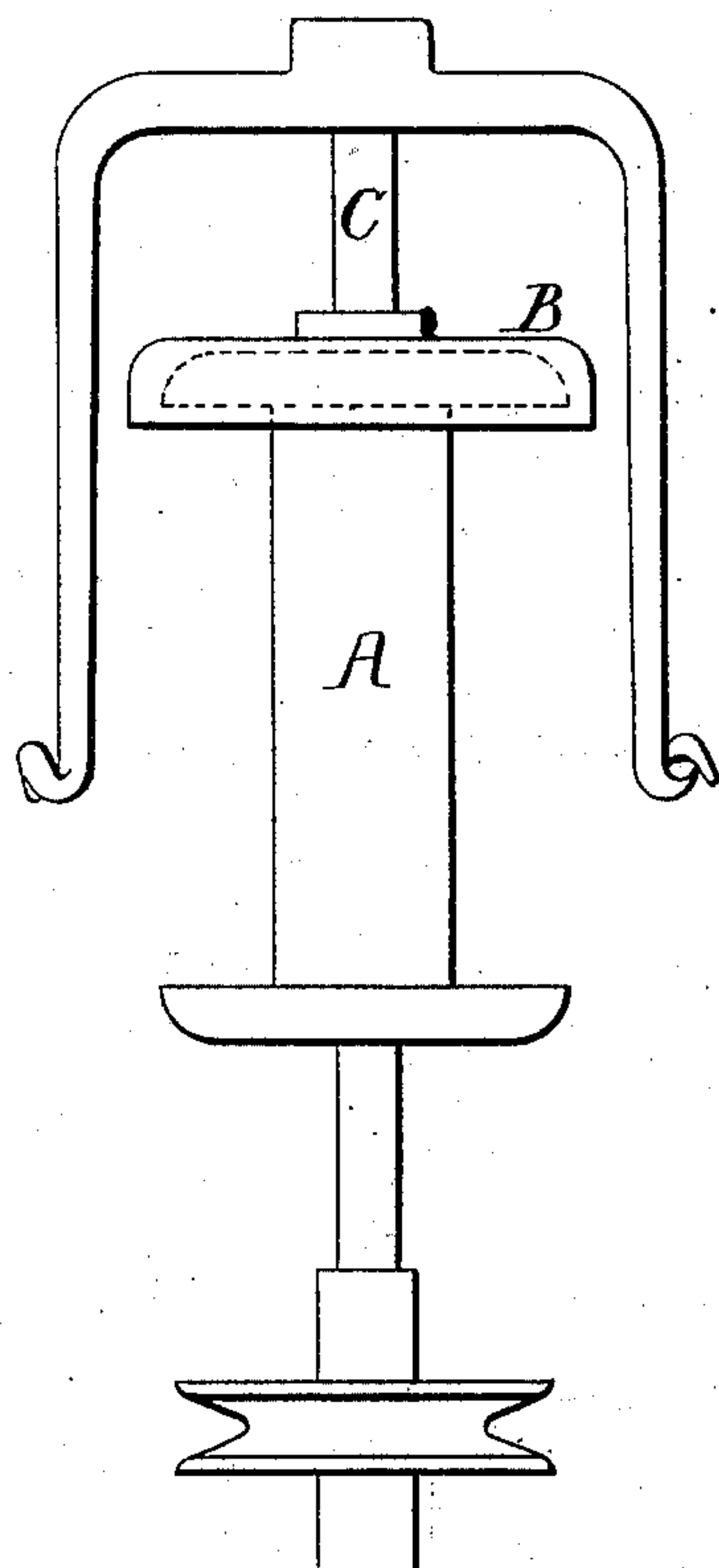


T. MITCHELL.  
Bobbin used in Spinning Mohair, &c.  
No. 203,754. Patented May 14, 1878..



*Fig. 1.*

*Fig. 2.*



Witnesses  
John M. Deemer.  
Harry Smith

Inventor  
Tom Mitchell  
by his Attorneys  
Howson and son

# UNITED STATES PATENT OFFICE.

TOM MITCHELL, OF BRADFORD, GREAT BRITAIN.

## IMPROVEMENT IN BOBBINS USED IN SPINNING MOHAIR, &c.

Specification forming part of Letters Patent No. **203,754**, dated May 14, 1878; application filed November 19, 1877.

*To all whom it may concern:*

Be it known that I, TOM MITCHELL, of Bradford, county of York, in the Kingdom of Great Britain and Ireland, have invented a new and useful Improvement in Bobbins used in Spinning Mohair, &c., of which the following is a specification:

The object of my invention is to prevent the fibers, near the top flange of a bobbin, in spinning from becoming entangled and breaking the thread which is being spun; and this object I accomplish in the manner which I will proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a side view of a spindle, flier, and bobbin of a spinning-machine with my improvement attached, and Fig. 2 a sectional view of my improved cap for the bobbin.

In spinning mohair and other fibrous substances, the fibers close to the top flange of the bobbin frequently become entangled, owing to the centrifugal force, and break down, as the flier and bobbin revolve, the thread that is being spun.

In order to overcome this objection, I place on the top flange of the bobbin A a cap, B, of brass or any suitable metal, which projects a short distance below the top flange of the bobbin, and which runs loose on the spindle C. This cap confines the fibers near the top of the bobbin, and prevents them from becoming entangled.

I do not desire to claim, broadly, a bobbin or spool with a cap on the top flange of the same; but

I claim as my invention—

The combination of the spindle and bobbin with a cap adapted to fit over the upper flange of said bobbin, and to project below the same, substantially as and for the purpose herein set forth.

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

TOM MITCHELL.

Witnesses:

WILLIAM WAUGH,  
JOHN GILL.