

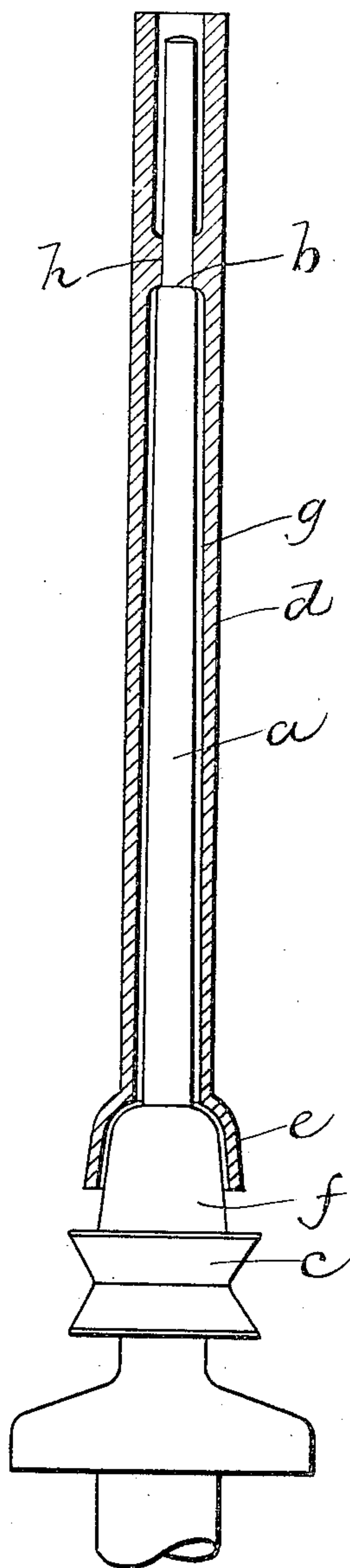
No. 768,726.

PATENTED AUG. 30, 1904.

V. BÉLANGER.
BOBBIN.

APPLICATION FILED OCT. 17, 1902.

NO MODEL.



Witnesses:
Walter A. Hall.
George H. Hall.

Inventor.
Victor Bélanger
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UNITED STATES PATENT OFFICE.

VICTOR BÉLANGER, OF SEAVIEW, MASSACHUSETTS.

BOBBIN.

SPECIFICATION forming part of Letters Patent No. 768,726, dated August 30, 1904.

Application filed October 17, 1902. Serial No. 127,692. (No model.)

To all whom it may concern:

Be it known that I, VICTOR BÉLANGER, of Seaview, in the town of Marshfield, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Bobbins, of which the following is a specification.

This invention has relation to bobbins, having for its object to produce a bobbin which will be less liable to be dislocated from position than heretofore and which will run more smoothly in operation than has hitherto been the case.

I have found that by suspending the bobbin at a point above its middle—that is to say, at a point nearer its upper than its lower end—it will center itself in rotation and will decrease the number of breaks in the yarn or roving.

On the accompanying drawing an ordinary spindle is indicated as having a blade *a* with a shoulder *b*. The spindle is driven by the whirl, and it will be noted that the spindle lacks the usual cup which receives the lower end of the bobbin.

The bobbin itself is indicated as a whole at *d*. It has a cylindrical surface which may be smooth, corrugated, or grooved, its lower end being flared, as at *e*, to escape the cone *f*. Where the spindle is not provided with the cone *f*, this flaring portion of the bobbin may be omitted. The bore *g* of the bobbin is somewhat greater in diameter than the spindle except at the point *h*, where the bobbin is provided with the internal shoulders adapted to engage the upper portion of the spindle and rest upon the shoulder *b*. Where the upper end of the spindle is tapered and is not provided with the shoulder *b*, the internal shoulder *h* on the bobbin may engage the tapering surface of the spindle. The shoulder *h* is located at or above the middle of the bobbin, so that the bobbin depends from the said

shoulder. I have found that a bobbin constructed in this manner soon centers itself in rotation, tending to overcome any vibration or gyratory motion of the spindle when in rotation and prevents uneven strains on the yarn, which frequently result in breaking the latter.

So far as I am aware I am the first to have provided a bobbin which is supported at its upper end so as to have a loose movement laterally relatively to the spindle except at its single point of engagement therewith.

The contacting-surface of the shoulder *h* is just sufficient to cause the spindle to drive the bobbin in the proper manner without preventing the desired lost motion between the bobbin and the spindle.

In many cases I prefer to employ the flaring portion *e* on the bobbin with the enlarged recess therein, as it is of use in the spooling operation, as will be readily understood.

Having thus explained the nature of the invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what I claim is—

A bobbin substantially as described having a body portion with its bore reduced at a point between its middle and its top to form a shoulder *h* to rest upon a shoulder on the upper end of the spindle, the bobbin being of such length and the bore of the bobbin both above and below the shoulder being of such diameter that the bobbin engages the spindle only with the said shoulder *h*.

In testimony whereof I have affixed my signature in presence of two witnesses.

VICTOR BÉLANGER.

Witnesses:

DANIEL V. VADULA,
C. F. BROWN.