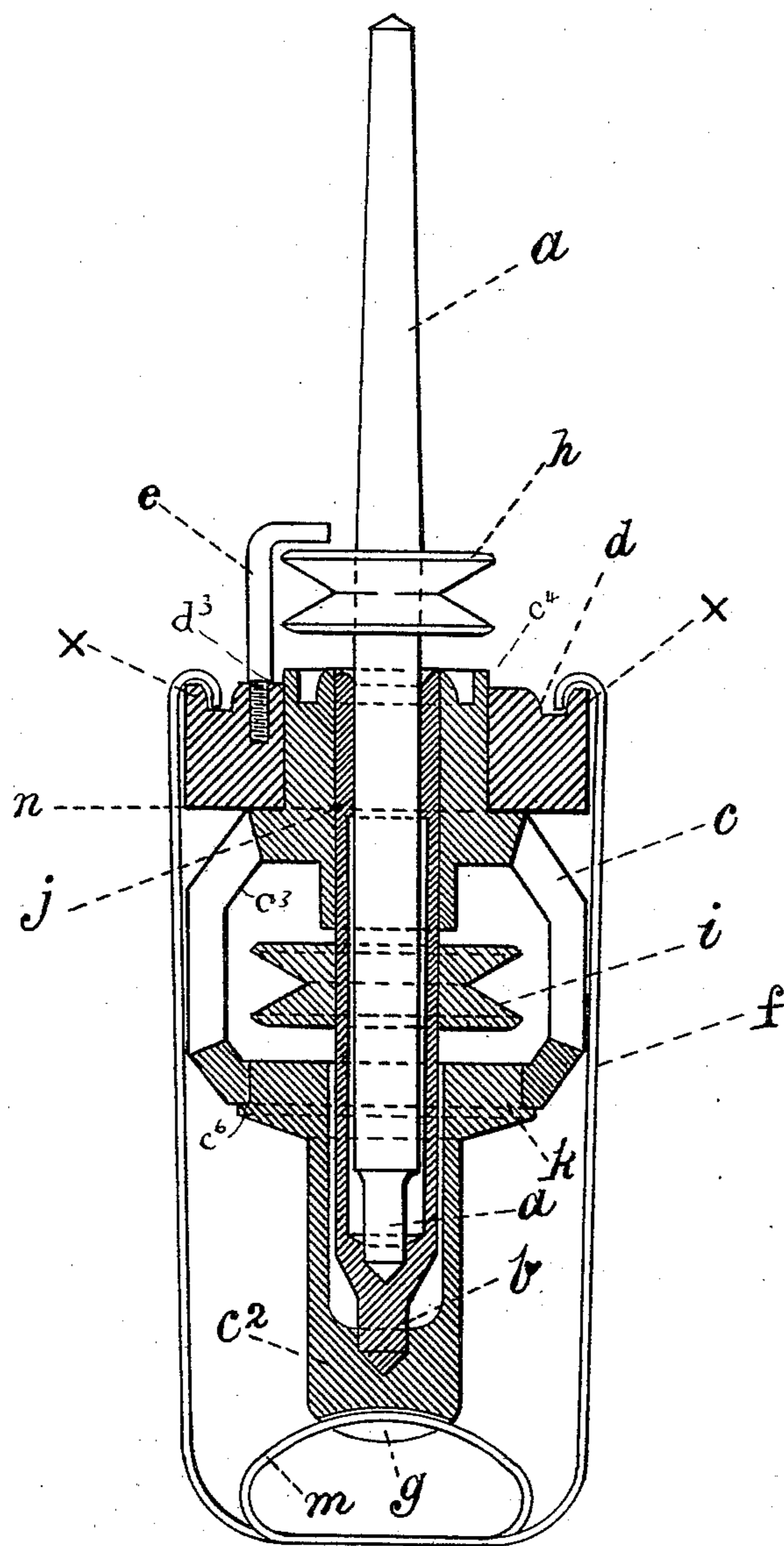


(No Model.)

F. SEYMOUR.
SUPPORT FOR SPINNING SPINDLES.

No. 408,264.

Patented Aug. 6, 1889.



WITNESSES:

Richard A. Healy
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UNITED STATES PATENT OFFICE.

FRANCIS SEYMOUR, OF PATERSON, NEW JERSEY, ASSIGNOR OF ONE-HALF
TO JOHN J. HEYWOOD, OF FALL RIVER, MASSACHUSETTS.

SUPPORT FOR SPINNING-SPINDLES.

SPECIFICATION forming part of Letters Patent No. 408,264, dated August 6, 1889.

Application filed March 15, 1887. Serial No. 231,047. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS SEYMOUR, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Support for Spinning-Spindles, of which the following is a specification.

This invention relates to improvements in spinning-spindles; and the object of my invention is to provide a new and improved spinning-spindle which can be run at an exceedingly high speed without heating or expanding unduly.

A further object of my invention is to simplify the construction of the mounting for the spindle.

The invention consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter, and pointed out in the claims.

In the accompanying drawing my improved spinning-spindle is shown with its mounting, the spindle, its retainer, and supporting device being in elevation and other parts being in section.

The spindle *a*, which upon its upper part may carry or support either a supply or receiving spool of the well-known construction, is provided with the whirl *h*, around which a cord for driving the spindle is to be passed. On the lower end of said spindle *a* a pintle is formed, which rests in a suitable step formed in the revoluble bearing *b*. Said bearing has a whirl *i*, around which a cord is to be passed for revolving it, and consists, essentially, of a hollow stem closed at the lower end and open at the top and cylindrical and smooth on its outside. Said bearing *b* is guided or retained in a frame *c*, having an upwardly-projecting part *c*¹, which is passed loosely into an aperture *d*³ in the rail or support *d*, the lower part of the frame *c* being enlarged to receive the whirl *i*. The bottom part of said frame *c* rests upon a shoulder *k*, formed on the top flange or head of a foot-piece *c*², having a step in which a pintle on the lower end of the revoluble bearing *b* runs. The foot-piece *c*² is provided in its lower end with a groove or notch *g*, into which the upper portion of a substantially elliptical loop *m* passes. Said loop is formed of a

wire *f*, which is U-shaped, its ends being bent to form hooks that engage ribs *x* on the upper surface or the rail *d* along the side edges, whereby the frame *c*, the foot-piece *c*², the revoluble bearing *b* and the spindle *a* are suspended by means of said wire *f* from the rail *d*, and the frame *c* and foot-piece *c*² are held together without the use of screws or like devices, and the entire construction of the mounting is simplified. The entire device can give more or less with the point *n* as the fulcrum, and my improved spinning-spindle is thus yielding and can give, being brought back into the normal position by the spring-wire *f*. This is very essential in high-speed spindles, as rigid mountings are very apt to produce an undue friction. The spindle *a* is prevented from being pulled out of its bearings when the spool is removed by the retainer on the rail *d*.

The difference in the size of the whirls *h* and *i* can be varied according to the requirements. The whirl *h*, being the smallest, turns faster than whirl *i*.

If, for example, the whirl *h* is only half the size of whirl *i*, the result will be that while the bearing *b* is making one turn the spindle *a*, though making two turns, makes only one in its bearing, thus permitting of attaining exceedingly high speed without causing heating, undue expansion, or undue wearing of the parts.

The bearing *b* and spindle *a* are rotated independently, inasmuch as separate and independent devices are used for driving each.

I do not claim in this application the rotating or live spindle and a tube containing bolster and step bearings for the spindle and provided with a whirl, whereby the said tube may be rotated, in combination with a case or holder for the tube and a step for the tube, broadly, or the spindle, the bearing-tube provided with a whirl, and a step for the tube, combined with means to rotate the said spindle and bearing-tube, broadly, the same not being my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a spindle having a pintle, of a revoluble bearing provided

with a step for receiving and supporting the
pintle of the spindle, a support for said rev-
oluble bearing, and a spring for suspending
said support from a rail or holder, substan-
5 tially as herein shown and described.

2. The combination, with a rail or holder,
of a frame under said rail, a foot-piece below
said frame and supporting the same, and a
spring supporting the foot-piece, said spring
10 being held on the rail or holder, substantially
as herein shown and described.

3. The combination, with a rail or holder,

of a frame-piece below it, a foot-piece sup-
porting the frame, a spring supporting the
foot-piece and held on the rail, a revoluble 15
bearing in the frame and foot-piece, and a
spindle having a pintle which rests upon a
step in the revoluble bearing, substantially
as herein shown and described.

FRANCIS SEYMOUR.

Witnesses:

H. H. SANDERSON,
J. H. SANDFORD.