(No Model.)

A. WOOD.

SUPPORT FOR SPINNING SPINDLES.

No. 392,976. Patented Nov. 13, 1888.

Fig. 1.

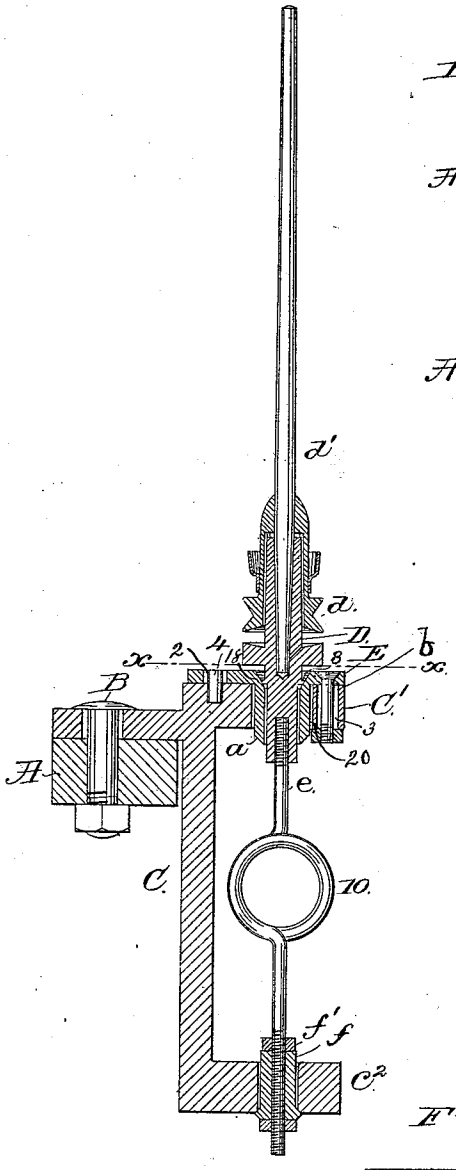


Fig. 3.

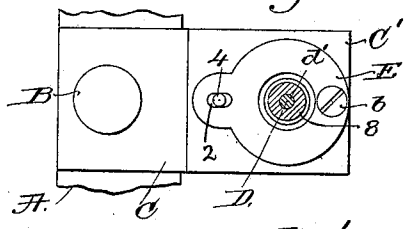


Fig. 4.

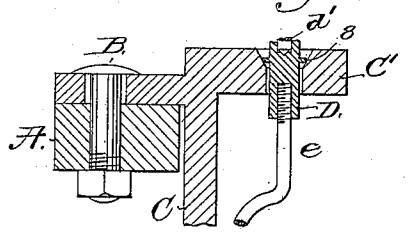


Fig. 2.

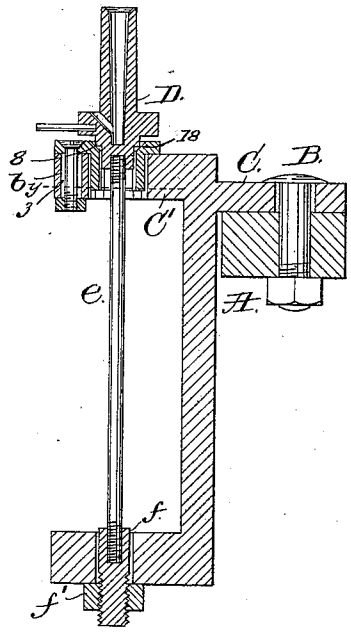
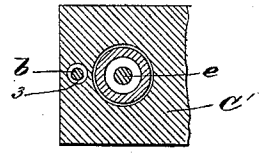


Fig. 5.



Witnesses.
Howard G. Eaton.
John F. C. Prout Jr.

Inventor:
Aurin Wood.
By Crosby & Gregory Attys.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

AURIN WOOD, OF WORCESTER, ASSIGNOR TO GEORGE DRAPER & SONS, OF HOPEDALE, MASSACHUSETTS.

SUPPORT FOR SPINNING-SPINDLES.

SPECIFICATION forming part of Letters Patent No. 392,976, dated November 13, 1888.

Application filed September 28, 1887. Serial No. 250,908. (No model.)

To all whom it may concern:

Be it known that I, AURIN WOOD, of Worcester, county of Worcester, and State of Massachusetts, have invented an Improvement in Supports for Spinning-Spindles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to improve and simplify the construction of the bearings for that class of spindle which in use is to automatically center itself to an unbalanced load.

In the invention to be herein described the rigid spindle-support, within which the pintle of the sleeve-whirl spindle has a running fit, is attached to the upper end of a spring-rod the lower end of which is secured to a rail or other fixed part of the frame, the connection preferably being such as to enable the rod to be strained or pulled in the direction of its length to cause the said spindle-support to be retained under more or less tension on a tapering seat in a bearing plate or block connected to or which may be a part of the bearing-rail, the seat being preferably a piece independent of and made adjustable on or with relation to the surface of the said rail, in order to the more readily align the spindle to the center of the ring in the usual ring-rail. (Not shown.)

Figure 1, in elevation and section, represents a spindle and support embodying my invention. Fig. 2 represents a modified form of my invention; Fig. 3, a section below the line *x*, Fig. 1. Fig. 4 represents another modification; and Fig. 5 is a partial section of Fig. 2 in the line *y*.

The bar A, as herein shown, has bolted to it by a bolt, B, a yoke, C, which, as represented, has as part of it the bearing-rail C′ and the foot or straining rail C^2. The rail C′ is bored for the reception below its surface of the spindle-support D, and, as herein shown, the said hole is made of sufficient size to receive the tubular sleeve *a* of the plate E. This plate is slotted at 2 to receive the pin or stud 4, while the bolt *b*, at the other end of the said plate, enters an opening, 3, of larger diameter than the said bolt, in the rail C′, enabling the said plate to be adjusted laterally on the rail C′ to aid in aligning the spindle to the center of the usual ring. The upper end of the opening in the plate referred to is enlarged and beveled or tapered to form a seat for the shoulder 8 of the rigid spindle-support D, which is surrounded directly by the sleeve-whirl *d* of the spindle *d′*, the said spindle-support forming the lateral bearing. The lower end of the spindle-support D has screwed into or fixed to it a spring-rod, *e*, the lower threaded end of which receives upon it a holder, *f*, and one or more nuts, *f′*, the holder serving as an anchor for the rod, rotation of the nut, which constitutes an adjusting device, putting strain upon the rod and drawing the spindle-support or its shoulder 8, with more or less tension, down on the tapering surface of the plate E, or, as I shall term it, the "seat." The shank of the spindle-support has a free space about it, so that it is free to move for a limited extent with the rotating spindle as the spindle moves or tips by unequal loading. The rod shown in Fig. 1 is bent, as at 10, to give to it greater elasticity.

Referring to Fig. 2, the rod *e* is straight. In Fig. 4 I have shown the shoulder 8 as resting upon a seat made directly in the rail C′. In Fig. 2 the plate having the seat for the spindle-support is attached to the rail C′ by a single bolt, *b*.

I do not herein claim, broadly, a spindle support or bolster having a shoulder which rests on a tapered seat; nor do I herein broadly claim a spindle support or bolster kept upon its seat by the direct pull of a spiral spring.

The bolster D herein shown has an annular shoulder, 8, constituted by the meeting together of surfaces substantially at right angles each to the other, the said shoulder resting upon the tapering seat 18, the shank of the bolster below the said shoulder being extended down through a chamber to a point below the said seat, the bolster supported in such manner being capable of rocking or moving upon the said seat as the spindle gyrates, due to unequal loading.

I do not herein specifically claim the said shoulder and the said tapering seat irrespective of the spring connected directly to the said bolster and adapted to draw the shoulder of the bolster upon the said seat, for the said bolster and seat are contained in an application, Serial No. 241,347.

I claim—

1. The tapering seat, the shouldered spindle-support resting thereon, and the connected spring-rod, combined with a holding device to firmly hold the said rod at a point below the spindle-support and maintain the spindle-support upon its seat, substantially as described.

2. The tapering seat, the shouldered spindle-support resting thereon, and the connected spring-rod *e*, combined with a holding device to firmly hold the said rod at a point below the spindle-support and maintain the spindle-support upon its seat, and with adjusting devices, substantially as described, to regulate the tension or strain upon the said rod, substantially as described.

3. The rail and the adjustable seat thereon, the shouldered spindle-support resting on the said seat, and the connected rod *e*, combined with a holding device to firmly hold the said rod under tension at a point below the spindle-support and maintain the shoulder of the spindle-support upon its seat, to operate substantially as described.

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

AURIN WOOD.

Witnesses:
RICHARD WARD GREENE,
GEO. E. SMITH.