

B. H. JENKS.

Spindle-Bolsters for Spinning-Machines.

No. 141,440.

Patented August 5, 1873.

Fig. 1

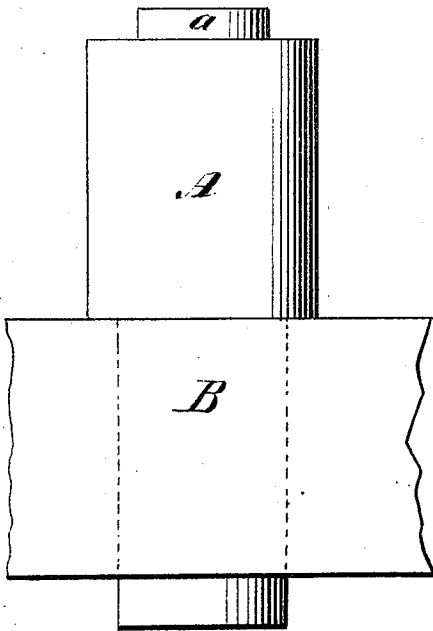


Fig. 2

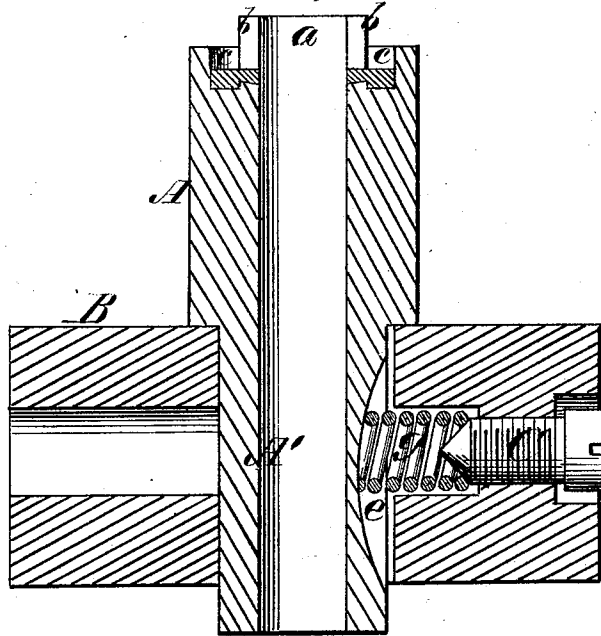
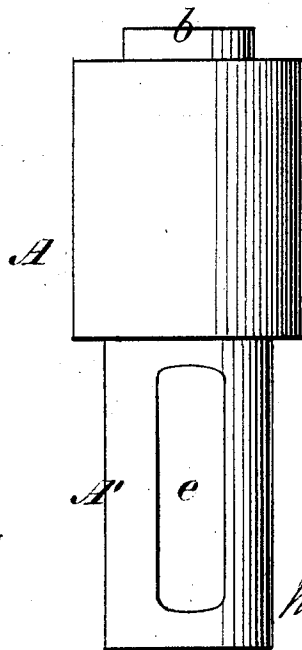


Fig. 3



Witnesses.
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UNITED STATES PATENT OFFICE.

BARTON H. JENKS, OF BRIDESBURG, PENNSYLVANIA.

IMPROVEMENT IN SPINDLE-BOLSTERS FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. **141,440**, dated August 5, 1873; application filed May 2, 1873.

CASE A.

To all whom it may concern:

Be it known that I, BARTON H. JENKS, of Bridesburg, in the county of Philadelphia and State of Pennsylvania, have invented an Improvement in Spindle-Bolster; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a side view of the bolster applied to a rail-section. Fig. 2 is a section taken diametrically through the bolster and transversely through the rail. Fig. 3 is a side view of the bolster without the rail.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improved means for allowing an elastic lateral motion to spindle-bolsters for the purpose of running the spindles at a very high speed without vibration, as will be hereinafter explained.

The following description of my improvement will enable others skilled in the art to understand it.

Prior to the improvement which I shall hereinafter describe attempts have been made to prevent wobbling or vibration of spindles when run at high speed by allowing free play to the bolsters or collars through which the spindles pass. For instance, a bolster has been secured into its rail by means of a leather diaphragm, which would allow a vertical play to the bolster, but, in my opinion, not sufficient lateral play for it to find its center of gravity. I do not, therefore, claim a leather diaphragm support for a spindle-bolster.

In the accompanying drawing, A represents a bolster, and A' the reduced neck thereof. This bolster is constructed with the usual oil-cup *c*, which communicates with the spindle by means of openings *b b* made through an annular lip, *a*. The hole through the rail B is of larger diameter than the diameter of the neck A' for the purpose of allowing lateral play to the bolster, and into this neck A' a groove, *e*, is made vertically, which receives a helical spring, *g*. The spring *g* is in a recess made into the rail, and is acted on by a screw,

C, the point of which may be cone-shaped. The spring *g* prevents motion of the bolster about its axis, and the screw C is intended for allowing the pressure of the spring against the bolster to be adjusted to a nicety.

It will be seen from the foregoing that the bolster is allowed to receive an elastic lateral motion, and to accommodate itself to the constant tendency of the spindle while rapidly rotating to find and preserve its center of gravity; and while this is the case the bolster is solidly supported by its shoulders resting upon the rail B, which shoulders cover over the space between the neck A' and inner surface of the hole through the rail, and thereby keep out waste-oil and flying matters.

In practice, the spring *g* should not offer any greater resistance to the bolster than will allow the spindle to find its center of gravity.

I am aware of the patent of Francis H. Perry, dated April 16, 1872, for improvement in bolsters and steps. My improvement dispenses with the ball and socket used by said Perry. It also avoids the necessity of capping the front of the rail with an elastic or spring cap. A spring cap applied with a ball and socket and a spindle, as Perry shows, permits the bearing and spindle to adjust themselves together in one direction only, and can hardly be of great benefit in the direction my invention points, inasmuch as the whole spherical journal-box must move in all directions to permit the spindle with bobbin on it to find the center of gravity when out of balance with the axis of the spindle; and if this is done, the invention which I have made would be illustrated, but by different means from those shown by me. The Perry bolster does not do this. The only part of his device which will permit the spindle to absolutely find the center of gravity is the spherical box, and that must roll and permit the step in which the lower end of the spindle rests to move in any direction. This plan or invention I have nothing to do with. My invention is to have a spindle rest on its lower point, and the intermediate bearings movable in all directions, so that it will adjust itself around the line of

the center of gravity, said bearing being cushioned by a spring or springs, and seated upon the rail, and prevented from turning with the spindle by means of a screw or screws.

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

1. The spring *g*, in combination with the necked bolster, which is supported upon, and

is laterally movable in, its rail, substantially as described.

2. The adjusting-screw *C*, combined with the spring *g* and the loose-necked bolster *A*, substantially as described.

BARTON H. JENKS.

Witnesses:

STOCKTON BATES,
W. D. BRITTAIN.