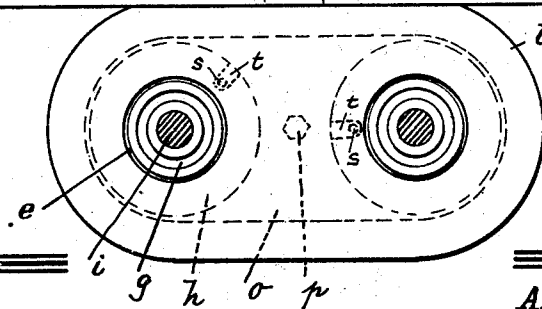
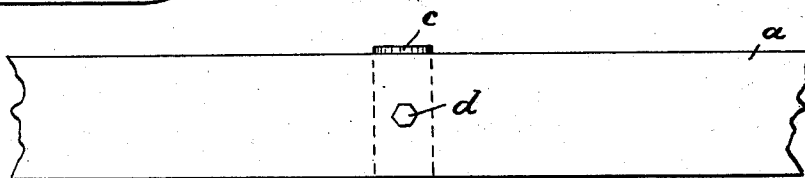
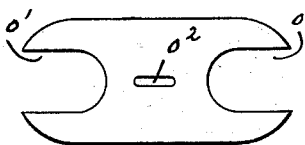
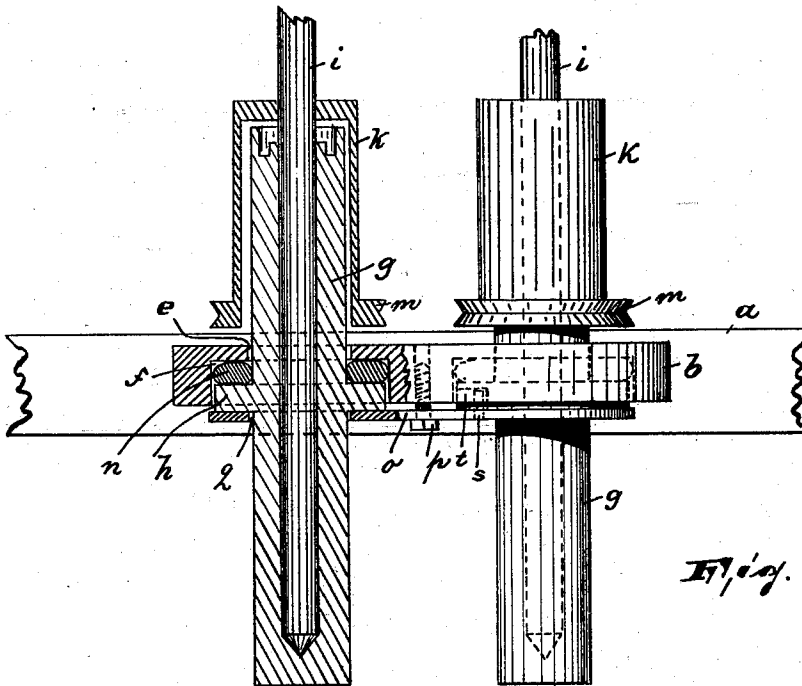


(No Model.)

A. SCHEID.
SPINDLE SUPPORT.

No. 561,345.

Patented June 2, 1896.



WITNESSES:

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Duncan M. Robertson.

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UNITED STATES PATENT OFFICE.

ADAM SCHEID, OF HARRISON, NEW JERSEY.

SPINDLE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 561,345, dated June 2, 1896.

Application filed December 31, 1895. Serial No. 573,900. (No model.)

To all whom it may concern:

Be it known that I, ADAM SCHEID, a citizen of the United States, residing in Harrison, Hudson county, and State of New Jersey, have invented certain new and useful Improvements in Spindle-Supports; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my present invention is to provide a spindle-support for spinning-spindles, arranged singly or in series of two, whereby the spindles are capable of adjusting themselves to unbalanced loads.

The invention consists in the improved spindle-support and in the combination and arrangements of the various parts thereof, substantially as will be hereinafter more fully described, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is a front elevation of a portion of a spindle-rail on which are mounted a series of spindles by means of my improved support, certain portions being broken away and others shown in section to better illustrate the nature of my said invention. Fig. 2 is a top plan view of Fig. 1, and Fig. 2^a a detail view of a modified form of a certain spring-plate.

In said drawings, *a* represents the spindle-rail, provided with a horizontally-arranged hole adapted to receive the shank or shaft *c* of the bracket or supporting-plate *b*. Said shaft *c* is preferably round and is adjustably secured in the hole of the spindle-rail by means of the set-screw *d* or in any desired manner.

The bracket *b* is provided with one or more vertical circular holes *e* and enlarged circular recesses or grooves *f*, adapted to receive the supporting-tube *g* and its flange *h*, respectively. The diameter of the hole *e* and recess *f* is slightly larger than the respective diameter of the tube and flange.

The tube *g*, containing step and bolster

bearing for the spindle *i*, is held on and in the said bracket by means of the spring-plate *o*, secured to the under side of the bracket by set-screw *p* or in any desired manner. In the drawings is illustrated a duplex spindle, and in that case only one spring-plate *o* is used for both supporting-tubes, and it is for that purpose provided with circular openings *q*, surrounding the lower portions of said supporting-tubes. The diameter of the openings *q* is slightly larger than the diameter of the tubes. Only one screw *p* is needed to secure the spring-plate *o* to the bracket *b*.

An elastic ring or washer *n* is placed on the flange *h* and within the recess *f*, as clearly shown in Fig. 1.

If desired, the spring-plate can be provided at each end with an open-ended slot *o'* and in its center with an elongated slot *o''*, adapted to receive the supporting-tubes and the set-screw, respectively, and by means of which arrangement the spring-plate can be adjusted, as will be manifest.

On the spindle *i* are arranged the sleeve *k* and whirl *m*, as in the usual manner.

A pin *s* projects upwardly from the spring-plate *o* and engages the radial groove *t* in the flange *h*, and thus prevents the tube *g* from rotating.

As each tube containing step and bolster bearings is flexibly mounted on the bracket *b*, the spindles will adjust themselves to unbalanced loads. By means of the set-screw *p* the spring-plate *o* can be loosened or tightened, and the flexibility of the spindle mounting or connection can thus be decreased or increased.

I do not intend to limit myself to the precise construction shown and described, as various alterations can be made without changing the scope of my invention; but

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination with the spindle-rail, of a spindle-supporting tube loosely mounted on said rail and provided with an annular flange, a spring-plate adjustably arranged on said rail and bearing on said flange and provided with an elongated slot adapted to receive the tube, and a spindle supported in said tube, all said parts, substantially as described.

2. The combination with the spindle-rail, of a spindle-supporting tube loosely mounted on said rail and provided with an annular flange, an elastic washer between the rail and the flange and surrounding the tube, a spring-plate adjustably arranged on said rail and bearing on the under side of said flange and provided with an elongated slot adapted to receive the tube, and a spindle supported in said tube, all said parts, substantially as described.

3. The combination with the spindle-rail, of a bracket adjustably secured on said rail, a spindle-supporting tube loosely mounted on said bracket and provided with an annular flange, a spring-plate adjustably secured on said bracket and bearing on said flange, and a spindle supported in the tube, all said parts, substantially as and for the purposes described.

4. The combination with the spindle-rail, of a bracket adjustably secured on said rail, a spindle-supporting tube loosely mounted on said bracket and provided with an annular flange, an elastic washer between the bracket and the flange, a spring adjustably arranged on said bracket and bearing on the underside of the flange, and a spindle supported in the tube, all said parts, substantially as described.

5. The combination with the spindle-rail, of a bracket adjustably secured on said rail, a spindle-supporting tube loosely mounted on said bracket and provided with a flange, a spring-plate adjustably arranged on said bracket and bearing on said flange and provided with an elongated slot adapted to receive the tube, and a spindle supported in the tube, all said parts, substantially as described.

6. The combination with the spindle-rail, of a bracket adjustably arranged on said rail,

a spindle-supporting tube loosely mounted on said bracket and provided with an annular flange, an elastic washer between the bracket and the flange, a spring-plate adjustably arranged on said bracket and bearing on the under side of the flange and provided with a slot surrounding the tube, and a spindle supported in said tube, all said parts, substantially as described.

7. The combination with the spindle-rail, of a bracket adjustably arranged on said rail and provided with a vertical hole and adjoining annular recess, a spindle-supporting tube, provided with an annular flange, loosely mounted in said hole and recess, a spring-plate adjustably secured to the under side of the bracket and bearing on the under side of the flange, and a spindle supported in the tube, all said parts, substantially as and for the purposes described.

8. The combination with the spindle-rail, of a bracket adjustably arranged on said rail and provided with a vertical hole and adjoining annular recess, a spindle-supporting tube, provided with an annular flange, loosely mounted in said hole and recess, an elastic washer between the flange and the bracket and arranged in said recess, a spring-plate adjustably secured to said bracket and bearing on the under side of the flange, and a spindle supported by the tube, all said parts, substantially as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of December, 1895.

ADAM SCHEID.

Witnesses:

ALFRED GARTNER,
DUNCAN M. ROBERTSON.