(No Model.)

C. SCHEID.

SPINDLE.

No. 590,377. Patented Sept. 21, 1897.

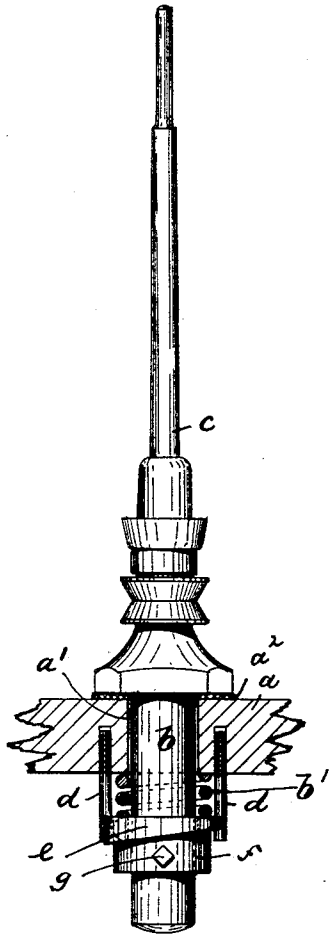

Fig. 1.

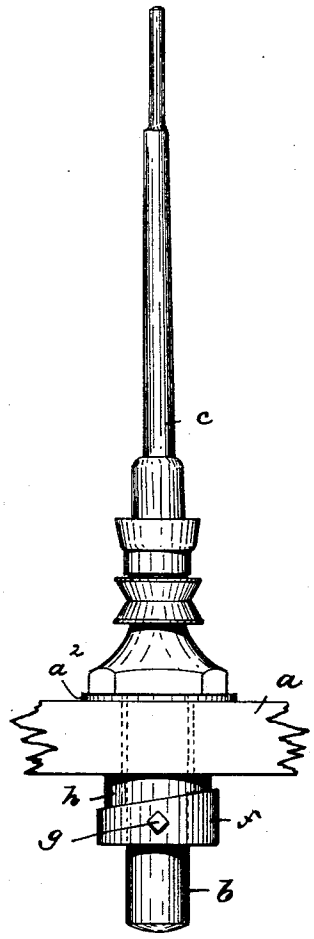

Fig. 3.

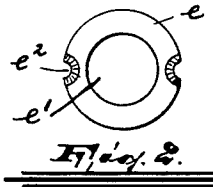

Fig. 2.

WITNESSES:

Wm. D. Bell.

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UNITED STATES PATENT OFFICE.

CARL SCHEID, OF HARRISON, NEW JERSEY, ASSIGNOR TO THE DRAPER COMPANY, OF PORTLAND, MAINE.

SPINDLE.

SPECIFICATION forming part of Letters Patent No. 590,377, dated September 21, 1897.

Application filed April 19, 1897. Serial No. 632,741. (No model.)

To all whom it may concern:

Be it known that I, CARL 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 Spindles; 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 this invention is to provide a spinning-spindle for silk, cotton, and other filaments which can be readily and quickly adjusted on the spindle-rail to a perpendicular position or to any oblique angle with said rail, of simple, strong, and durable construction, reliable and efficient in operation.

The invention consists in the improved means for securing the spindle-supporting bolster to the spindle-rail and in the combination and arrangement 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 an ordinary spinning-spindle the bolster of which is mounted on the spindle-rail by my improved means, the spindle-rail being shown in section; Fig. 2, an underneath view of a certain washer used in connection with my improved fastening and adjusting means, and Fig. 3 a front elevation illustrating a slight modification from what is illustrated in Fig. 1.

In said drawings, *a* represents a spindle-rail provided with a vertical bore or opening *a'*, penetrated by the tube *b*, containing step-and-bolster bearing for the spindle *c* and resting with its annular flange or base upon the intermediate elastic washer a^2, all of the usual and well-known construction.

On each side of the vertical bore or opening *a'* and secured in the spindle-rail *a* are the downwardly-extending parallel pins *d*, engaging curved grooves or recesses e^2, arranged in a ring or washer *e*, which latter is provided with a vertical central opening *e'*, of a diameter larger than the diameter of the tube *b*, and is adapted to bear with its upper surface against the intermediate spiral spring *b'*, as clearly shown in Fig. 1. The lower surface of the said ring or washer *e* is inclined and is adapted to be engaged by the inclined top portion of the ring *f*, which latter is adjustably arranged by means of the set-screw *g* on the tube *b*.

In the modification illustrated in Fig. 3 the ring *f* engages with its inclined top portion the inclined lower portion of a ring or washer *h*, downwardly projecting from the spindle-rail *a* and secured thereto in any desired manner, or, if preferred, said ring can be made integral with said rail. It will be manifest that the diameter of the opening in said ring or washer *h* must be larger than the diameter of the tube *b*.

By simply turning the ring *f* on the tube *b* the relative position of the spindle *c* to the rail *a* can easily be changed—that is to say, the spindle can be set at an oblique angle to the rail without weakening or disturbing the mounting of said spindle.

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

1. The combination with the spindle-rail, of a tube loosely mounted in said rail, a washer adjustably arranged on said tube and having its upper surface inclined, an intermediate washer surrounding said tube, and having its lower surface inclined and adapted to be engaged by the inclined upper surface of the adjustable washer, said intermediate washer being provided with diametrically opposite arranged grooves or recesses, a series of pins projecting downward from the spindle-rail and in engagement with said grooves or recesses of the intermediate washer, a spiral spring surrounding the tube and arranged between the spindle-rail and the said intermediate washer, and a whirl-driven spindle in said tube, all said parts, substantially as and for the purposes described.

2. The combination with the spindle-rail, of a tube loosely mounted in said rail, a washer adjustably arranged on said tube and having its upper surface inclined, an intermedi-

ate ring or washer surrounding said tube and having its lower surface inclined, the diameter of the central opening of said intermediate ring being larger than the diameter of the tube, a spiral spring surrounding the tube and arranged between the spindle-rail and the said intermediate washer, means for preventing rotation of said intermediate washer, and a whirl-driven spindle in said 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 29th day of March, 1897.

CARL SCHEID.

Witnesses:
ALFRED GARTNER,
L. SNYDER.