(No Model.)

C. SCHEID.

SPINDLE.

No. 590,379. Patented Sept. 21, 1897.

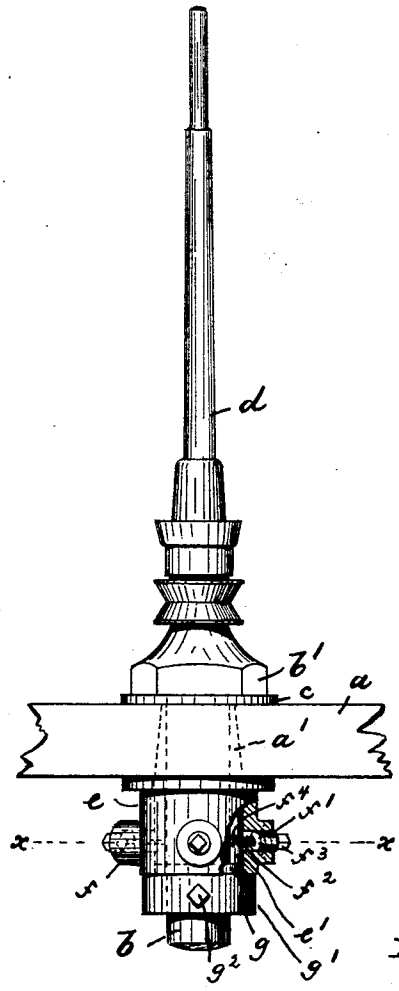


Fig. 1.

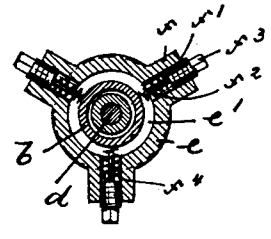


Fig. 2.

WITNESSES:

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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. 590,379, dated September 21, 1897.

Application filed April 19, 1897. Serial No. 632,743. (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.

This invention relates to spinning-spindles, and its object is to provide supporting means for such spindles, whereby the same are allowed sufficient yielding motion to adjust themselves to unbalanced loads; furthermore, to allow said spindles to be adjusted obliquely to the spindle-rail.

The invention consists in the improved spinning-spindle, in the means for mounting the spindle-supporting bolster on the spindle-rail, and in the combination and arrangement of parts, substantially as will be hereinafter more fully described, and finally embodied in the clauses of the claim.

In the accompanying drawings, Figure 1 is a front elevation of a portion of a spindle-rail in which is mounted a whirl-driven spindle by means of my improved supporting means, and Fig. 2 a sectional view on the line $x\ x$ of Fig. 1.

The spindle-rail a is provided with an upwardly-tapering hole or opening a', penetrated by the tube b (of smaller diameter than the diameter of the said opening) and containing step-and-bolster bearing for the whirl-driven spindle d. The tube b is also provided above the rail with an annular flange b', resting on the intermediate elastic washer c, all as clearly shown in Fig. 1 of the drawings, and of usual and well-known construction.

Surrounding the hole or opening a' and downwardly projecting from the spindle-rail a is arranged a tube or bushing e, the internal diameter of which is larger than the diameter of the tube b, by which latter it is penetrated.

Projecting from the side of said tube or bushing e and preferably integral therewith are arranged at uniform intervals a series of internally-threaded lugs f, in each of which is arranged a set-screw f', having its outer portion squared, as at f^3, and carrying at its inner portion a pin f^2, which latter is surrounded by a spiral spring f^4, bearing with one end against the set-screw f' and with its other end against the tube b, as clearly illustrated in Fig. 2.

On the tube b and below the bushing e is adjustably arranged by means of the set-screw g^2 a ring or collar g, provided at its upper portion with a flange or shoulder g', adapted to engage the internal bore or opening e' of the bushing e when the spindle d is to be adjusted to a perpendicular position.

If it is desired to place the spindle d at an angle to the spindle-rail, the ring or collar g is moved downward until its annular flange g' disengages the opening e' in the bushing e. One or more of the set-screws are then operated until the required position of the spindle d is obtained, the spiral springs f^4 holding the tube b in position and yet allowing the same sufficient yielding motion. The ring or collar g is then adjusted to bear with the annular flange g' against the under side of the bushing e, as will be manifest.

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 bushing downwardly projecting from said rail and also penetrated by the tube, the internal diameter of said bushing being larger than the diameter of the tube, a series of spiral springs adjustably arranged in said bushing and bearing against said tube, a ring or collar adjustably arranged on the tube and adapted to engage the bushing, 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 bushing downwardly projecting from said rail, said bushing and rail being provided with a central vertical hole or opening, a tube loosely mounted in said hole or opening, a series of spiral springs adjustably arranged in said bushing and bearing against the tube, a ring or collar adjustably arranged on the tube and below the bushing, and provided on its

upper portion with an annular shoulder or flange adapted to engage the hole or opening in said bushing, and a whirl-driven spindle in said tube, all said parts, substantially as and for the purposes described.

3. The combination with the spindle-rail, of a bushing downwardly projecting from said rail, said bushing and rail being penetrated by a vertical hole or opening, a tube loosely mounted in said hole or opening, a series of lugs horizontally projecting from said bushing, a set-screw adjustably arranged in each of said lugs, a spiral spring intermediately arranged between each set-screw and the tube, a ring or collar adjustably arranged on the tube and below the bushing, and a whirl-driven spindle in said tube, all said parts, substantially as and for the purposes described.

4. The combination with the spindle-rail, of a bushing downwardly projecting from said rail, said bushing and rail being penetrated by a vertical hole or opening, a tube loosely mounted in said hole or opening, a series of lugs horizontally projecting from said bushing, a set-screw adjustably arranged in each of said lugs, a spiral spring intermediately arranged between each set-screw and the tube, a ring or collar adjustably arranged on the tube and below the bushing, and provided at its upper portion with an annular shoulder or flange adapted to engage the hole in said bushing, and a whirl-driven spindle in 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 5th day of April, 1897.

CARL SCHEID.

Witnesses:
ADAM SCHEID,
WM. D. BELL.