

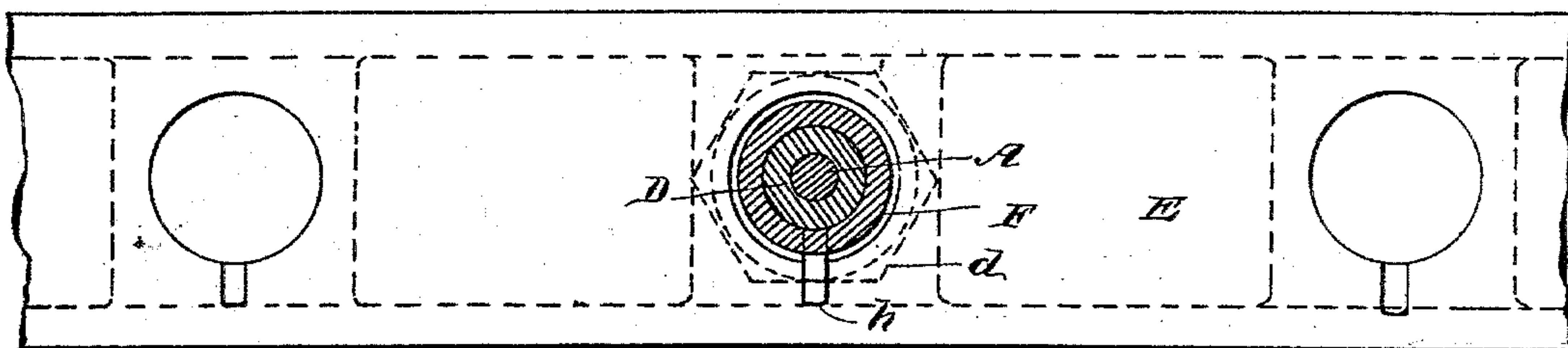
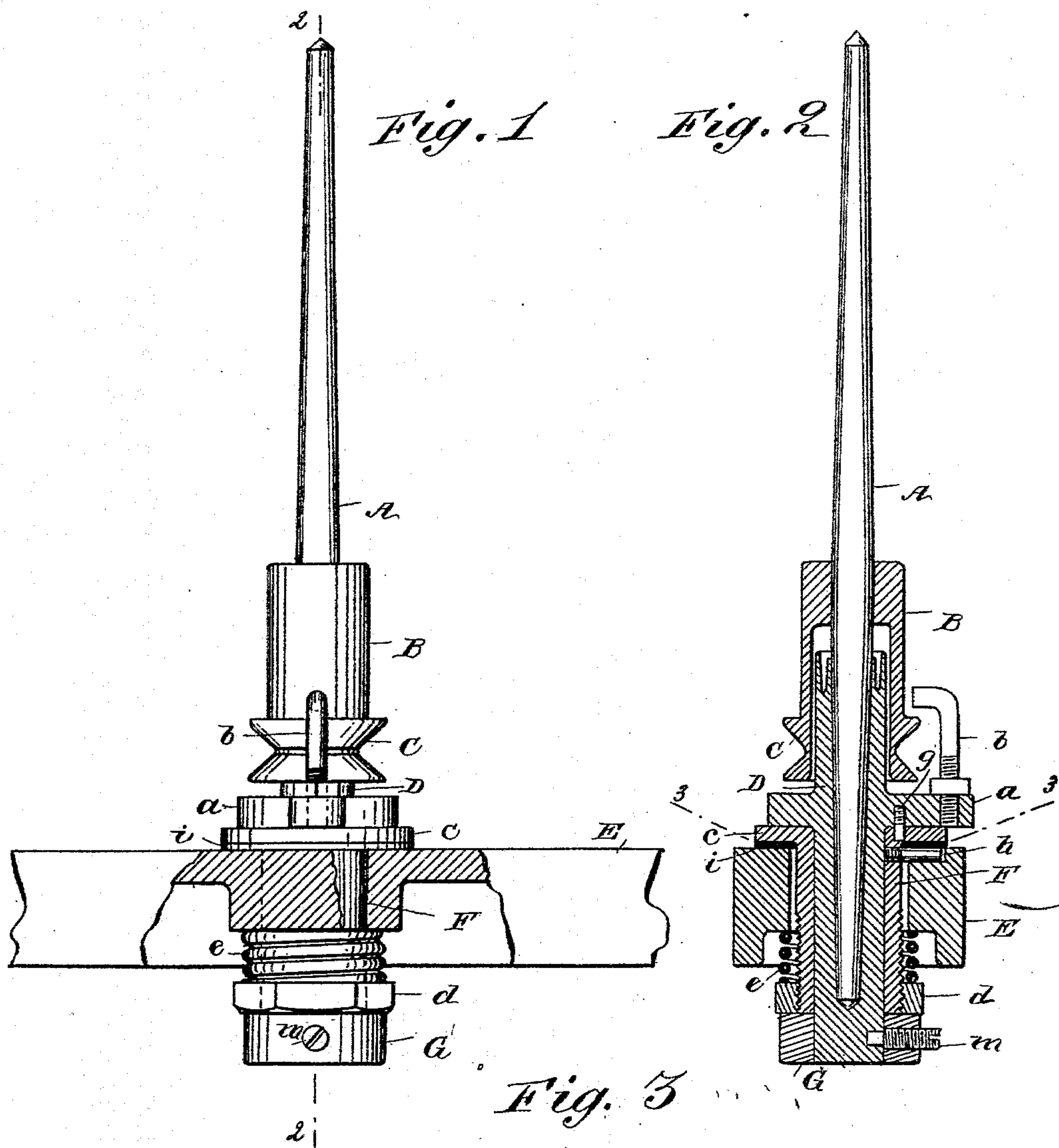
(No Model.)

R. ATHERTON.

SUPPORTING DEVICE FOR SPINNING SPINDLES.

No. 516,042.

Patented Mar. 6, 1894.



WITNESSES:

*C. Newell*  
*C. Sedgwick*

INVENTOR

*R. Atherton*  
BY *Munn & Co*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ROBERT ATHERTON, OF PATERSON, NEW JERSEY.

## SUPPORTING DEVICE FOR SPINNING-SPINDLES.

SPECIFICATION forming part of Letters Patent No. 516,042, dated March 6, 1894.

Application filed May 25, 1893. Serial No. 475,470. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT ATHERTON, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Supporting Device for Spinning-Spindles, of which the following is a full, clear, and exact description.

My invention relates to an improvement in supports for spinning spindles, of a type that permits the spindle to yield laterally a limited degree and by "self-adjustment" compensate for variable strains to which such devices are subjected in operation; the object being to provide a novel and superior means for the automatic adjustment of a spinning spindle in motion, which will facilitate a removal of the spindle and its bolster together from the spindle rail of the machine.

My invention consists in the peculiar construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a broken side view of a spindle rail, partly in section, a spindle and the bolster thereon, and the improved bolster casing engaging the spindle rail and bolster. Fig. 2 is a sectional side view on the line 2—2 in Fig. 1; and Fig. 3 is a sectional plan view on the line 3—3 in Fig. 2.

The spindle A, concentric sleeve B, having the band whirl C, formed on it, and bolster D, are of well known form, not requiring a detailed description, further than the statement that the spindle is rotatably supported by the bolster in the usual way, and that the sleeve B loosely envelops the free upper end portion of the bolster, thereby disposing the whirl C, near to the collar *a*, that radially projects from the bolster, and that often has contact with a spindle rail such as E, the usual band guard *b* projecting from the collar near to the whirl. The shank of the bolster D, that projects downward from the collar *a*, and wherein the lower end of the spindle A is axially stepped, is made cylindrical externally, and of a suitable diameter to fit neatly within the true axial bore of the casing F, which is a feature of the improvement.

The casing F, is preferably made cylindrical

cal in the body and provided with a fixed or integral radial flange *c*, at the upper end, a detachable flange or collar *d*, being located on the body of the box at its lower end.

Preferably, there is a screw thread produced on the exterior of the cylindrical casing F, for the reception of the internally threaded collar *d*, as represented in Fig. 2, whereby the latter is adjustably secured on the lower end of the casing.

The spindle rail E is of the ordinary construction provided in such a portion of the frame of a spinning machine, it being recessed at proper intervals leaving thicker portions remaining which latter are vertically perforated for the introduction of spindle supports. In this case, the spindle rail E, is perforated in series, as indicated in Fig. 3, the diameter of each hole being so proportioned that the body of the casing F will freely enter and be permitted to wobble slightly if unrestrained.

The shank of the bolster D is of such a relative length as will allow it to project a suitable degree below the rail E, and the casing F also extends below the portion of the rail in which it is located, providing a space between the adjustable collar *d*, and the lower surface of the rail E, for the introduction of a spiral spring *e*, that is loosely fitted upon the casing body, and that may be more or less compressed endwise by an adjustment of the collar *d*. A dowel pin *g* is provided to lock the collar *a* of the bolster to the radial flange *c* of the casing F, and while it is shown as secured in the collar *a* and in loose engagement with the radial flange named, it is evident that this engagement of parts may be reversed and the same service rendered by the pin.

The body of the casing F, is loosely secured from rotation by the laterally projecting pin *h*, that is fastened by one end in the wall of the same, and engages with a suitable groove in the top face of the rail E, as indicated in Fig. 2.

An elastic washer *i* is placed on the body of the casing F, and intervenes between the rail E and flange *c*, affording a slightly yielding seat for the latter and for the parts supported by it.

A locking ring G is placed on the end portion of the shank of the bolster D which extends below the casing F, and is thereto re-



movably secured by the set screw *m*, that is preferably doweled in the shank, as shown in Fig. 2.

In operation, any overload of the spindle A 5 on one side, or improper draft strain of the band that engages the whirl C, will be compensated for by the slight yielding of the casing F, which will resume a normal vertical position when the parts are restored to a balanced condition. In case it is necessary to remove a spindle from the frame of the machine, it is quickly effected by removing the locking ring G which will release the shank of the bolster D, that may then be lifted out of the casing F, without impediment, or in any manner 15 deranging the connection of the latter with the rail E.

Having thus fully described my invention, I claim as new and desire to secure by Letters 20 Patent—

1. In a spindle support, the combination with the spindle rail, of the bolster casing supported by its upper end on the spindle rail, and loosely extending therethrough, the bolster fitted in the casing and projecting through

the lower end thereof, a collar on the lower end of the casing, a spring intervening the collar and spindle rail, and a locking ring removably secured on the lower projecting end of the bolster, substantially as described. 30

2. In a spindle support, the combination with the vertically perforated spindle rail, the spindle, the bolster wherein the spindle is stepped and means to rotate the spindle in the bolster, of a cylindrical bolster casing 35 loose in the rail perforation and locked from rotation, the said casing having a flange detachably secured to the bolster and supported from the spindle rail, and the said bolster projecting through the casing at the lower end, 40 an adjustable collar on the casing below the rail, a spring between the collar and rail, and a locking ring removably secured on the bolster end that projects below the casing and impinging said casing, substantially as described. 45

ROBERT ATHERTON.

Witnesses:

PHIL. J. BRIODY,  
PETER RYLE.