

T. MAYOR.  
Spindle for Spinning-Machines.

No. 215,142.

Patented May 6, 1879.

Fig. 1.

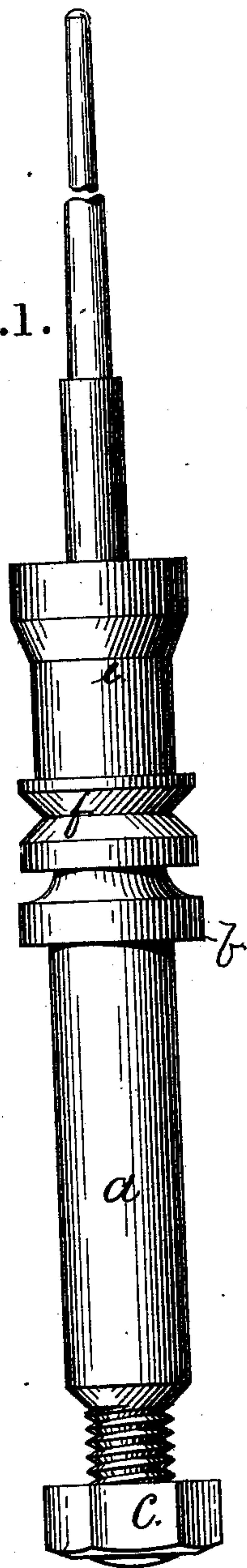


Fig. 2.

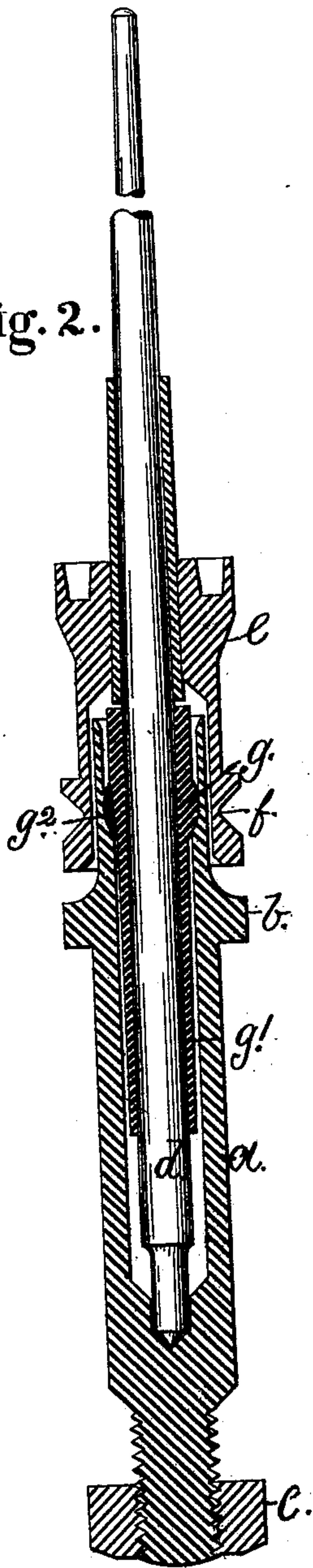
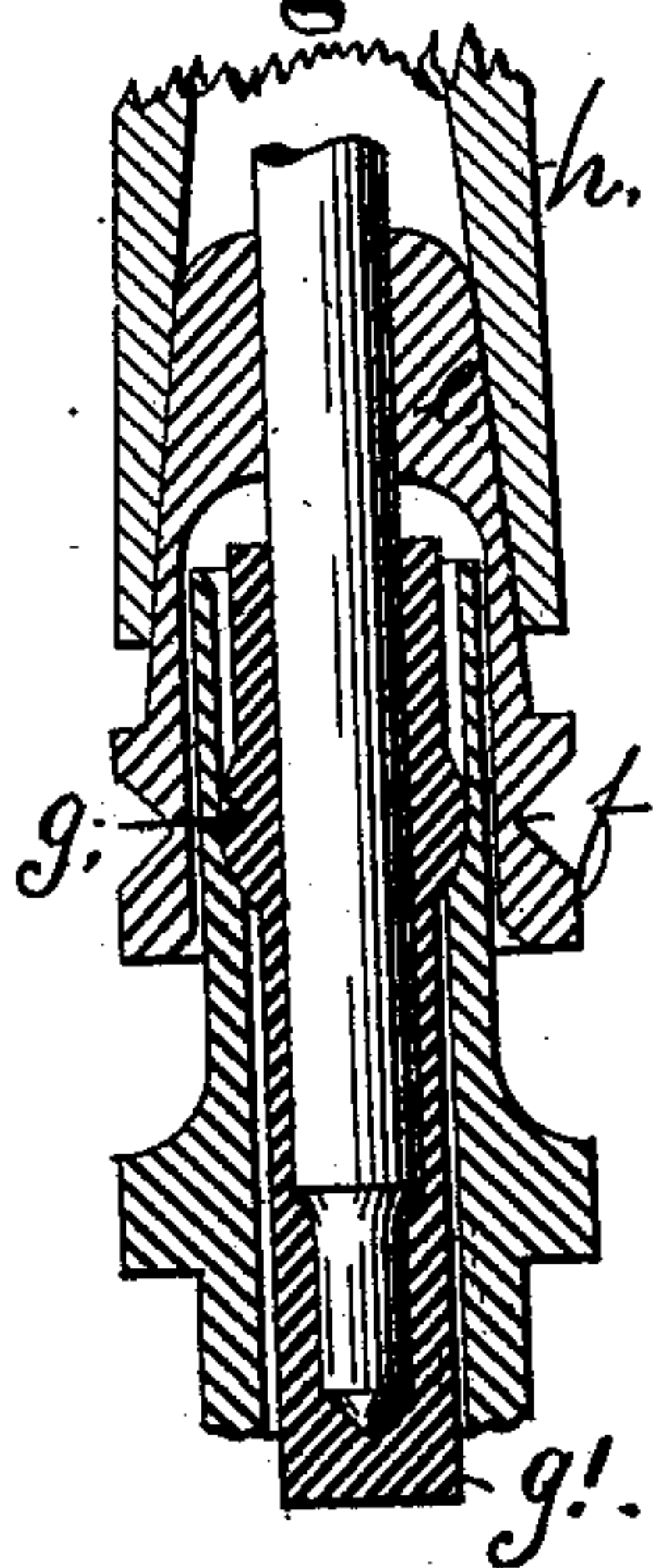


Fig. 3.



WITNESSES:

*Joseph A. Miller Jr.*  
*William L. Coop.*

INVENTOR:

*Thomas Mayor*  
*by Joseph A. Miller*  
*attorney*



# UNITED STATES PATENT OFFICE.

THOMAS MAYOR, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOSEPH MAYOR, OF SAME PLACE.

## IMPROVEMENT IN SPINDLES FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. 215,142, dated May 6, 1879; application filed February 13, 1879.

*To all whom it may concern:*

Be it known that I, THOMAS MAYOR, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Spindles for Spinning-Machines; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is an external view of my improved spindle and bolster-case. Fig. 2 is a sectional view, showing the spindle provided with a sleeve-whirl and a bolster, secured within the bolster-case by a ball and socket, so that with a loosely-fitting step a slight adjustment of the spindle, and a free adjustment of the bolster to or with the spindle, is possible. Fig. 3 is a partial sectional view, showing the bobbin in frictional contact with the sleeve of the whirl and the bolster supported by a ball and socket, the spindle-step forming part of the bolster and adjustable with the same.

The first object of this invention is to allow the bolster to adjust itself to or with the spindle, and the second object is to allow the spindle to adjust itself axially.

The invention consists in the arrangement, within a bolster-case, of a bolster supported by a ball and socket and a spindle provided with a sleeve-whirl, so that the pull of the driving-band shall be on the line passing through the horizontal center of the ball-and-socket bearing, so that the bolster can adjust itself freely to the spindle, as will be more fully hereinafter set forth, and pointed out in the claims.

In the drawings, *a* represents the bolster-case, provided with the shoulder *b*, by which it rests on the bolster-rail, and is secured by means of the screw-nut *c*.

*d* is the spindle, the ~~the~~ of which, as shown in Fig. 2, has a recess slightly larger than the point of the spindle, so that a slight adjustment in the step is possible. When, however, the step forms part of the bolster, so that the whole may adjust itself, the usual fit for the step is used.

*e* is the sleeve, to which the whirl *f* is secured, so that the center of the groove in the whirl is on a line with the center of the ball *g*, formed on the bolster *g*<sup>1</sup>.

The ball *g* supports the bolster in a suitable

socket turned in the bolster-case, so that the bolster may turn with the spindle or the spindle in the bolster, and the bolster adjust itself to the spindle, or, if the step forms part of the bolster, allow the bolster and spindle to adjust themselves axially, and as the whirl is on a line with the center of the ball-and-socket support of the bolster the pull of the band will allow a free adjustment of the bolster without the strain exerted by the band interfering with such adjustment, as would be the case if the center of the whirl was above or below the center of the ball *g*.

To allow any oil raised by the revolving spindle to return outside the bolster, the ball *g* is provided with a groove, *g*<sup>2</sup>, as shown in Fig. 2.

I am aware that bolsters for spindles have before my invention been supported on a ball and socket, so as to adjust themselves; but as such bolster did not have the whirl placed so as to surround the ball and the pull of the band, the fixed or tightly-fitting step prevented the free adjustment of the spindle and bolster.

I do not claim a bolster supported by a ball and socket, broadly, as such is not my invention.

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

1. The combination, with the spindle, of the bolster *g*<sup>1</sup> and the bolster-case, said bolster being supported in the bolster-case by the ball and socket *g*, of the sleeve-whirl *e f*, arranged to surround the bolster and case, in the manner described, so that the center of the whirl is on a line with the center of the ball *g*, substantially as and for the purpose set forth.

2. The combination, with the spindle of a bolster-case and a bolster provided at its lower end with a step, as described, said bolster being supported in the case by a ball and socket, of a sleeve-whirl arranged, as set forth, to surround the bolster and case, so that the center of the whirl is in a line with the center of the ball and socket, all substantially as specified.

THOMAS MAYOR.

Witnesses:

JOSEPH A. MILLER,

JOSEPH A. MILLER, Jr.