

(No Model.)

J. W. WATTLES.

MECHANISM FOR SUPPORTING AND LUBRICATING THE SPINDLES OF RING  
SPINNING FRAMES.

No. 257,909.

Patented May 16, 1882.

Fig. 1.

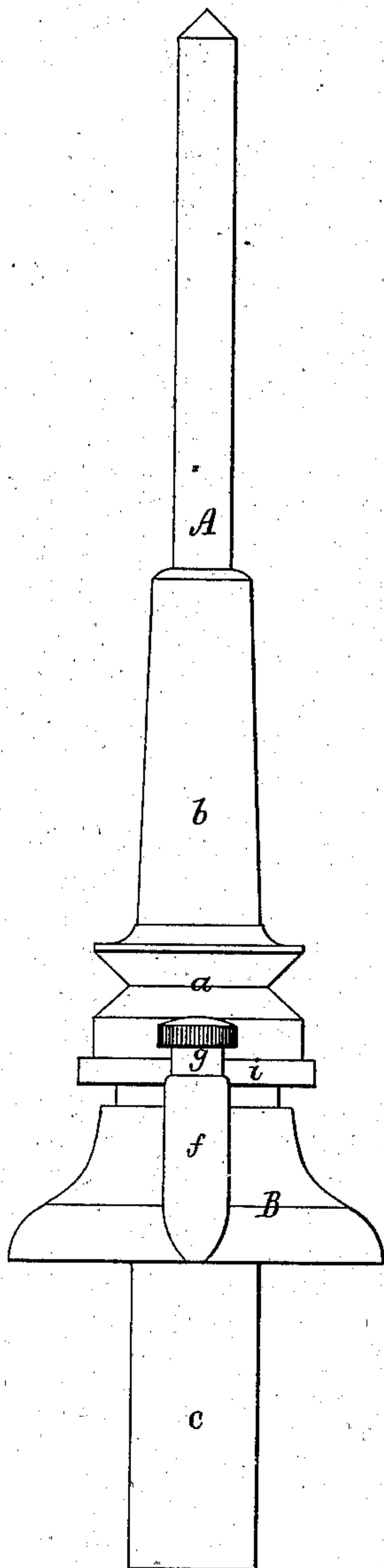


Fig. 3.

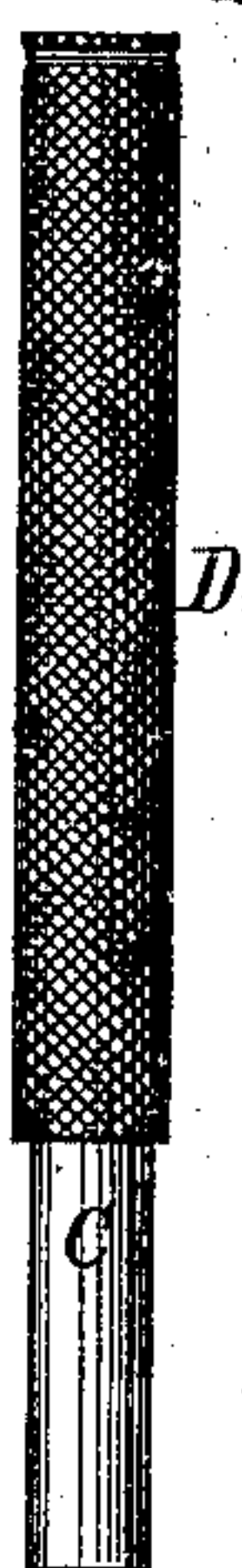


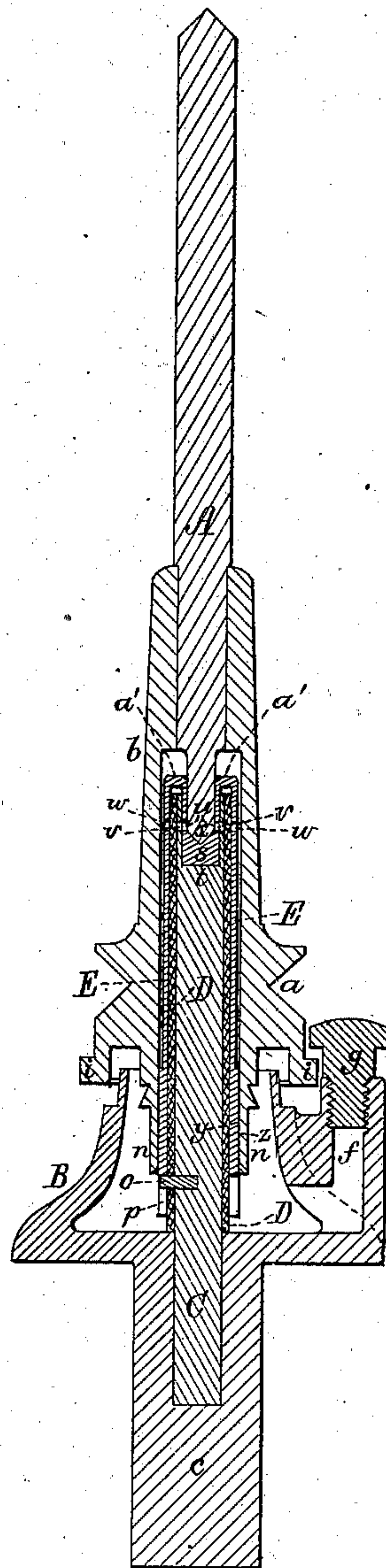
Fig. 4.



Fig. 5.



Fig. 2.



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# UNITED STATES PATENT OFFICE.

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MECHANISM FOR SUPPORTING AND LUBRICATING THE SPINDLES OF RING-SPINNING FRAMES.

SPECIFICATION forming part of Letters Patent No. 257,909, dated May 16, 1882.

Application filed February 13, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH W. WATTLES, of Canton, in the county of Norfolk, of the State of Massachusetts, have invented a new and useful Improvement in Mechanism for Supporting and Lubricating the Spindles of Ring-Spinning Frames; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, and Fig. 2 a vertical and transverse section, of a spindle with its supports as provided with my invention. Fig. 3 is a side view of the dead-wick carrier and its tubular wick. Fig. 4 is a side elevation, and Fig. 5 a bottom view, of the dead bearing sleeve or bolster.

My present invention relates to and is an improvement on the kind of spindle and its adjuncts represented in the United States Patent No. 248,816, dated October 25, 1881, and granted to me, the nature of such improvement being duly set forth in the claims hereinafter presented, as well as in the following description.

In the said drawings, A denotes a "live spindle," whose driving-whirl is shown at *a* and the supporting-sleeve thereof at *b*, all being formed and arranged as shown.

B is the oil-reservoir, provided with a neck, *c*, and also with a filling-induct, *f*, into which a screw, *g*, is screwed, the milled head of the screw lapping on a flange, *i*, projecting from the whirl-sleeve *b*, and serving to keep the spindle from being raised during the act of doffing or removing a bobbin from it.

Extending upward from the bottom of the oil-reservoir, and concentric therewith, is the stationary post or carrier C, for supporting a tubular wick, D. This wick encompasses the said carrier, and is to be suitably secured thereto and to extend from the oil-reservoir, at or near its bottom, to the top of the carrier.

Encompassing the wick, and fitting thereto, is the metallic bearing-tube or bolster E, which, as represented, extends up to and over the tops of the wick and the carrier C, and is provided with a spindle-foot step, *s*, extending down from it and into a correspondingly-shaped socket, *t*, made in the head or upper part of the carrier C.

By having the step *s* and the tube E connected at their upper ends or parts, as shown at *a'*, the step, by means of the tube, can easily be raised out of the socket *t* as occasion may require. In some cases I make the step separate from the tube, or I form the spindle-foot bearing in the upper part of the carrier itself; but it is preferable to have the step and socket therein as represented. From the interior of the step one or more holes or ducts, *u*, are led laterally through the step, each duct *u* opening into another duct, *v*, made through the wick-carrier C and leading to the wick D, in manner as represented. From the wick holes *w* lead laterally through the bearing-tube E.

From the above it will be seen that on oil being drawn upward by the wick D such oil will flow through the ducts *v* and *u* and into the step, in order to lubricate it and the spindle-foot *x*, projecting from the spindle into the said step; also, that oil will flow through the ducts *w* and run down the exterior surface of the tube E and between the bearing-surfaces *y x* of such sleeve and the tubular extension *n* of the whirl-sleeve.

The bearing-tube E is notched at bottom, as shown at *p*, to receive a stud, *o*, projecting from the wick-carrier C, such notch and stud being to prevent the tube or bolster E from turning around on the wick. When the stud is in the notch the oil holes or ducts *u* and *v* are brought into their proper relations for the oil to pass from the wick through them into the step. The spindle while revolving is supported by its foot and the step, and by the tubular extension *n* and the stationary sleeve or bolster E.

What I claim as my invention is as follows, viz:

1. The bearing-tube E and the spindle-foot step, arranged, connected, and provided with oil-ducts substantially as set forth, in combination with the oil-reservoir B, wick-carrier C, and tubular wick D, and with the spinning-frame spindle A, having the bearing foot or pivot *x*, the whirl *a*, and its sleeve *b*, all substantially as described.

2. The spindle-foot step *s*, arranged within and connected to the bearing-tube E at the upper part thereof, and having not only a wick-receiving space between them, the said tube



and step, but one or more ducts leading from the said space into the said step, all being substantially as set forth.

3. The wick-carrier provided with the tubular wick and extended upward from the oil-reservoir, and having in its upper part a step-socket, as described, in combination with the said oil-reservoir, and with a spindle having a foot or pivot, a whirl, and its sleeve, arranged as set forth, and also with a removable bearing-tube encompassing the wick and having a spindle-foot step extending into the socket of the said wick-carrier, and being, with the said bearing-tube, provided with oil-ducts, as set forth.

4. The combination, with the oil-reservoir,

its wick, and stationary wick-carrier having the step-socket, the oil-ducts *v*, and stud *o*, and with a spinning-frame spindle provided with the foot or pivot, whirl, and whirl-sleeve, arranged as described, of the removable bearing-tube *E* and step *s*, connected thereto and provided with oil-ducts *u* and *w* and the notch *p*, such notch, when in engagement with the stud, being to prevent the tube from revolving on the wick and to bring the oil-ducts *u* and *v* to open into each other, in order for oil from a wick to flow into the step, as explained.

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Witnesses:

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