(No Model.)

J. W. WATTLES.

DEVICE FOR SUPPORTING AND LUBRICATING THE SPINDLES OF A RING SPINNING FRAME.

No. 309,903. Patented Dec. 30, 1884.

Fig. 1.

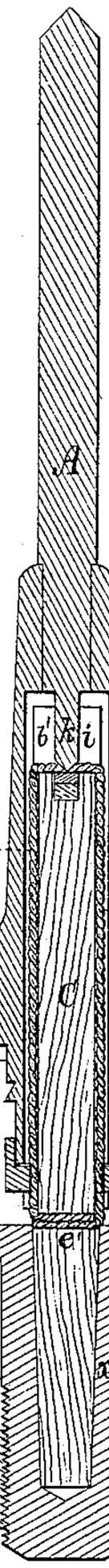


Fig. 2.

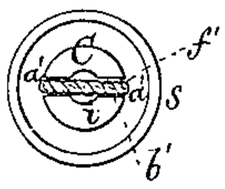


Fig. 4.

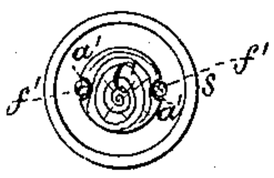


Fig. 3.

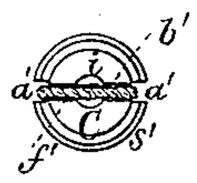


Fig. 5.

Fig. 8.

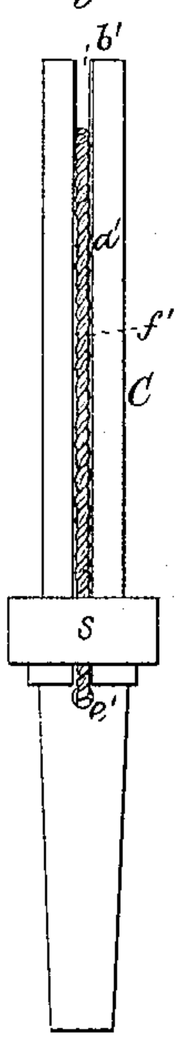


Fig. 6

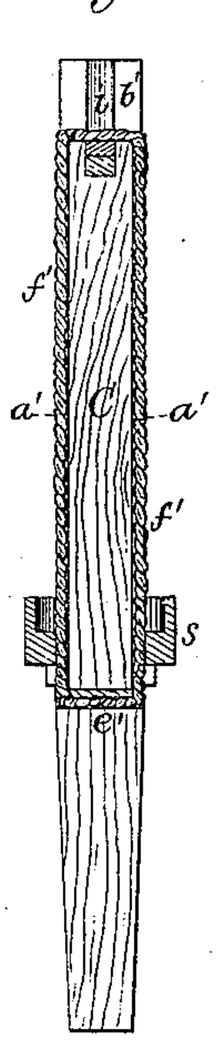


Fig. 9.

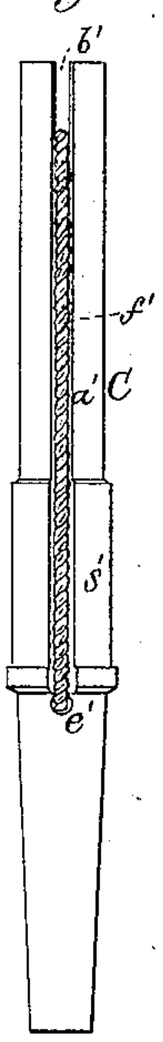
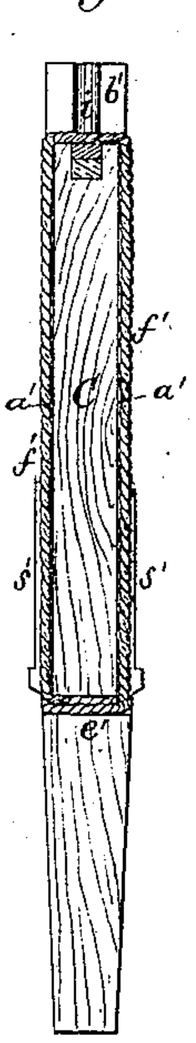


Fig. 7.



Witnesses.

S. N. Piper

E. B. Pratt.

Inventor.

Joseph Warren Wattles.

by R. H. Eddy atty.

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH WARREN WATTLES, OF CANTON, MASSACHUSETTS.

DEVICE FOR SUPPORTING AND LUBRICATING THE SPINDLES OF A RING-SPINNING FRAME.

SPECIFICATION forming part of Letters Patent No. 309,903, dated December 30, 1884.

Application filed February 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WARREN WATTLES, of Canton, in the county of Norfolk, of the Commonwealth of Massachusetts, have invented a new and useful Improvement in Devices for Supporting and Lubricating the Spindles of a Ring-Spinning Frame; 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 vertical section of a spindle and its supports in accordance with my invention, the nature of which is defined in the claims hereinafter presented. Figs. 2 and 3 are top views; Figs. 4 and 5, transverse sections; Figs. 6 and 7, longitudinal sections, and Figs. 8 and 9, side elevations of the stationary post C and its oil-elevator, hereinafter described.

In Fig. 1, A denotes a "live-spindle" whose driving-whirl is shown at *a* and the supporting-sleeve thereof at *b*, all being formed in section and arranged as represented.

B is the oil-reservoir, provided with a fastening-neck, *c*, having screwed on it a nut, *d*. This reservoir also has a filling-induct, *f*, into which a screw, *g*, is screwed. The milled head of this screw laps on a flange, *o*, 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 up from the bottom of the reservoir, concentric therewith, and inserted in a tapering socket, *x'*, extending down from such bottom into the neck *c*, is a wooden post, C, which has two grooves, *a' a'*, formed in opposite sides of it, and extending down such from a cross-cut or recess, *b'*, made diametrically in its head, and having a spindle pivot-step, *i*, in which the pivot *k* of the spindle is inserted and rests.

Through the cross-cut *b'*, and down through the grooves *a'* and a hole, *e'*, made through the neck *c*, there is a cord, *f'*, of some proper material to answer the purpose of a wick, to draw oil from the oil-reservoir by capillary attraction up to the said pivot and step. The said wooden post C, I provide either with a metallic cup, *s*, for the support of the lower end of the spindle, or a cylindrical enlargement or journal, *s'*, for such purpose, the post, as provided with such enlargement, being shown in Figs. 3, 5, 7, and 9, while Figs. 1, 2, 4, 6, and 8 represent it as having the cup *s*. The capillary cord serves to raise oil from the reservoir to the spindle-bearings, so as to keep them lubricated. The said cord has both ends drawn in opposite directions tightly into and through the hole *e'*, the cord thereby being prevented from being drawn off the post by the spindle in the act of raising it off such post.

The post, made of wood rather than metal, is found in practice to cause the spindle to run steadier, and in several other respects better than would be the case were the post a metallic one. Furthermore, the wooden post is an oil-absorbent and soon becomes more or less charged with oil, and aids in lubricating the spindle.

The wooden post, which I usually make of "doe-wood" or rock-maple, is cheaper than a metallic one, and yields to the pressure of the spindle, and does not wear the spindle-bearings as does a metallic post.

I do not herein claim for supporting a spindle, as described, a metallic post and a tubular wick applied thereto, and a metallic sleeve encompassing the wick; but

I claim—

1. The combination of the wooden post C and the lubricating-cord, arranged in it as described, with the live-spindle and the oil-reservoir, applied to and arranged with such post and cord as represented.

2. The spindle-supporting post, grooved and provided with a cross-cut and hole, as described, and with the lubricating-cord, arranged therein substantially as set forth.

3. The combination of a spindle-supporting post, made of wood, with an oil-reservoir and a metallic spindle, and with a lubricator arranged between the spindle and post, and adapted to transmit oil by capillary attraction from the reservoir up to the bearings of the spindle and post, and to the post lengthwise thereof, all substantially as set forth.

JOSEPH WARREN WATTLES.

Witnesses:
R. H. EDDY,
E. B. PRATT.