

(No Model.)

H. F. WOODMANCY.
SPINDLE SUPPORT.

No. 480,985.

Patented Aug. 16, 1892.

Fig. 1.

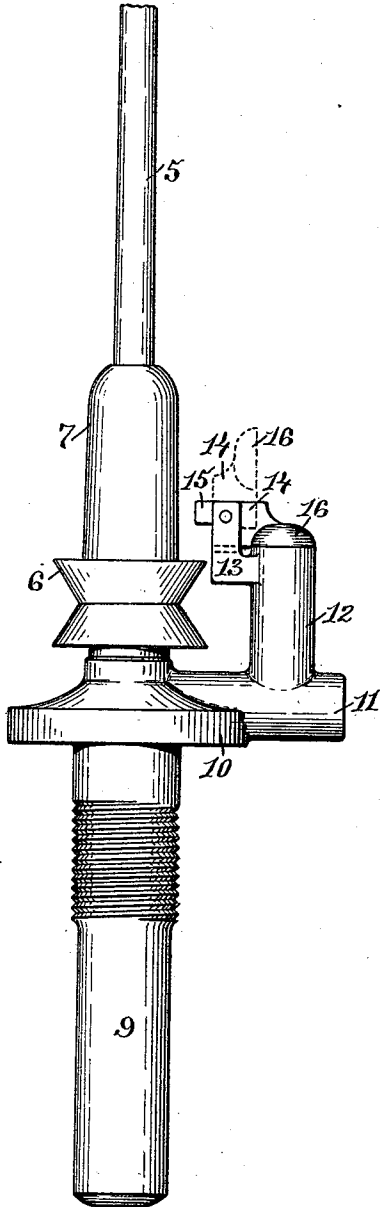
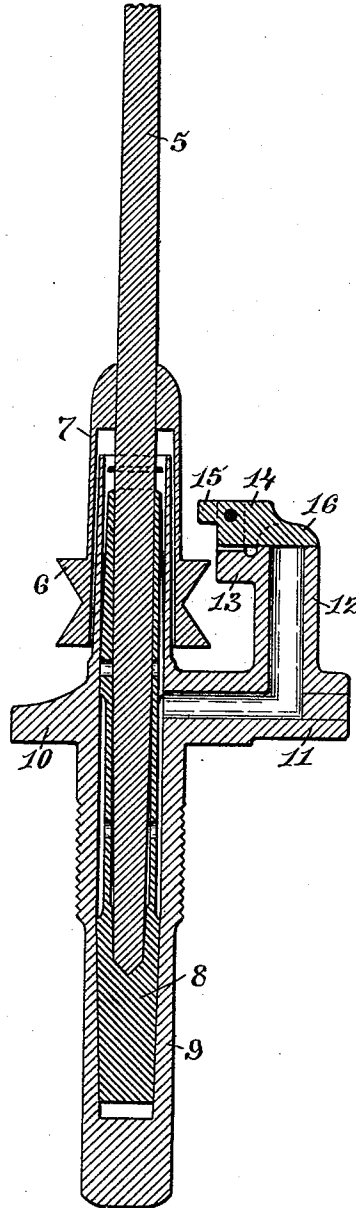


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY F. WOODMANCY, OF WHITINSVILLE, MASSACHUSETTS.

SPINDLE-SUPPORT

SPECIFICATION forming part of Letters Patent No. 480,985, dated August 16, 1892.

Application filed February 10, 1892. Serial No. 421,000. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. WOODMANCY, of Whitinsville, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Spindle-Supports; 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.

This invention has reference to improvements in supports for spindles of spinning-machines.

The object of the invention is to produce a support for spindles in which the doffer-guard while holding the spindle in place during the removal of a bobbin may be readily operated to allow the removal from the bolster and case of the spindle, whirl, and sleeve.

Another object of the invention is to produce a spindle-support provided with a doffer-guard which may be automatically operated by the whirl to allow the insertion of the spindle in the bolster and to lock the same in place.

The further object of the invention is to produce a spindle-support having a rigid arm closely approaching the circumference of the whirl, by which the driving-band is prevented from slipping off the whirl.

The invention consists in certain peculiar features of construction and combination of novel parts, which will hereinafter be more fully described, and pointed out in the claims.

Figure 1 represents a view of the improved spindle-support formed in part with a bolster-case and the doffer-guard pivotally secured thereto. Fig. 2 represents a vertical sectional view of the same to more clearly show the improved construction.

Similar numbers of reference designate corresponding parts throughout.

In the drawings, 5 indicates a spindle of the usual form provided with the whirl 6 and sleeve 7. The lower or bearing end of the spindle is contained within the bolster-bearing 8, which in turn is held within the bolster-case 9. The bolster-case is provided on a portion of its outer surface with a screw-thread, by which it is secured in a perforation of the bolster-rail. Above this threaded portion is formed a flange 10, extending from one side

of which is a hollow arm 11, closed at the outer end, having the vertical hollow post 12, and at the upper portion of this post and formed in part therewith is the inwardly-extending bracket 13. This bracket may extend inward sufficiently to just clear the edge of the whirl 6 and has upwardly-projecting ears, between which is pivoted the arm 14, having the inward projection 15 to form the doffer-guard, and on its outer end the counter-weight 16, shaped to serve as a cap or cover for the open end of the post 12. The perforation of the vertical post 12 and the arm 11, being continuous from the upper end of the post to the interior of the bolster-case, serves as a reservoir for the lubricant, which may enter the bolster-case and through suitable openings in the bolster is admitted to the spindle-bearing.

When a bobbin is placed on the spindle, its lower inner surface is engaged by the whirl-sleeve 7, which prevents the bobbin from being pushed down sufficiently to be caught by the doffer-guard. On removing or doffing the bobbin from the spindle after being filled, the engagement of the bobbin with the whirl-sleeve tends to lift the spindle and whirl from the bolster; but after a slight upward movement the whirl 6 comes in contact with the doffer-guard 15 and further upward movement is prevented, the bobbin is drawn off from the spindle, and the spindle and whirl fall back into place. If the spindle is to be removed from the bolster, by simply lifting the weighted end of the pivoted doffer-guard, as is shown in dotted lines in Fig. 1, the obstruction is removed. When released, the counter-weight immediately falls back into place and again sets the doffer-guard.

An important feature of this invention is the ease and rapidity with which the spindles may be inserted in place and the oiling-tube covered, requiring no attention in turning the doffer-guard, as at present, the simple insertion of the spindle being sufficient, the doffer-guards opening automatically as the whirl passes them and immediately closing after the whirl has passed. The spindle can be supplied with oil while running, as the hinged doffer-guard can be lifted off the oiling-tube without interfering with the whirl.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. In a support for spindles, a doffer-guard consisting of a lever, the outer end of which
5 is weighted, pivoted on a rigid post, the whole adapted to support the pivoted lever in the horizontal position in its normal condition and permit the tilting of the lever, as described.
- 10 2. A spindle-support having a rigid vertical post on one side beyond the driving-whirl, a bracket extending from the post toward the spindle, and a hinged lever pivoted near its inner end, having the outer end
15 weighted, the whole adapted to form a stop for the whirl in its normal position and open a passage for the whirl when the weighted end of the lever is raised, as described.
3. In a support for spindles, consisting of
20 the bolster-case 9, having the usual oil-chamber, the laterally-extending hollow arm 11, and vertical hollow post 12, forming a communication with the interior of the bolster-case, the combination therewith of a doffer-guard pivoted to the upper portion of said
25 post, as described.
4. In a support for spindles, consisting of

the bolster-case 9, having the usual oil-chamber, the laterally-extending hollow arm 11 and vertical hollow post 12, forming extensions of the oil-chamber, the combination
30 therewith of a doffer-guard pivoted to the upper end of said post 12 and having a counter-weight adapted to serve as a cover for the open end of the post, as described.

5. The combination, with a spindle, a sleeve-whirl secured to the spindle, and a bolster-case closed at the bottom, adapted to be secured to a bolster-rail provided with a tube extending
40 upward within the sleeve-whirl and having an interior oil-chamber, of the hollow arm 11, extending laterally beyond the whirl, the vertical hollow post 12, forming with the hollow arm an inlet to the oil-chamber in the bolster-case, the bracket 13, extending inward toward
45 the spindle above the whirl when the same is in its normal position, and the arm 14, pivoted to said bracket and having the doffer-guard 15 and counter-weight 16, as and for the purpose described.

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Witnesses:

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