

No. 619,899.

Patented Feb. 21, 1899.

J. A. MILLER, JR.  
SPINDLE SUPPORT.

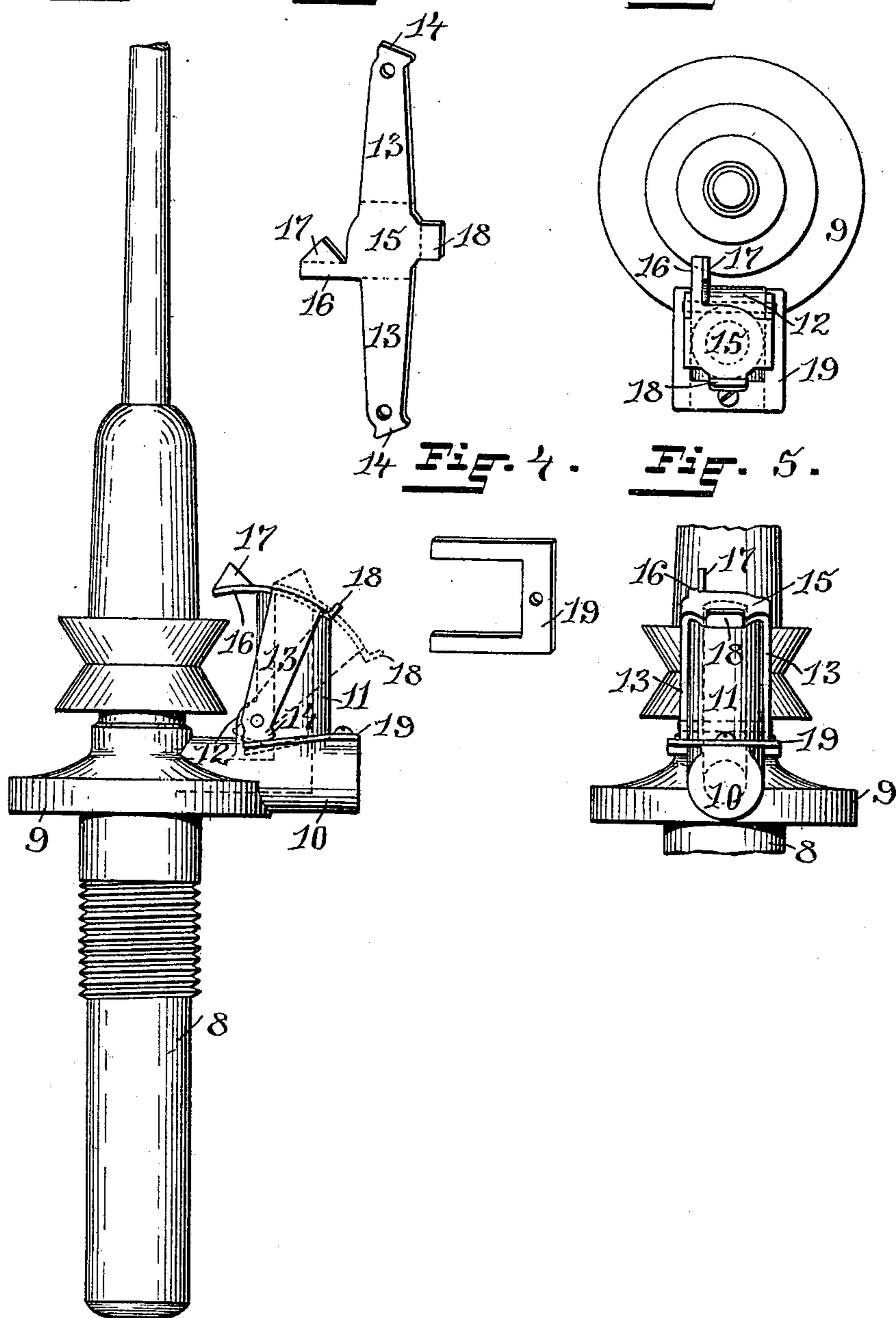
(Application filed June 23, 1894.)

(No Model.)

Fig. 1.

Fig. 2.

Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOSEPH A. MILLER, JR., OF PROVIDENCE, RHODE ISLAND.

## SPINDLE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 619,899, dated February 21, 1899.

Application filed June 23, 1894. Serial No. 515,461. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH A. MILLER, Jr., of the city of Providence, in the county of Providence and State of Rhode Island, have  
5 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  
10 had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in spindle-supports having oil-reservoirs, and resides particularly in the means for closing the open ends of the reservoirs and  
15 for preventing the undue lifting of the spindle when the spun yarn is doffed from the spindle.

The object of the invention is to so construct the doffer-guard and oil-reservoir cover  
20 that the oil-inlet may be placed as high as possible above the center of the whirl or the band-pull without interfering with the ring-rail and the doffer-guard will be swung outward on a radial line from the spindle by the  
25 whirl when the spindle is inserted.

Another object of the invention is to reduce the cost of construction.

Another object of the invention is to so construct and arrange the oil-reservoir cover that  
30 it will more effectually close the entrance to the reservoir and prevent the entrance of dust and lint.

The invention consists in the peculiar construction of the doffer-guard and reservoir-  
35 cover.

The invention also consists in forming the upper end of the oil-reservoir of a segment of a circle and providing a cover and doffer-guard closely fitting the same and movable there-  
40 over.

Figure 1 represents a side view of a spindle and its support provided with the improved doffer-guard and oil-reservoir cover. Fig. 2 represents a plan view of the blank from  
45 which the doffer-guard, the cover, and their supporting-arms are bent. Fig. 3 represents a plan view of Fig. 1. Fig. 4 represents a view of the spring for throwing the doffer-guard and cover into the locked position.  
50 Fig. 5 represents an end view of portions of

the spindle and its support with the improvements attached.

Similar numbers of reference designate corresponding parts throughout.

In the drawings, 8 indicates the spindle-  
55 bolster, and 9 the flange, which bears on the bolster-rail. Extending laterally from the upper part of the bolster is the tubular oil-reservoir 10, having the upwardly-extending hollow post 11, forming an opening to the oil-  
60 reservoir, in which a column of oil may be maintained. The upper end of this post is slightly curved.

On the oil-reservoir 10 is a projection 12, to which are pivoted the arms 13 13, having the  
65 bearing-studs 14 14. These arms 13 are bent from the sides of the curved reservoir-cover 15, which by the pivoting of the arms 13 may be swung over the upper end of the post 11 to close the entrance thereto or to leave the  
70 same open when oil is to be supplied. From the front of the cover 15 extends the doffer-guard 16, having the beveled extension 17. This doffer-guard extends inwardly over the spindle-whirl and prevents the undue up-  
75 ward movement of the same in doffing. When it is desired to remove the spindle, however, the doffer-guard 16 and the cover 15 are drawn back out of the way by means of the lip 18 on the rear end of the cover 15.  
80

The double spring 19 is fastened to the oil-reservoir and its free ends bear on the bearing-studs 14, tending to throw the arms 13, the cover 15, and the doffer-guard inward to a position where the upward pull by the spin-  
85 dle-whirl on the doffer-guard is more nearly in a line with the pivots of the arms 13, which offer more resistance to the pull than do the springs. When a spindle is inserted in the bolster, the edge of the whirl in passing down-  
90 ward strikes the inclined edge of the beveled extension 17 and, riding over the same, forces the doffer-guard and cover backward sufficiently to leave a clear passage.

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

1. In a spindle-support having a laterally-extending oil-reservoir and an upward-extending tubular post forming the inlet to the  
100

oil-reservoir, the combination therewith of a doffer-guard, attached to and forming a part of a cover, pivotally supported on the laterally-extending tube below the whirl and the  
5 oil-inlet and adapted to swing outward to release the spindle and open the oil-inlet, and a spring bearing on the device to hold it in the closed position, whereby the static level of the oil may be maintained above the center  
10 of the whirl and the doffer-guard is moved radially outward by the whirl when the spindle is inserted, as described.

2. In a spindle-support, the combination with a spindle-bolster, an oil-reservoir extending laterally therefrom, a stud on said  
15 reservoir, and an upwardly-extending tubular post at the outer end of the reservoir, of a cover for said post, a doffer-guard extending from the front of said cover, a lip turned up-  
20 ward from the rear portion thereof, side arms

extending downward from the sides of the cover and pivoted to the stud on the reservoir, and a spring adapted to act on said side arms.

3. The combination with the bolster 8 and the oil-reservoir 10 extending laterally there- 25 from having the stud 12 and the tubular post 11, of the side arms 13 pivoted to the stud 12 and having the shoulder 14, the cover 15 connecting the side arms at their upper ends, the doffer-guard 16, having the beveled portion 30 17, extending inwardly from the cover, the lip 18 on the cover, and the spring 19, secured to the oil-reservoir, having arms bearing on the shoulders 14, as described.

In witness whereof I have hereunto set my 35 hand.

JOSEPH A. MILLER, JR.

Witnesses:

HENRY J. MILLER,  
M. F. BLIGH.