(No Model.)

A. E. RHOADES.

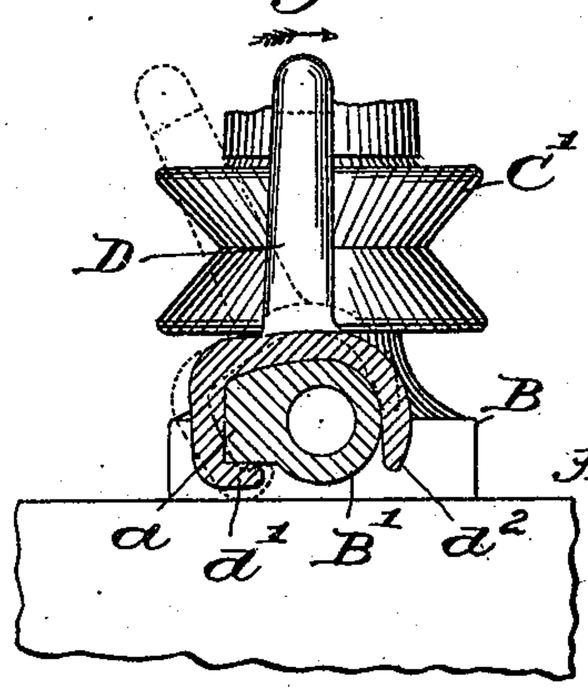
SPINDLE RETAINER FOR SLEEVE WHIRL SPINDLES.

No. 504,281. Patented Aug. 29, 1893.

Fig: 1

Fig: 3.

Fig: 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

ALONZO E. RHOADES, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO GEORGE DRAPER & SONS, OF SAME PLACE.

SPINDLE-RETAINER FOR SLEEVE-WHIRL SPINDLES.

SPECIFICATION forming part of Letters Patent No. 504,281, dated August 29, 1893.

Application filed April 22, 1893. Serial No. 471,387. (No model.)

To all whom it may concern:

Be it known that I, ALONZO E. RHOADES, of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Spindle-Retainers for Sleeve-Whirl Spindles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Supporting cases to contain bearings for sleeve whirl spindles commonly have a horizontal tubular extension terminated by an upturned hollow leg, said leg and extension constituting an oil reservoir.

To keep the spindle in place during the operation of doffing, this class of supporting case has commonly had screwed into it the threaded end of an ⌐ shaped stud, which is turned about its center to overlap the whirl and keep the spindle down during doffing. I desire to do away with this ⌐ shaped pin which is inconvenient in use because to turn it for the removal of the spindle when necessary, requires the employment of a wrench or special tool. Instead of this pin I have so shaped the extension from the supporting case as to receive the crotched foot of a hook, the said foot being so shaped as to be easily applied to the extension, and so as to be tipped thereon when it is desired to remove the spindle.

To enable the crotched foot of the hook to remain seated as in full lines, I have provided the extension with a lug, with which one end of the crotched foot will engage when the hook is in working position, the said end of said hook bearing on the rail when the hook is tipped into position to let the spindle be removed.

Figure 1, in elevation, represents a spindle and its supporting case with my improved detachable retainer in place; Fig. 2, a section in the line *x*, Fig. 1, and Fig. 3, a detail looking down upon the upper end of the retainer, the large circle indicating the sleeve whirl.

The rail A, the supporting case B thereon having the extension B′ and leg B^2 to constitute an oil reservoir, and the spindle C having a sleeve whirl C′, are and may be all as usual except as to the shape in cross section of the extension B′. In Fig. 2 this extension is represented as provided with a lug *a* which projects from one side of the said extension near the surface of the rail A.

My improved retainer D is composed preferably of a single piece of metal preferably a casting, it having at its upper end a hook *d*, the foot of the retainer being crotched as best shown in Fig. 2, to leave a lip *d′*, and a nose d^2, said lip engaging the lug *a* at its under side and preventing the movement of the retainer too far in the direction of the arrow Fig. 2, the hook serving to keep the spindle down during the operation of doffing. When it is desired, however, to remove the spindle the operator will turn the retainer back from its full into its dotted line position and in so doing the lip *d′* will meet and tip on the rail, the nose d^2 sliding over and about the rounded surface of the extension.

I do not broadly claim a tipping retainer, or a retainer mounted on and so as to turn on the extension, but prior to my invention I am not aware that a one-piece retainer has ever had a crotched foot substantially such as described adapted to be readily applied to the extension and to be readily removed therefrom without dismembering the retainer, the retainer being free to be tipped on the extension, the extension being so shaped as to enable the retainer to be firmly seated thereon and prevented from undue lateral movement in one direction, as the direction to keep the spindle down, but yet the retainer is free to be tipped in the opposite direction for the necessary distance to let the spindle be lifted from its bearings.

The crotched foot of the retainer is applied to the extension before the latter is seated on the rail by the usual nut N and when seated the retainer is held in place between the extension and rail.

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

1. A spindle retainer consisting of a hook having a crotched foot and a lip, substantially as described, to enable the said retainer to be readily slipped over and the said lip to pass beneath a portion of a horizontal extension from the spindle-bearing supporting-case

and adapted to tip on or about said extension for a limited extent, substantially as described.

2. A spindle-bearing supporting-case having an oiling extension B′ provided with a lug, combined with a spindle retainer having a hook adapted to engage a projecting portion of a spindle and at its lower end a crotched foot provided with a lip and a nose, the lip to engage the lug, and the nose to pass down over the opposite side of the said extension, the distance between the lip and nose being sufficient to enable the retainer to be readily applied to or taken from the said extension, to operate, substantially as described.

3. The combination with a spindle bearing supporting case having an oil extension, and a rail, of a spindle retainer applied to said extension and having a portion located between said extension and rail in manner substantially as described so that it can be removed only by loosening or releasing the spindle supporting case from the rail substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALONZO E. RHOADES.

Witnesses:
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S. F. SMITH.