(No Model.)

E. J. CARROLL.

SPINDLE RETAINER.

No. 523,909. Patented July 31, 1894.

Fig. 1.

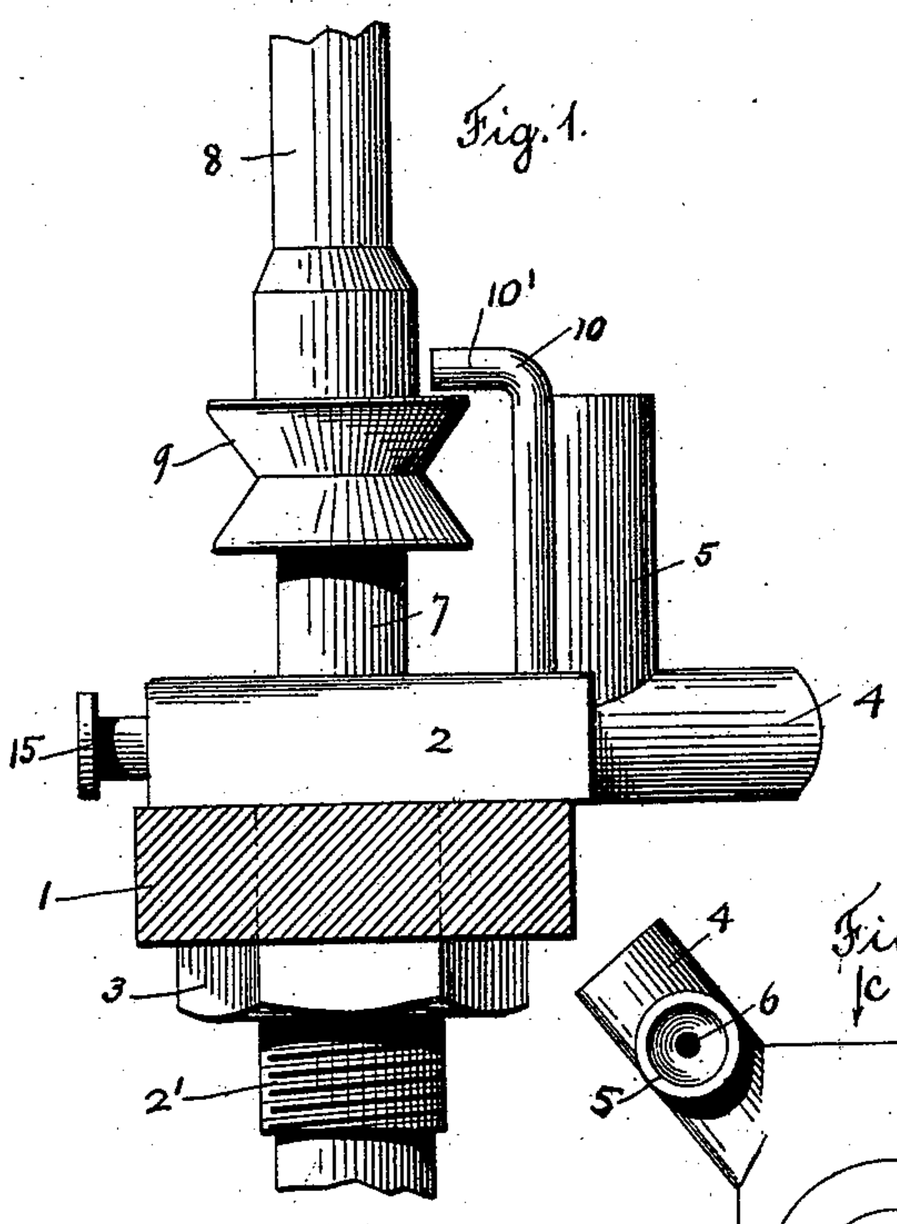


Fig. 3.

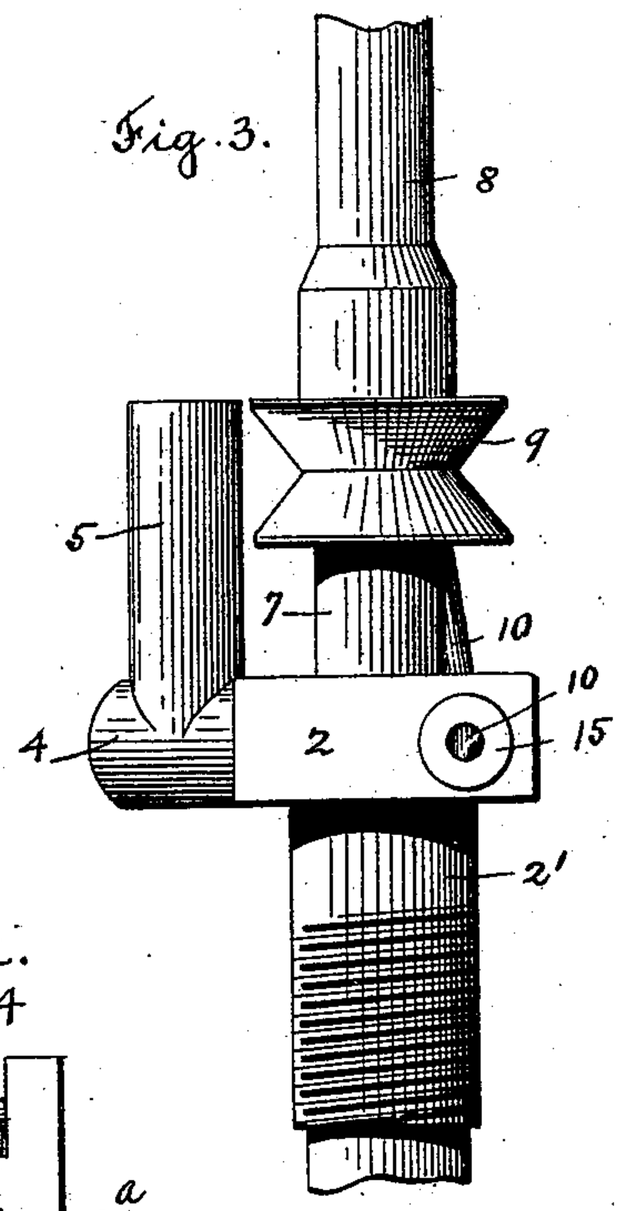
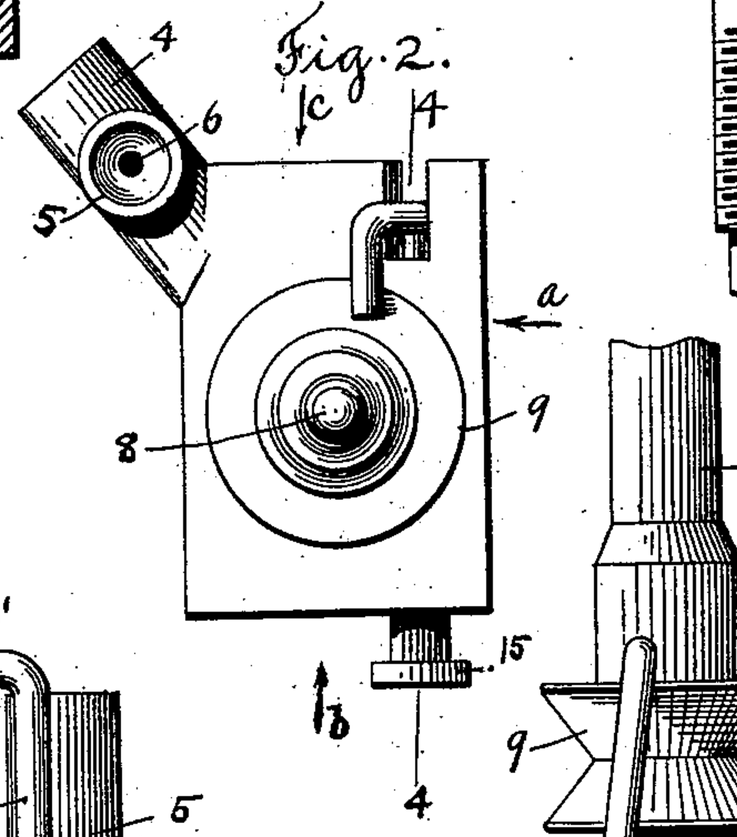


Fig. 2.



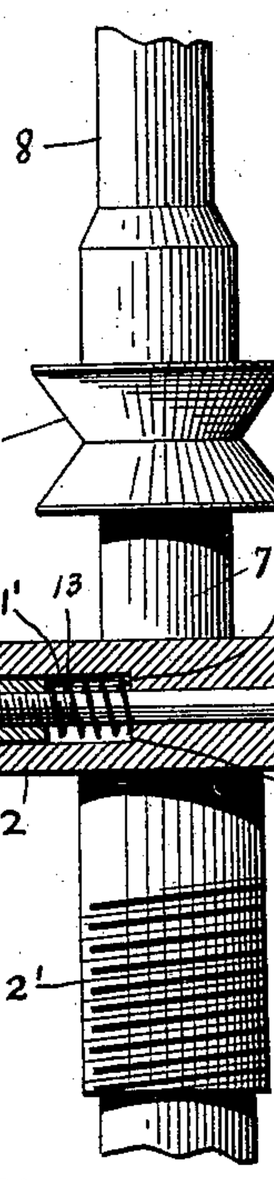


Fig. 4.

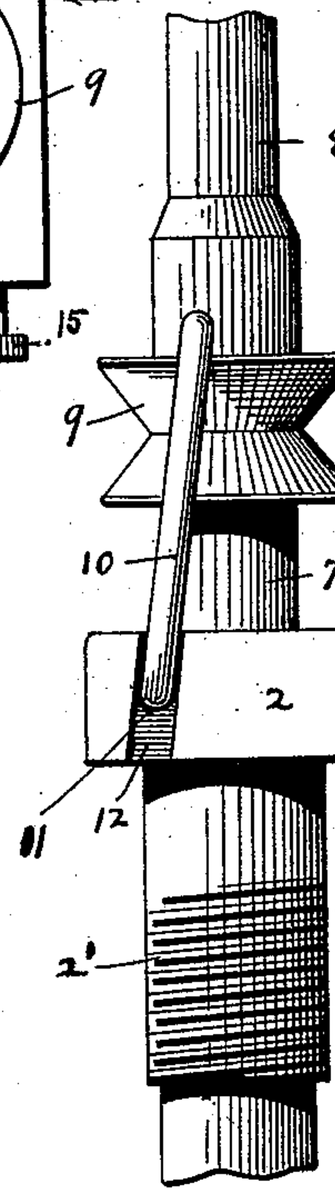


Fig. 5.

Witnesses
Chas. F. Schmuck
Katie Farrell

Inventor
Edgar J. Carroll,

By Attorney
John C. Dewey

UNITED STATES PATENT OFFICE.

EDGAR J. CARROLL, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO WILLIAM T. CARROLL, OF SAME PLACE.

SPINDLE-RETAINER.

SPECIFICATION forming part of Letters Patent No. 523,909, dated July 31, 1894.

Application filed December 20, 1893. Serial No. 494,169. (No model.)

To all whom it may concern:

Be it known that I, EDGAR J. CARROLL, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Spindle-Retainers; and I do hereby declare that the following is a full, clear, and exact description thereof, which, in connection with the drawings making a part of this specification, will enable others skilled in the art to which my invention belongs to make and use the same.

My invention relates to a spindle retainer, or to a device for holding the spindle, to prevent it from being lifted from the bolster and supporting case, when removing the bobbin from the spindle.

The object of my invention is to improve upon the construction of spindle retainers, as now ordinarily made, and to provide a spindle retainer of simple construction and operation, and adapted to be combined with a spindle supporting case of ordinary construction, and to be operated by the attendant from the front of the frame, in case it is desired to remove the spindle.

My invention consists in certain novel features of construction and operation of a spindle retainer, and more particularly in combining with a spindle supporting case a longitudinal moving spring actuated spindle retainer, with one end provided with a retaining hook, at the rear end of the supporting case, and back of the spindle, adapted to engage a projecting portion of the spindle, and with the other end at the front of the supporting case, upon the opposite side of the spindle, and adapted to be operated by the attendant from the front of the frame, as will be hereinafter described.

Referring to the drawings:—Figure 1 is a side view, looking in the direction of arrow *a*, Fig. 2, of a spindle supporting case, and a portion of a sleeve whirl spindle, with my improved spindle retainer combined therewith. Fig. 2 is a plan view of the parts shown in Fig. 1. Fig. 3 is a front view, looking in the direction of arrow *b*, Fig. 2. Fig. 4 is a sectional view, on line 4, 4, Fig. 2, looking in the direction of arrow *b*, same figure, showing the construction of the spindle retainer, and its position when pushed in so as not to hold the spindle. Fig. 5 is a rear view, looking in the direction of arrow *c*, Fig. 2. In Figs. 2, 3, 4, and 5, the rail and nut shown in Fig. 1 are left off.

In the accompanying drawings 1 is the rail, which supports the shank 2′, of the spindle supporting case, in the usual manner. The nut 3 secures the shank 2′ in the rail 1.

The spindle supporting case may be of the ordinary construction, and is provided in this instance with the square or rectangular flanged or projecting portion 2, adapted to rest on the top of the rail 1, as shown in Fig. 1, and having the tubular horizontal extension 4 at one rear corner, and the tubular vertical arm 5 extending up from the extension 4, and provided with a central oil hole 6, into which the oil is poured to pass down through a hole bored in the tubular extension 4, and in the flanged portion 2, to the interior of the central tube or bolster 7, of the supporting case, which furnishes a bearing for the lower end or pintle of the removable spindle 8, provided with a sleeve whirl 9, all in the ordinary way.

I will now describe my spindle retainer, which consists of a spring actuated angular arm 10, preferably made in one piece, and of round wire, with its upper end 10′ bent inwardly and adapted to extend over the upper surface of the sleeve whirl 9, or other projecting portion of the spindle, and its lower horizontal arm adapted to be supported and move longitudinally in a hole 11 bored through the flanged portion 2, from the front to the rear thereof, and at one side of the bolster 7.

The rear edge of the flanged portion 2, where the hole 11 extends, is slotted or cut out, on a slant, as shown at 12, Figs. 2, 4, and 5, and the upright arm of the retainer 10 extends in said slot 12 so that said upright arm will be held in a position inclined toward the center axis of the whirl 9, and away from the driving band, not shown, passing around said whirl, see Fig 5. By this construction, I am enabled to make the horizontal arm of the retainer 10 straight, and locate it at one side of the central tube or bolster 7, and bring the upright arm of the retainer and the hooked end 10′ thereof, inside of and away from the driving band, passing around the whirl, so

that said hooked end of the retainer will not come in contact with the band, to wear the same. The front end of the hole 11 at the front of the flanged portion 2 is enlarged, as shown at 11', Fig. 1, and furnishes a chamber in which extends a spiral spring 13 encircling the horizontal arm of the retainer 10, with its inner end bearing against the shoulders 14, and its outer end bearing against the end of the button 15, screwed on to the threaded end of the horizontal arm of the retainer 10.

From the above description in connection with the drawings, the operation of my improved spindle retainer will be readily understood by those skilled in the art.

The spiral spring 13 acts to move the upright arm of the retainer 10 toward the spindle, and hold the upper end 10' thereof over the upper surface of the sleeve whirl 9, as shown in Figs. 1 and 2, and the slot 12 serves to hold the upright arm of the retainer in proper position away from the driving band passing around the whirl.

When it is desired to remove the spindle for any purpose, the button 15 is pressed inwardly by the attendant, from the front of the frame, against the action of the spring 13, and the horizontal arm of the retainer 10 is moved inwardly in the hole 11 in the flanged portion 2, and the upper end 10' of the upright arm is moved back away from the sleeve whirl 9, as shown in Fig. 4, to allow the spindle to be removed.

The advantages of my improved spindle retainer will be readily appreciated by those skilled in the art. It is of very simple construction and operation, and is adapted to be applied to spindle supporting cases, and spindles of the ordinary construction, and to be operated from the front of the frame, when it is desired to remove the spindle for any purpose.

It will be understood that the details of construction of my spindle retainer may be varied somewhat if desired, and the upper hooked end thereof may be adapted to extend over a projecting portion of the spindle, instead of over the sleeve whirl, if preferred.

I am aware, that it is not new to make a spindle retainer with the end, operated by the attendant, at the front of the spindle, and the retaining end at the rear of the spindle; and therefore I do not claim such construction.

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

1. The combination with a spindle supporting case, provided with a hole extending through the flanged or projecting portion, from the front to near the rear thereof, at one side of the central tube or bolster, and the rear edge of the projecting portion of the supporting case slotted diagonally at the rear end of said hole, for the purpose stated, of a spring actuated spindle retainer, supported and movable longitudinally in said hole and slot, and consisting of a straight horizontal arm, with one end at the front of the supporting case, and an upright arm, inclined toward the central axis of the sleeve whirl, with its upper end bent inwardly, and a spring engaging said spindle retainer, to hold the same in its operative position, substantially as set forth.

2. The combination with a spindle supporting case, provided with a hole extending through the flanged or projecting portion, from the front to near the rear thereof, at one side of the central tube or bolster, said hole enlarged at its front end, and the rear edge of the projecting portion of the supporting case, slotted diagonally at the rear end of said hole, for the purpose stated, of a spring actuated spindle retainer, supported and movable longitudinally in said hole and slot, and consisting of a straight horizontal arm, with one end at the front of the supporting case, and an upright arm, inclined toward the central axis of the sleeve whirl, with its upper end bent inwardly, and a spring contained within the enlarged end of the hole in the flanged portion of the supporting case, and means for retaining said spring, to actuate and hold the spindle retainer in its operative position, substantially as set forth.

EDGAR J. CARROLL.

Witnesses:
KATIE FARRELL,
JOHN C. DEWEY.