C. S. FOSTER.

SPINDLE.

APPLICATION FILED DEC. 1, 1911.

1,075,205.

Patented Oct. 7, 1913.

Fig. 1

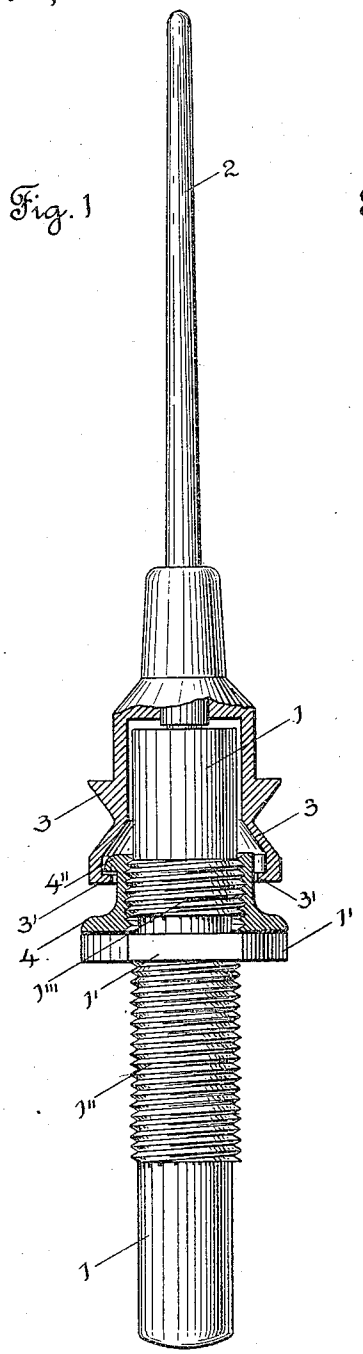


Fig. 2.

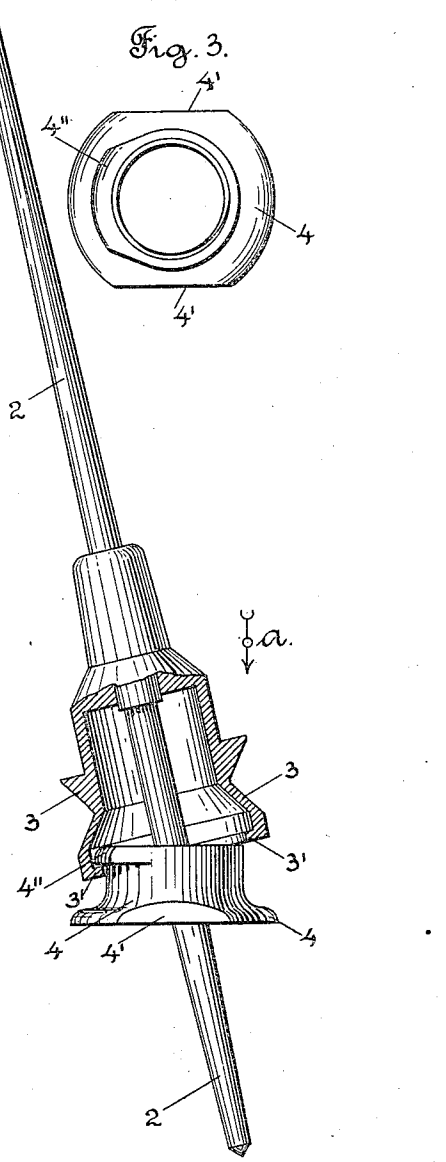


Fig. 3.

Witnesses

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SPINDLE.

1,075,205. Specification of Letters Patent. Patented Oct. 7, 1913.

Application filed December 1, 1911. Serial No. 663,202.

To all whom it may concern:

Be it known that I, CHARLES S. FOSTER, a citizen of the United States, residing at Central Falls, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Spindles, of which the following is a specification.

My invention relates to spindles, and more especially to a sleeve whirl spindle.

In the ordinary construction of sleeve whirl spindles, it has been customary to provide the bolster case with a hook, or other device, to extend over the upper portion of the whirl, to prevent the lifting of the spindle from its bearing during the doffing operation. The use of a hook, or similar device, to extend over the upper portion of the whirl, as stated above, is objectionable, in that the hook acts to catch lint, and also interferes with the band passing around the whirl.

The object of my invention is to do away with the retaining hook or device above referred to, and to substitute therefor a locking nut or washer, adapted to be screwed onto a screw thread on the bolster case, and provided with a lip or extension to engage an inwardly extending lip or flange on the lower part of the whirl, all as will be hereinafter fully described.

My invention consists in certain novel features of construction of my improvements, as will be hereinafter fully described.

Referring to the drawing: Figure 1 is a front elevation of the spindle, and its supporting case, embodying my improvements; the lower part of the spindle, and my locking nut are shown in section. Fig. 2 shows the locking nut detached from the bolster case, and also the spindle in position to be detached from the locking nut. Fig. 3 is a plan view of the locking nut, detached, looking in the direction of arrow, *a*, Fig. 2.

In the accompanying drawing, 1 is the bolster case, which may be of any ordinary construction, and is provided with a flanged portion 1′ to rest on the spindle rail, and also the screw thread 1″ below said flanged portion to receive the binding nut, not shown.

2 is the spindle, having a whirl 3. There is an opening or space between the lower end of the whirl 3, and the flanged portion 1′ of the bolster case 1. The whirl 3 has an inwardly extending lip or flange 3′ at its lower end.

Combined with the bolster case, and the whirl of the spindle, is a removable locking nut 4, which is screw threaded internally and is adapted to be screwed onto a thread 1‴ on the upper part of the bolster case 1 above the flanged portion 1′. The lower part of the locking nut 4 is preferably of the same size or circumference as the flanged part 1′ of the bolster case 1. The two opposite edges of the locking nut 4 are made straight, as shown at 4′ in Fig. 3, to correspond with the flat or straight edges on the bolster case 1. The locking nut 4 has a projection or lip 4″ on one side, at its upper part, which is adapted to extend over the lip or flange 3′ on the whirl 3, as shown in Fig. 1, to prevent the whirl and the spindle from being raised and detached from the bolster case.

When it is desired to remove the spindle and whirl from the bolster case, the lock nut 4 is turned off of the thread 1‴ of the bolster case 1, and with the spindle and whirl, removed from the upper part of the bolster case, as shown in Fig. 2; the spindle and whirl are then free to be tilted or inclined, as shown in Fig. 2, to allow the lip or flange 4″ to be disengaged from the lip or flange 3′ on the whirl 3, and the spindle and whirl will be disengaged from the locking nut, as will be readily understood by those skilled in the art.

It will be understood that the details of construction of my improvements may be varied if desired.

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

1. The combination with the bolster case, having a flanged or enlarged portion, and an external screw thread below the flanged portion and an external screw thread above the flanged portion, and a spindle having a whirl thereon, said whirl having an inwardly extending integral lip or flange at its lower end, of a removable locking nut, having an internal screw thread adapted to be screwed onto the thread on the bolster case, above the flanged portion, and having an external lip or projection thereon, on one side, at its upper end, to extend over

the inwardly extending lip or flange on the whirl, and prevent the whirl and spindle from being raised and detached from the bolster case, until the locking nut is removed from the bolster case.

2. The combination with the bolster case, having a flanged or enlarged portion, and an external screw thread below the flanged portion, and an external screw thread above the flanged portion, and a spindle having a whirl thereon, said whirl having an inwardly extending integral lip or flange at its lower end, of a removable locking nut, having the opposite edges at its lower part straight, to correspond with the straight edges on the bolster case, and having an internal screw thread, adapted to be screwed onto the thread on the bolster case, above the flanged portion, and having an external lip or projection thereon, on one side, at its upper end, to extend over the inwardly extending lip or flange on the whirl, and prevent the whirl and spindle from being raised and detached from the bolster case.

CHARLES S. FOSTER.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."