R. KELLY.

Boss or Shell Roller for Spinning-Machines.

No. 215,464. Patented May 20, 1879.

Fig. 1.

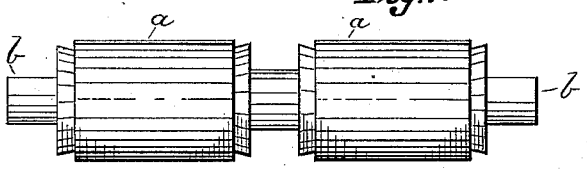


Fig. 2.

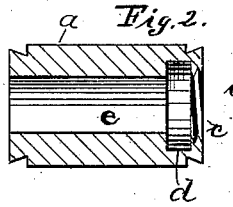


Fig. 3.

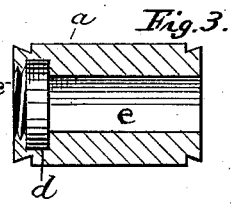
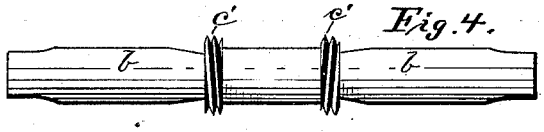


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE

ROBERT KELLY, OF COHOES, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO ALEXANDER W. MUNRO, OF SAME PLACE.

IMPROVEMENT IN BOSS OR SHELL ROLLERS FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. **215,464**, dated May 20, 1879; application filed December 3, 1878.

To all whom it may concern:

Be it known that I, ROBERT KELLY, of the city of Cohoes, county of Albany, and State of New York, have invented a new and useful Improvement in Boss or Shell Rollers for Mules, Spinning-Frames, &c., of which the following is a specification.

The invention relates to boss or shell rollers for mules, spinning-frames, drawing-frames, &c.

Heretofore such rollers have commonly been made and fastened upon the spindles by a groove in the spindle containing a spring. This method is objectionable, for the reason that the spring causes an uneven pressure and considerable friction, and cannot be relied upon to hold the shell in its proper place upon the spindle.

The object of my invention is to provide a boss or shell roller so that the shell is perfectly free to revolve upon the spindle or shaft without any friction from springs, &c., that is easily adjusted and readily removed from the spindle or shaft for cleaning and oiling, and not liable to drop off the spindle when being handled or used.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a longitudinal elevation of my device. Figs. 2 and 3 are sectional elevations of the shells of a pair of rolls on the line of their axes. Fig. 4 is a longitudinal elevation of the spindle or shaft.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct, from cast-iron or other suitable material, the spindle or shaft *b b*, provided with right and left hand screw-threads *c' c'*, and reduce the diameter of said shaft just adjoining to and outside of the screw-threads and at the ends, all substantially as shown in Fig. 4.

I construct the shell-pieces *a a* (see Figs. 1, 2, and 3) of cast-iron or other suitable material, and bore and polish out the central holes, *e e*, so as to nicely fit and revolve on the turned and polished shaft *b b*. Near to one end of each shell I turn out the annular chambers *d d*. (See Figs. 2 and 3.) I then cut in each the female screw-threads *c c* of the proper size, so as to screw upon and over the male screw-threads *c' c'*. When in this last-named position, the hubs formed by the screw-threads *c' c'* are then within the annular chambers *d d*, and the shells *a a* revolve freely upon the spindle *b b* without any binding or unnecessary friction.

The double shell-roller can be handled without any danger of the shells *a a* falling off. When desired, the shells *a a* can be removed for cleaning and oiling by a slight pressure endwise and unscrewing at the same time.

The screw-threads may be right or left handed, V-shaped, or square, or double-threaded, without changing the nature of my invention.

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

A boss or shell roller for spinning-frames, consisting of a spindle or shaft with circumferential projections composed of screw-threads and shells to fit upon said shaft, having annular chambers and screw-threads, wherein the screws upon the shaft or spindle are screwed through and into the annular chambers, thereby holding the shells upon the shafts, substantially as shown, described, and set forth.

ROBERT KELLY.

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