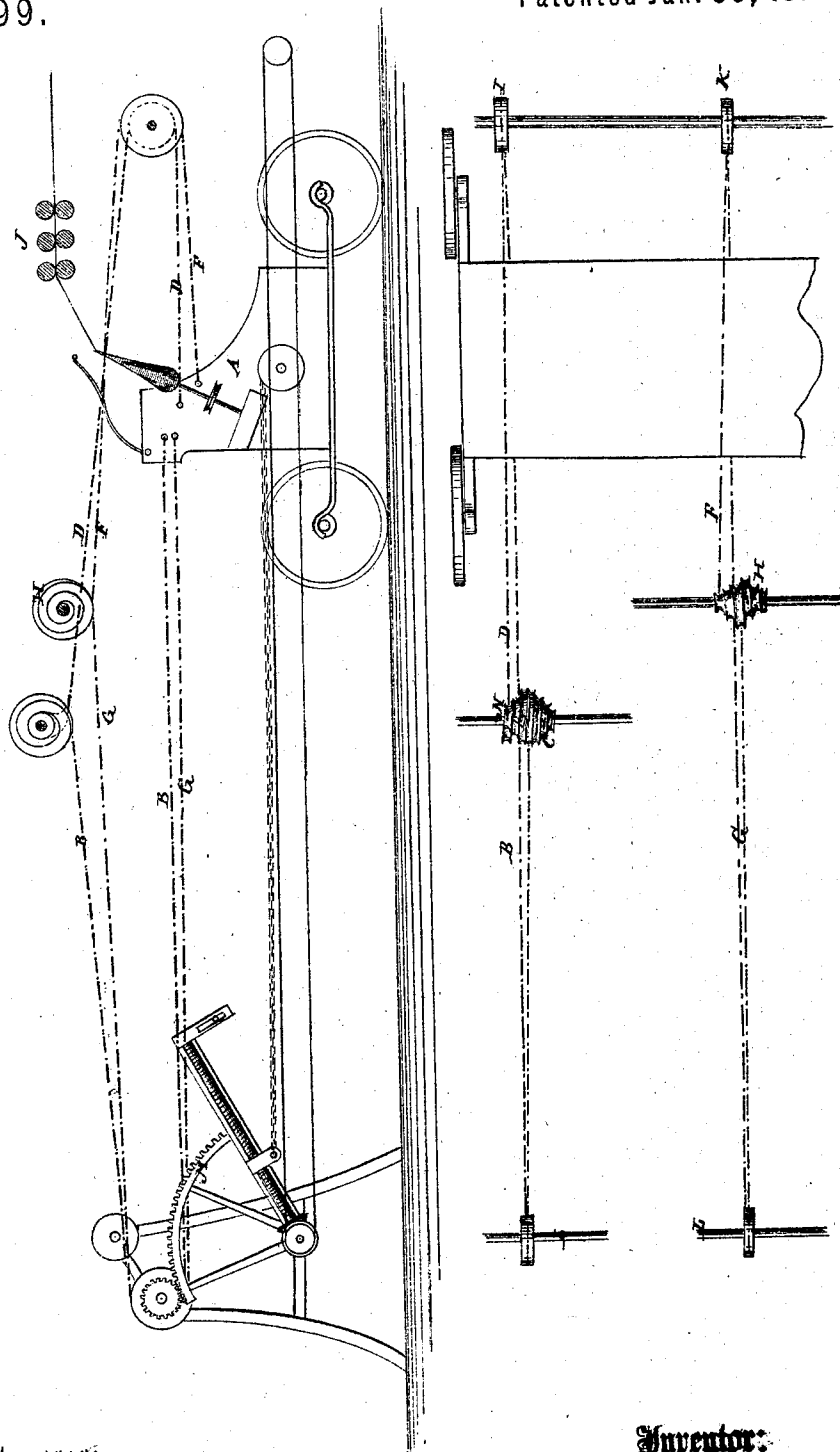


F. O'CONNOR ROBINSON.
 Improvement in Self-acting Mules for Spinning.
 No. 123,199. Patented Jan. 30, 1872.



Witnesses:

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UNITED STATES PATENT OFFICE.

FEARGUS O'CONNOR ROBINSON, OF FALL RIVER, MASSACHUSETTS.

IMPROVEMENT IN SELF-ACTING MULES FOR SPINNING.

Specification forming part of Letters Patent No. 123,199, dated January 30, 1872.

Specification describing a new and useful Improvement in Spinning-Mules, invented by FEARGUS O'C. ROBINSON, of Fall River, in the county of Bristol and State of Massachusetts.

My invention consists of an enlargement on the scroll or wheel of the "back-jack" band of the Sharp and Roberts and other like spinning-mules, so arranged that just previous to the end of the inward or "winding-on" movement of the carriage the back-jack band—which is the one that regulates the movement of the carriage when it is drawn out by the "front jack-band"—will be wound upon the said enlargement so as to considerably increase the tension of the "front jack" or drawing-out band, for giving the carriage a quicker movement by said tension—as the said back jack-band is delivered from the said enlargement at the beginning and during a small portion of the outward movement—than the ordinary movement and faster than threads are delivered from the rollers, for taking out the kinks which get in the yarns when slackened up by the rising of the fallers to let said yarns run up to the points of the spindles, ready for twisting as the carriage runs out again. My improvement differs from the arrangement of the enlargement on the scroll which works the "front jack band" or drawing-out band in that, while it pulls out the kinks, it does not put "drag" in the yarn—that is, it does not draw out the yarns or threads any finer than they are drawn without it, as the other arrangement does, for the slacking off of the drawing-out band compensates for the accelerated motion of the carriage in the first part of its movement, so that, notwithstanding such accelerated movement, the carriage does not move any further during the whole stretch than it would if the enlargement was not used; whereas, in the other arrangement—that is, where the enlargement is on the drawing-out scroll and the accelerated motion is caused by the running of the cord on to the enlargement at the beginning of the outward movement—the gain of the carriage on the delivery of the rollers is kept up throughout the stretch, and thus more stretch or "drag" is put in the yarn than is desirable.

Figure 1 is a side elevation of some parts of a mule; and Fig. 2 is a top view, illustrating my improvement.

Similar letters of reference indicate corresponding parts.

A is the carriage, B the front jack-band, and C its scroll for drawing the carriage out. D is the back jack-band and E its scroll for regulating the carriage when it runs out. F is the front drawing-in band; G, the back drawing-in band for regulating the inward movement of the carriage; and H, the scroll by which both are actuated. The bands D and F work over loose pulleys I K at the inner ends of the stretch, and the bands B and G work over fast pulleys on the shaft L which works the sector M, alternately, one being in gear when moving one way and the other when moving the other way. J represents the rollers. N represents the enlargement on the scroll E, whereon the back jack-band which regulates the movement of the carriage runs, as before stated, just previous to the arrival of the carriage at the end of the movement inward, to increase the tension of the front jack-band B, and thereby cause the aforesaid quick movement of the carriage during the first part of the outward movement and while said rope D is running off the said enlargement. The scrolls E and C are on the same shaft, which is reversed in its motion at the proper times, and one cord winds on when the other winds off.

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

The back jack-band scroll E, having an enlargement, N, arranged for the band D to run on during a small portion of the last part of the inward movement of the carriage, and off during the fore part of the outward movement, all substantially as specified.

FEARGUS O'CONNOR ROBINSON.

Witnesses:

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