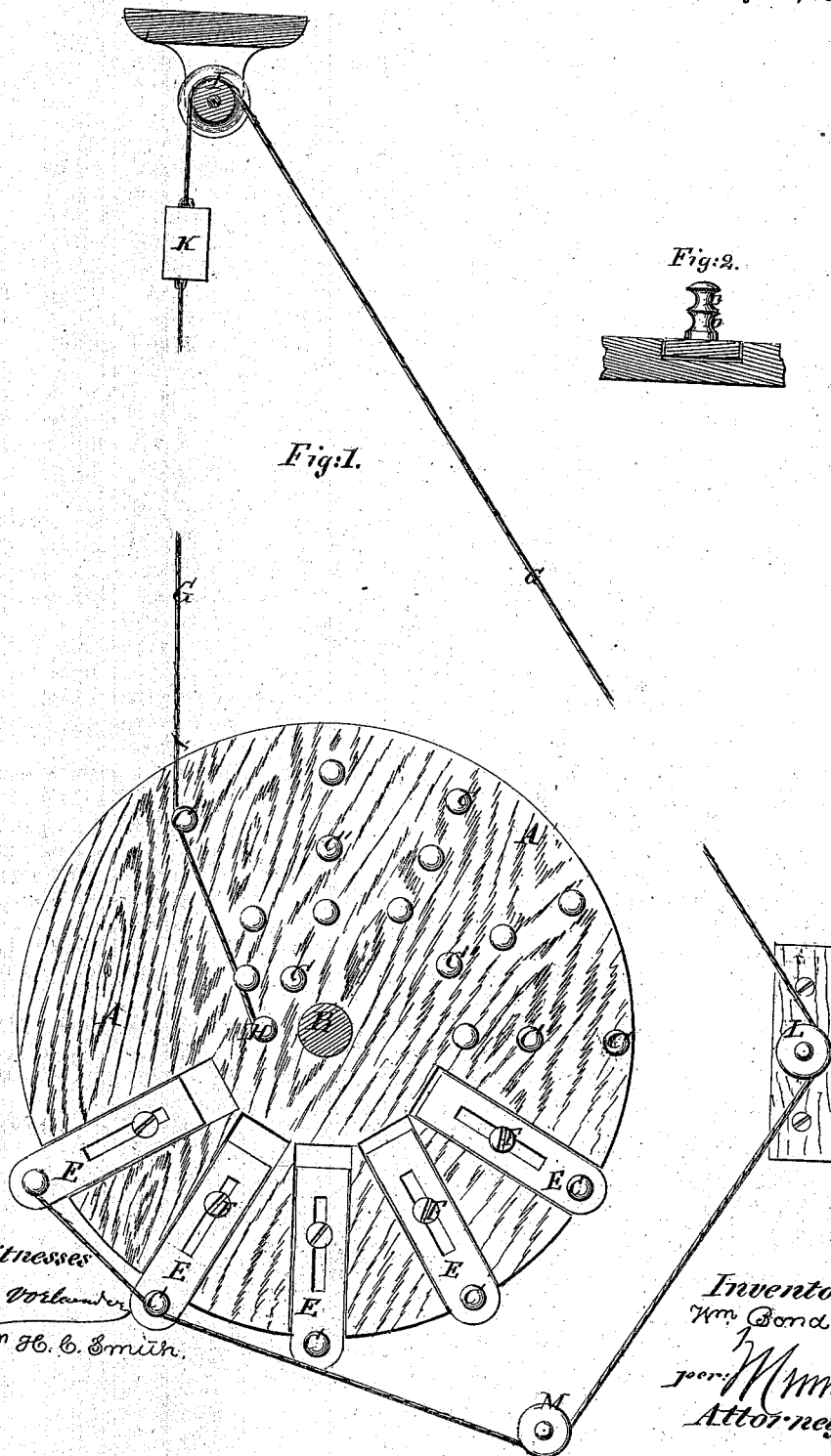


WILLIAM BOND.
Improvement in Scrolls for Operating the Carriages
of Spinning Mules.

No. 115,271.

Patented May 30, 1871.



Witnesses
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WILLIAM BOND, OF WINDSORVILLE, CONNECTICUT.

IMPROVEMENT IN SCROLLS FOR OPERATING THE CARRIAGES OF SPINNING-MULES.

Specification forming part of Letters Patent No. 115,271, dated May 30, 1871.

To all whom it may concern:

Be it known that I, WILLIAM BOND, of Windsorville, in the county of Hartford and State of Connecticut, have invented a new and Improved Mule-Carriage Operating Device; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in apparatus for operating the carriages of spinning-mules, jacks, or other machines in which it is desirable to have the speed of the carriage vary during the movements, for which many different contrivances have been devised. The said invention consists in a variable or adjustable scroll of peculiar construction, on which the carriage-operating cord works over pins in the side of the wheel, which are adjustable toward or from the center at any part of the said wheel, which makes about one revolution for moving the carriage out or in, as hereinafter more fully described.

Figure 1 is a top view of my improved scroll, the carriage-operating cord and the guide-rollers therefor; and Fig. 2 is a section of a part of the wheel, showing one way of adjusting the pins.

Similar letters of reference indicate corresponding parts.

A is a disk of suitable size, or about the same measurement in the circumference as the distance the carriage travels each way. It is mounted, in this instance, on a vertical shaft, B, to revolve in a horizontal plane; but it may be arranged in a vertical plane, if preferred. C and C' represent pins rising from the upper side, and having annular grooves, D, as shown in Fig. 2. The pins C are placed in slides E, adjustable radially in the disk, and secured by clamp-screws F in the required position.

The pins C' are placed in holes, and may be shifted from one to another. Any other means of adjusting the pins may be employed. G is the carriage-operating cord. It is attached at one end, H, to the scroll-wheel, extended to the guide-wheel I, beyond the limit of the movement of the carriage, and attached to the latter, say at K, between the said guide and wheel A. From the said guide I it is extended back, over the guides L-M, to the opposite side of wheel A, and attached to it at its other end, so that when the wheel turns it winds on one side and off the other. The shaft of wheel A is to be connected by any suitable arrangement of gearing with the driving mechanism, and is to have automatic shifting contrivances of any well-known kind for causing it to turn one way, *x*, for moving the carriage in one direction, shifting, and turning the other way for moving it in the opposite direction, *x*, which contrivances are not shown, as it is immaterial what particular arrangement be employed; or two scrolls may be used, one moving the carriage out and the other in.

It will readily be seen, by inspection of the drawing, that by shifting the pins C and C' at different points around the wheel toward or from the axis of the wheel the carriage may be made to move fast or slow at any part of its movements out or in, as may be required by the nature of the work in hand.

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

A variable scroll-wheel, constructed substantially as herein described, for operating the carriages of spinning machinery, substantially in the manner specified.

WILLIAM BOND.

Witnesses:

CHAS. NEWELL DUXPREZ,
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