J. W. MULLINS.

MECHANICAL MOVEMENT.

No. 186,151. Patented Jan. 9, 1877.

Fig. 1.

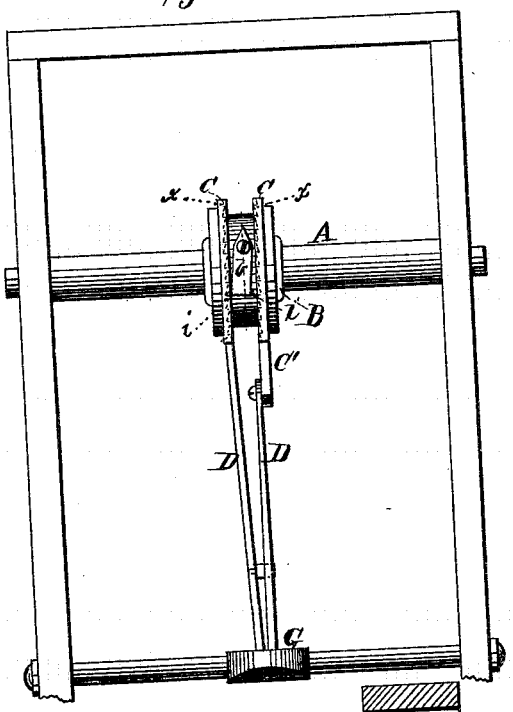


Fig. 3.

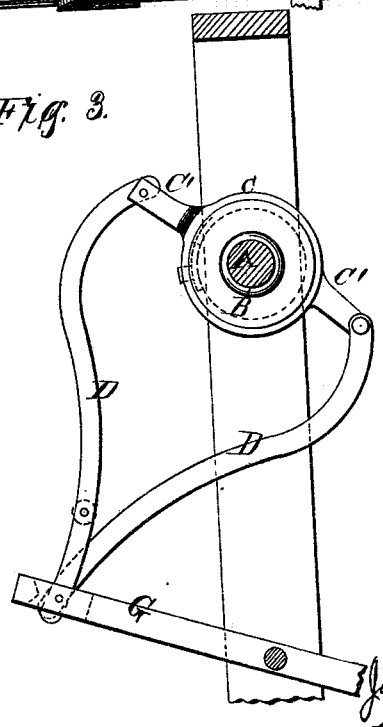
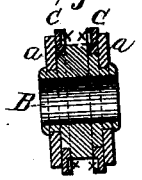


Fig. 2.



WITNESSES

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IMPROVEMENT IN MECHANICAL MOVEMENTS.

Specification forming part of Letters Patent No. **186,151**, dated January 9, 1877; application filed December 13, 1876.

To all whom it may concern:

Be it known that I, JOHN W. MULLINS, of Big Raccoon, in the county of Laurel and in the State of Kentucky, have invented certain new and useful Improvements in Mechanical Movements; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a treadle-movement for sewing and other machines, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front elevation of my invention. Fig. 2 is a section through the cylinder on the spindle. Fig. 3 is a side view of the same.

A represents the shaft or spindle which is to be rotated, and on this shaft is secured a drum or cylinder, B, having at each end a circumferential flange, *a*. On this cylinder are placed two loose collars, C C, provided with arms or levers C′ C′, projecting outward in opposite directions. The inside surfaces of the collars C C are provided with ratchet-teeth *x x*, and between the collars, on the exterior of the cylinder, is pivoted an arm, *b*, having a projecting tooth, *i*, on each side at the free end. This arm is so constructed as to disconnect itself from one ratchet-collar when the same is rotated in one direction, and thereby connect itself with the other ratchet-collar.

The arm *b* may be made in one piece, as shown, or it may be made in two parts, with a suitable spring between the two parts.

The levers C′ C′ have arms D D pivoted to their outer ends, which arms are curved, as shown, and their lower ends pivoted by one bolt to a treadle, G. The treadle is worked in the usual manner, thereby working the arms D D up and down, whereby the collars C C are rotated back and forth in opposite directions, and one or the other is always in gear with the arm *b*, and pulling around the center at all times. The spindle A is thus propelled without any crank, and while the spindle is thus propelled very short motions with the treadle may be made, and the spindle is at all times driven in one direction, and it will start at any point positively in the same direction.

This movement may be used for running sewing-machines, or any other machinery desired.

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

The combination of the spindle A, the cylinder B, with arm *b*, having teeth *i i*, the loose ratchet-collars C C, with levers C′ C′, the arms D D, and treadle G, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of November, 1876.

JOHN W. MULLINS.

Witnesses:
JAMES W. MORAN,
GEORGE CLOYD.