

W. B. FLOYD.

TREADLE.

No. 189,093.

Patented April 3, 1877.

Fig. 1.

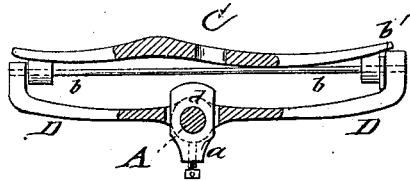


Fig. 2.

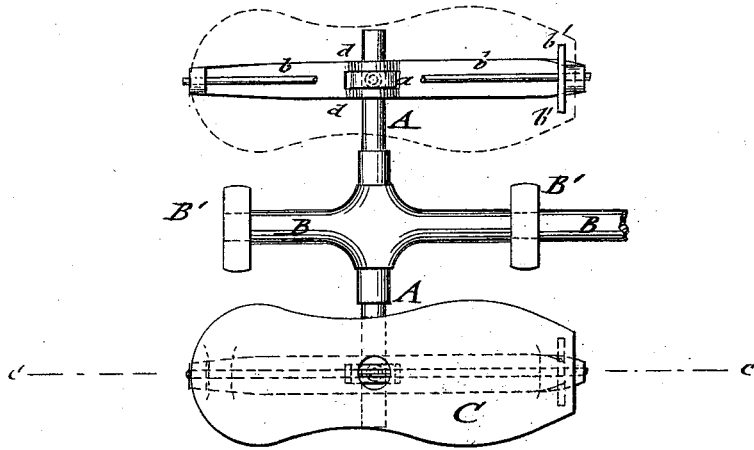


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN TREADLES.

Specification forming part of Letters Patent No. **189,093**, dated April 3, 1877; application filed February 26, 1877.

To all whom it may concern:

Be it known that I, WILLIAM B. FLOYD, of Kansas City, in the county of Jackson and State of Missouri, have invented a new and Improved Treadle, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved treadle on line *cc*, Fig. 2; Fig. 2, a top view of the same, and Fig. 3 an end view of the treadle.

Similar letters of reference indicate corresponding parts.

This invention relates to an improvement in that class of sewing-machine and other treadles that are worked by the alternating raising and lowering of the feet and legs in place of the forward or backward motion of the feet, so as to remove all strain from the ankles, and give the operator more power with less exertion than with the common treadle.

The invention consists of two treadles, that are arranged in adjustable manner on the laterally-swinging treadle-bar, that turns by its cross-piece in suitable bearings. The treadles are pivoted longitudinally and laterally, to adapt themselves to the position of the feet.

In the drawing, A represents the lateral treadle-bar, which is supported by its rectangular cross-bar B in bearings B'. The treadles C are made to slide on the ends of the laterally-swinging bar A, and are clamped by sockets and fastening-screws *a* to the same, so as to give more or less leverage, as required. The treadles C are pivoted at the front and rear ends to longitudinal pivot-rods *b*, which are secured to supporting brackets or arms D, that turn by ring-shaped center bearings or sleeves *d* on the treadle-bar. The treadles are capable of lateral and longitudinal motion, by the pivot-rods *b*, until resting on fixed seats *b'* of the brackets of the treadle-bar, so as to adjust themselves to the position of the feet when in motion to work the machine.

When the feet of the operator are not level as he sits at ease, the treadles are given enough play by the pivoted brackets on the treadle-bar to adjust themselves to the angle the feet may be placed in.

The lateral motion of the treadles in the brackets adapts them to the feet during the motion of raising and lowering the same, to give an oscillating motion to the treadle-bar, and work thereby by crank-rod connection the fly-wheel shaft and engine, in the customary manner.

The compound pivots of the treadles renders the motion of the same natural and easy, so as not to fatigue the worker as much as where the feet and ankles alone do the work. The feet do not change their relative positions to the legs by the adjustment of the treadles to their position, so that there is no strain upon the ankle-joints, but only upon the knee and thigh joints, which can perform more labor with greater ease, on account of their greater strength.

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

1. As an improvement in treadles, the combination of a laterally-oscillating treadle-bar with adjustable and clamped treadles, to give more or less leverage, substantially in the manner and for the purpose set forth.

2. As an improvement in treadles, the combination of the laterally-swinging treadles with the centrally-pivoted and longitudinally-oscillating brackets or arms of the treadle-bar, to form a duplex pivot-joint, for the purpose described.

3. The combination of the treadle C with a longitudinal pivot-rod, *b*, fixed end seat *b'*, and oscillating bracket D, substantially as specified.

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Witnesses:

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