

Treadle.

Patented Jan. 10, 1865.

Fig 1.

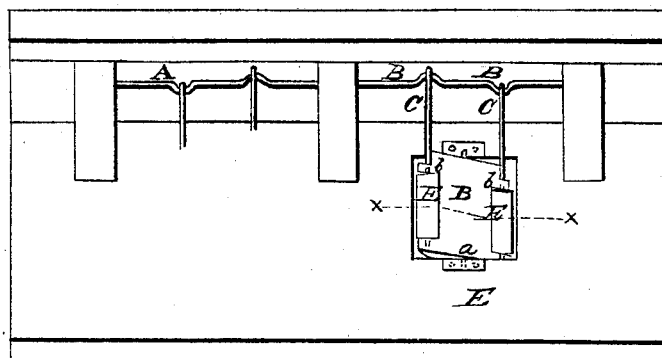
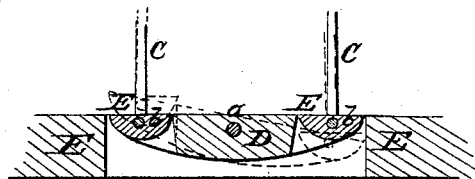


Fig 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN J. KIMBALL, OF NAPERVILLE, ILLINOIS.

IMPROVEMENT IN TREADLES FOR OPERATING MACHINERY.

Specification forming part of Letters Patent No. 45,837, dated January 10, 1865.

To all whom it may concern:

Be it known that I, JOHN J. KIMBALL, of Naperville, in the county of Du Page and State of Illinois, have invented a new and Improved Treadle for Operating Machinery; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my invention; Fig. 2, an enlarged vertical section of the same, taken in the line *x x*, Fig. 1.

Similar letters of reference indicate like parts.

This invention consists in constructing a treadle in such a manner that the weight of the operator will be made subservient in actuating it, muscular force not being expended nor required in any great degree.

A represents a shaft, which is provided with two cranks, B B, having reverse positions, and C C are pitmen, which are connected to them.

D represents the treadle, which is formed of a square piece of plank of suitable dimensions, hung centrally on a shaft, *a*, the journals of which are fitted in bearings on or in a proper base, E, or on the flooring which supports the device to be driven.

The pitmen are connected to the treadle D—one at each side and near one end of it—and in the treadle at each side of it there are fitted foot-pieces E E, which, like the treadle, are hung centrally on shafts *b b*, the journals of the shafts, *b*, having their bearings in the treadle, and allowed to turn freely therein. The lower parts of the foot-pieces E E below the shafts *b b* are heavier than the upper parts, so that the foot-pieces will have a tendency to keep themselves in a horizontal position,

irrespective of the position or movement of the treadle D.

The pitmen C C are of equal length, and when the treadle D is in a horizontal position the two cranks B B will also be in a horizontal position, projecting from opposite sides of the shaft A.

From the above description, it will be seen that the operator by standing upon the foot-pieces E E, and inclining his body first to the right and then to the left, will actuate the treadle D, the foot-pieces E E always conforming to the position of the feet of the operator—that is to say, their upper surfaces always being in a horizontal position, as will be understood by referring to Fig. 2, in which an inclined position of the treadle is shown in red with the upper surfaces of the foot-pieces in a horizontal position. Thus it will be seen that in operating the treadle but little or no muscular force requires to be exerted upon it, the weight of the body being sufficient for the purpose, and it will further be seen that the cranks cannot catch upon their centers, and the treadles when left in a horizontal position can always be started at once without first turning the crank-shaft by hand, as is frequently required with the single crank and treadle.

I claim as new and desire to secure by Letters Patent—

The treadle D, hung centrally on a shaft, *a*, provided with two pitmen, C C, which are connected to reverse cranks B B on the shaft A, in combination with the foot-pieces E E, hung on shafts *b b*, which are fitted in the treadle, and all arranged to operate substantially as and for the purpose specified.

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