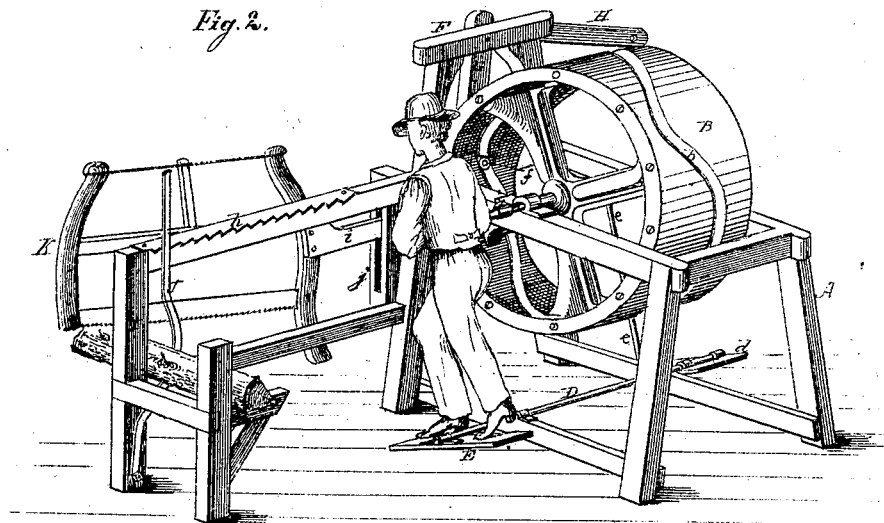
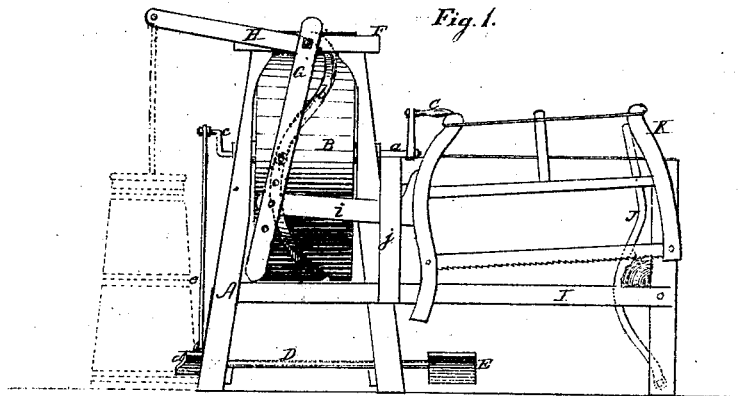


J. H. Whitney,

Converting Motion.

No. 109,163.

Patented Nov. 8, 1870.



Witnesses:

Phil. T. Dodge
D. P. Low

Inventor:

J. H. Whitney
by Dodge & Munn
his attys.

United States Patent Office.

JOHN H. WHITNEY, OF ROCHESTER, MINNESOTA.

Letters Patent No. 109,163, dated November 8, 1870.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN H. WHITNEY, of Rochester, in the county of Olmstead and State of Minnesota, have invented certain Improvements in Mechanical Movements, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to a man-power or motor for household use, in operating saws, churns, &c.; and

The device consists in a cam-wheel mounted in a frame, and operated by the joint action of a hand-crank and a treadle, and so arranged as to communicate a vibratory motion to levers pivoted to the frame, to which levers the saw, churn, or other apparatus to be operated is connected, as hereinafter explained.

Figure 1 is a rear elevation of my motor, with a buck-saw and a churn connected therewith, and

Figure 2 is a perspective view from the front of the same with the operator in position.

In constructing my apparatus, I first make a strong frame, A, of four or five feet in height, and mount thereon, on a horizontal shaft, *a*, a broad-faced wheel or drum, B, having an endless zigzag groove, *b*, encircling it, as shown.

To one end of the shaft *a*, which is rigidly attached to the drum, I attach a hand-crank, C, and to the opposite end attach another crank, *c*, as shown in fig. 1.

Across the frame A, near the floor, and immediately under the drum B, I mount a horizontal rock-shaft, D, and provide this shaft, at one end, with an arm, *d*, and connect said arm, by a pitman, *e*, with the crank *c* on the drum-shaft, as shown in figs. 1 and 2.

To the opposite end of this shaft D, being the one below the hand-crank, I attach a treadle or platform, E, which projects an equal distance on each side of the shaft, as shown in fig. 2.

The frame A I construct with an upright portion, F, at one end, and pivot thereto the upper end of a depending lever, G, which lever is provided with a friction-roller, *f*, that plays in the groove *b* of the drum.

When thus arranged, it will be seen that when the drum is rotated by the treadle or the hand-crank, or the two jointly, the zigzag groove, acting on the roller *f*, will give the lever G a vibratory motion.

To the upper end of lever G I attach rigidly a horizontal arm, H, the outer end of which is given a vertical movement when the apparatus is in operation.

To the lever G a saw, or other device requiring a horizontal motion, may be attached, and to the arm

H a churn-dasher, or similar device requiring a vertical movement, may be connected.

When the machine is designed especially for sawing fire-wood, I construct a lateral extension, I, of the frame A, and provide the same, at its outer end, with supports for the wood, and with a pivoted lever, J, and rack *h*, for locking the wood in place.

The saw K I provide with an arm, *i*, and connect the same to the lower end of lever G, and to the side of the frame A I secure a slotted guide-block, *j*, through which the arm *i* of the saw plays, and by which the saw is prevented from moving laterally, while, at the same time, a free longitudinal and vertical movement is permitted.

In operating the machine, if the saw is to be used, the wood is placed on the supports and locked fast by means of the lever J; or if a churn only is to be operated, the saw is disconnected and the dasher-handle connected to lever H, as shown in dotted lines in fig. 1.

The operator then mounts the treadle or platform E, with one foot on each end of the same, and grasps the crank C with his hands; and, by throwing his weight first upon one foot and then the other, and, at the same time, urging the crank around with his arms, he sets the drum in motion, and thereby the levers G H, and the machine or device connected with them.

By the combination and arrangement shown, of the crank and the double treadle or platform, the operator is enabled to apply his weight and strength to great advantage in propelling the machine.

It is obvious that the connection may be made in any suitable manner from the levers G H to the machine to be operated thereby, as the case may require.

It is also obvious that the apparatus may be so arranged as to communicate a rotary motion when necessary, any suitable devices being used for the purpose; as, for instance, a belt from the drum B, or gearing connected therewith.

Instead of using the grooved drum for operating the levers, gearing may be connected with the double treadle and crank, and answer the same purpose.

The apparatus will answer not only for operating saws and churns, but for straw and vegetable-cutters, washing-machines, mills, &c.

In this manner I produce a cheap, simple, and powerful apparatus for operating the various machines used about the house and farm.

Having thus described my invention,

What I claim is—

I. A mechanical movement or motor, consisting of

the oscillating platform E, arranged in the manner herein described, whereby the operator, by standing on said platform, is enabled, without changing his position, to throw his weight alternately upon opposite sides of the bearing point of the platform, the same being connected by crank and pitman, or equivalent devices, with a driving-shaft for communicating motion, substantially as described.

2. In combination with the platform E, arranged as described, the driving-crank c, arranged in relation

thereto, as set forth, whereby the operator is enabled to operate the platform and crank conjointly, as set forth.

3. The combination of the oscillating platform E, the driving-crank C, drum B, and lever G, all arranged to operate substantially as described.

JOHN H. WHITNEY.

Witnesses:

PHIL. T. DODGE,
W. C. DODGE.