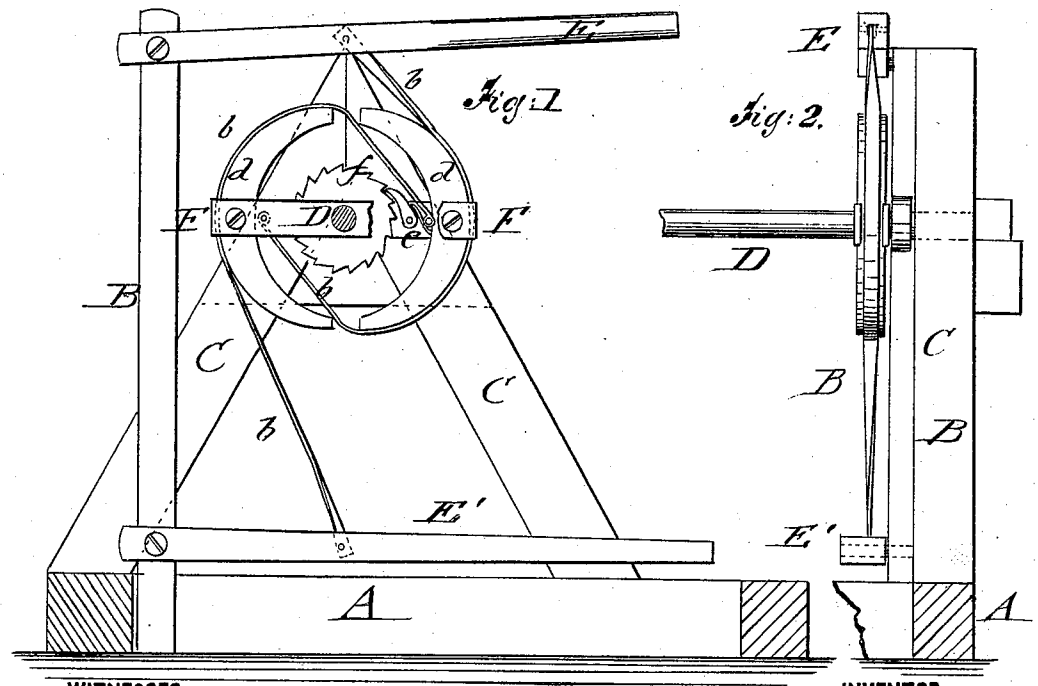
O. CHILD.

MECHANICAL MOVEMENT.

No. 169,341. Patented Nov. 2, 1875.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ORLANDO CHILD, OF CLAREMONT, NEW HAMPSHIRE.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

Specification forming part of Letters Patent No. **169,341**, dated November 2, 1875; application filed April 3, 1875.

To all whom it may concern:

Be it known that I, ORLANDO CHILD, of Claremont, in county of Sullivan and State of New Hampshire, have invented a new and Improved Mechanical Movement, of which the following is a specification:

In the accompanying drawing, Figures 1 and 2, respectively, represent side elevation and end view of my improvement in mechanical movement for changing reciprocating into rotary motion.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish a simple and easily-operated mechanical movement for transmitting alternating reciprocating into continuous rotary motion, to be used for working circular saws, straw-cutters, hand-cars, vehicles, &c.

The invention will first be fully described, and then pointed out in the claim.

In the drawing, A represents any suitable frame, to which my mechanical movement is applied in its application to the various purposes. It consists of a vertical standard, B, to which the operating levers and handles are pivoted, and suitable bearings C, for supporting the main shaft D. Two sets of levers and treadles are preferably worked alternately for producing continuous rotary motion of the shaft D. Both levers E and treadles E′ are connected by band-springs *b* of suitable strength, which are guided, on circular or semicircular adjustable pieces *d*, to diametrical frames F, turning loosely on shaft D. The diametrical frames F act, by means of spring-pawls *e*, on ratchet-wheels *f*, keyed to the main shaft, and impart rotary motion to the same, which is made continuous by working alternately the corresponding levers and treadles.

A very simple and conveniently-worked transmission of power for the trades, and for the propulsion of hand-cars, boats, vehicles, &c., is thus produced, which may be employed with greater or less speed, and with but few repairs.

The combination of elements, as above described, enables me to rotate the drive-shaft by a single hand or foot, or by the union of one of each, or by operating a hand and foot on each side alternately or simultaneously. I am thus enabled to use both the weight and muscular strength to very great advantage.

I am aware that a centrally-pivoted bar has been made to operate a pawl on either side of a ratchet-wheel, being vibrated by a lever and two connecting-straps; but

What I claim is—

The combination and arrangement of the vertical standards B, levers E E, treadles E′ E′, diametrical frames F F, having pawls, the connecting-rods *a a*, and the shaft D, having ratchet-wheels *f f*, substantially as and for the purpose specified.

ORLANDO CHILD.

Witnesses:

E. MCQUESTEN,

F. CURTIS.