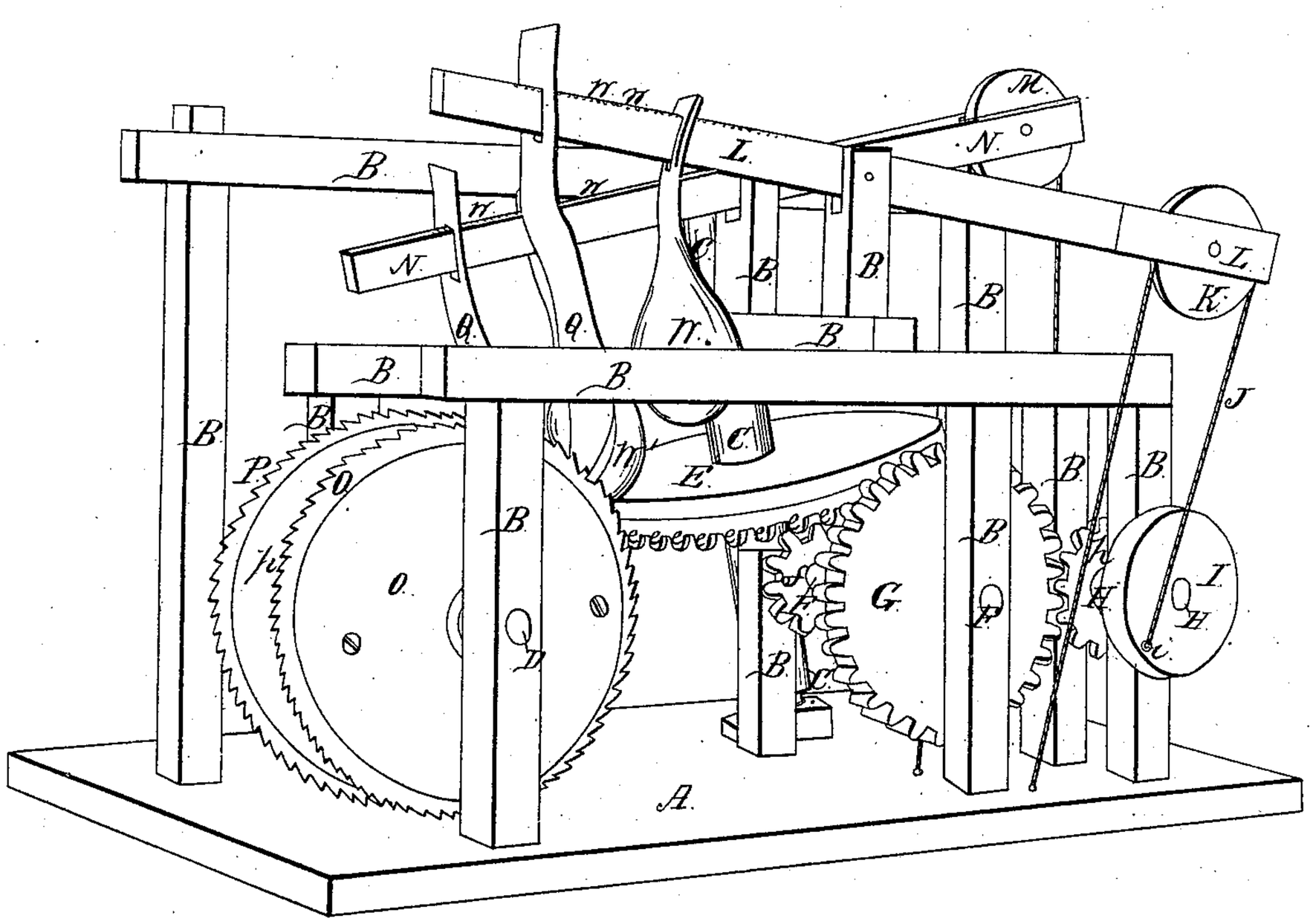
J. See,

Mechanical Movement.

No. 79,503. Patented June 30, 1868.



Witnesses
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JAMES SEE, OF MITCHELL, INDIANA.

Letters Patent No. 79,503, *dated June* 30, 1868.

IMPROVEMENT IN MECHANICAL MOVEMENT.

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, JAMES SEE, of Mitchell, in the county of Lawrence, and State of Indiana, have invented a new and improved Mechanical Movement; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, (making a part of this specification,) in which—

My invention is represented by a perspective view.

The object of this invention is to furnish a device by which the application of motive-power to machinery may be so regulated, controlled, and directed, in conjunction with a set of weights, levers, and ratchets, that a great saving of power shall be effected thereby, enabling the operator, by the application of any given amount of power at the main shaft, to obtain results at the point where the power is to be used, exceeding, by nearly one hundred per cent., the results of any other apparatus hitherto invented for a similar purpose.

In the drawings, A represents the base, and B the supporting-frame of my apparatus, C being the main shaft, which receives the power, and D being the shaft which finally applies such power, increased by the gain of other force, derived from a set of weights, the operation of which is hereinafter explained.

The power may be applied to the shaft C from a steam or air-engine, water or wind-wheel, horse-power, dog-power, or any other available source of motive-power.

In the drawing, an inclined wheel, E, is shown, which may be employed when a dog-power is used, and indeed the same construction of wheel and shaft as here represented is equally applicable to the use of power from any of the different sources above enumerated.

In connection with the wheel E and the main shaft, I use a horizontal shaft, F, to which is fixed a small pinion, *f*, which receives motion from the wheel E, by means of a series of cogs, *e e*, on the under surface of the latter, and imparts such motion to the shaft F, and to a large cog-wheel, G, fixed thereon.

From the cog-wheel G said motion is transmitted to another horizontal shaft, H, by means of a smaller spur-wheel, *h*. The latter shaft is provided with two wheels, I I, one shown at the right-hand corner of the drawing, and the other hidden behind the wheel G, by the position in which the view is taken. These wheels I I may be eccentrics, or they may each be provided with a pin or crank, *i*. From one of the pins a cord, J, passes up over a pulley, K, in the end of a lever, L, thence down through the floor or base-plate A, thence across under said floor, towards the opposite side thereof, and thence up over another pulley, M, in the end of another lever, N, and down to the pin *i*, on the other wheel I. The pins *i i* are arranged on opposite sides of the shaft H, so that when one is ascending the other is descending. As the shaft H revolves, the two pins alternately depress one end or the other of the rope or chain J, and, in consequence, one or the other of the levers L N, one lever always rising while the other is falling.

Upon the shaft D, by which the power is finally to be applied to the working machinery, are two strong ratchet-wheels, O P, supported by stout braces, *o p*, and rotated on and with their shaft, by means of two strong dogs, Q Q′, hanging from the end of the levers L N, opposite to that where the pulleys K M are supported. As the levers are alternately worked up and down by the means and in the manner above explained, the dogs Q Q′ are applied to the ratchets O P, and rotate them and the shaft D, to which they are attached, with great power.

Upon the levers L N, just behind the dogs Q Q′, are two heavy weights, W W′, which may be adjusted along the levers by the notches *w w w*, according to the judgment of the operator or workman. These weights add their power to that of the levers, causing the dogs to act with a greatly increased force upon the ratchet-wheels. It will be observed that the motion of these wheels and the shaft D is always continuous and uniform, one dog or the other always exerting its force against the ratchets. It will be observed, also, that no loss of power occurs in lifting the weights W W′, as one weight helps to raise the other.

The whole apparatus is simple, and can be constructed and attached to any running-machinery at little expense. It is not liable to get out of order, and its working operation adds no expense to that of the other

machinery. It has been thoroughly tested, and found to effect a saving of about one hundred per cent. over other devices for the same purpose.

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

The apparatus above described, consisting essentially of the shaft C, wheel E, shaft F, wheels *f* G, shaft H, wheels *h* I I, cord or chain J, pulleys K M, levers L N, weights W W′, dogs Q Q′, ratchet-wheels O P, and shaft D, when the several parts are constructed and combined as above described, and for the purpose set forth.

JAMES SEE.

Witnesses:

JOHN KILEY,

JAS. R. GLOVER.