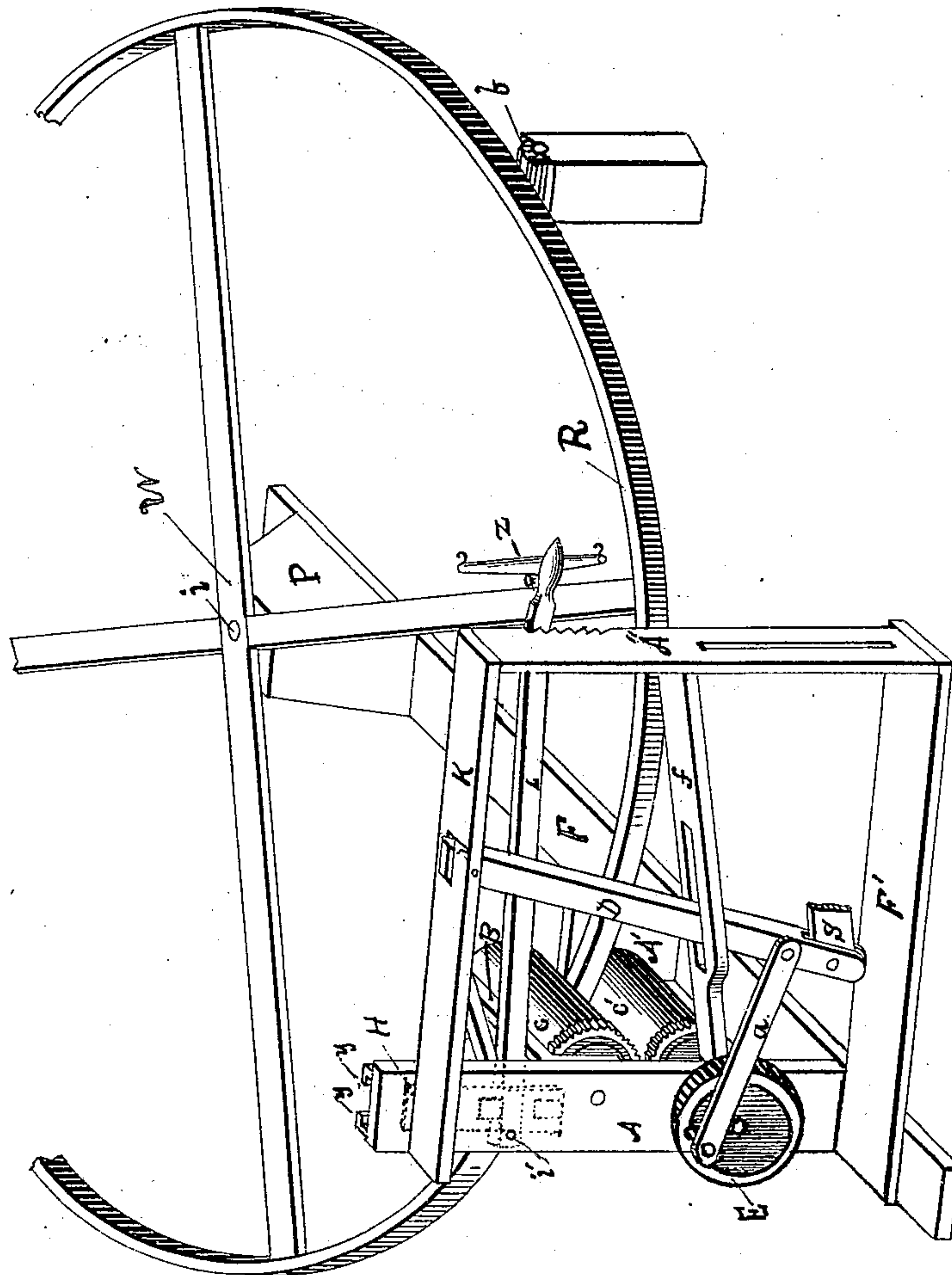


(No Model.)

D. ELEY.
HORSE POWER MOTOR.

No. 309,833.

Patented Dec. 30, 1884.



Witnesses:
D. T. Downing
Lucas Glattey

Inventor.
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UNITED STATES PATENT OFFICE.

DAVID ELEY, OF BLACKLEYSVILLE, OHIO.

HORSE-POWER MOTOR.

SPECIFICATION forming part of Letters Patent No. 309,833, dated December 30, 1884.

Application filed July 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, DAVID ELEY, a citizen of the United States, residing at Blackleysville, in the county of Wayne and State of Ohio, have invented a new and useful Horse-Power Motor, of which the following is a specification.

My invention relates to improvements in horse-power motors; and it consists in the employment of a large horizontal power-wheel provided with a suitable rim to operate in conjunction with a set of upper and nether rollers adapted to be compressed together upon the rim, and thereby obtain a rapid rotary movement of the same by the action of the rim upon the rollers as it is drawn through the same by horse-power applied within the rim of the wheel.

The object of my invention is to provide a horse-power without belting or intermediate cog-gearing, and to apply the power more closely than heretofore to the point of resistance, and thereby obtain a greater power with less expense than heretofore. I attain this object by the mechanism illustrated in the accompanying drawing, in which the figure represents a plan view of my invention, a portion of the drive-wheel being cut away; also showing how the motor may be utilized for different purposes.

Referring to the drawing, the sills $F F'$, standards $A A' A''$, top K , and brace f constitute the frame-work of my invention. The standards $A A'$ support the two rollers $c c'$, adjacent to and with their contacting faces on a plane with the rim of the drive-wheel W . The lower roller, c' , is stationary upon the standards, lies immediately under the rim of the drive-wheel, and carries the belt-wheel E . The upper roller is vertically adjustable by means of the hand-lever L , which operates upon a pivot, i' , as a fulcrum, and passes through and rests upon the vertically-movable brace B , which is connected with the standard A by the plate H (indicated by dotted lines) and corresponding lugs, $y y$. This vertically-ad-

justable brace B carries the upper roller, c , and thus by the downward movement of the lever L the roller c is made to clamp the rim of the drive-wheel between the rollers, so as to impart to them the motion of the rim R . The swinging shaft D and crank-shaft a , attached to the belt-wheel E , illustrate my method of communicating motion by means of this motor to a crosscut-saw by the shaft s , operating through the slot in the standard A'' . The drive-wheel W is supported upon the pedestal P at the pivot i , and prevented from lateral tilting by means of opposite supporting-posts provided with rollers b . The wheel W is provided with a flat rim, R , which may be provided with cogs to operate upon the rollers, if desired. The rim passes horizontally across and between the rollers $c c'$, held tightly upon it by means of the lever L , as aforesaid. Horse-power is applied within the rim R at Z , and a rapid rotary movement is thereby imparted to the rollers by the movement of the interpassing rim, and from the rollers to the band-wheel E , as above set forth. By this simple device a very effective and inexpensive horse-power motor is produced, and by doing away with the multiplied gearing heretofore used the friction, wear, and breakage of the motor is greatly diminished.

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

In a horse-power motor, the power-wheel W , provided with operating-rim R and supporting axle-post P , in combination with upper and nether rollers, $c c'$, and supporting-structure, one of said rollers being vertically adjustable upon the rim, and adapted to clamp the rim between the rollers, substantially as and for the purpose specified.

In testimony whereof I hereunto set my hand.

DAVID ELEY.

Witnesses:

H. B. SWARTZ,
D. A. SWARTZ.