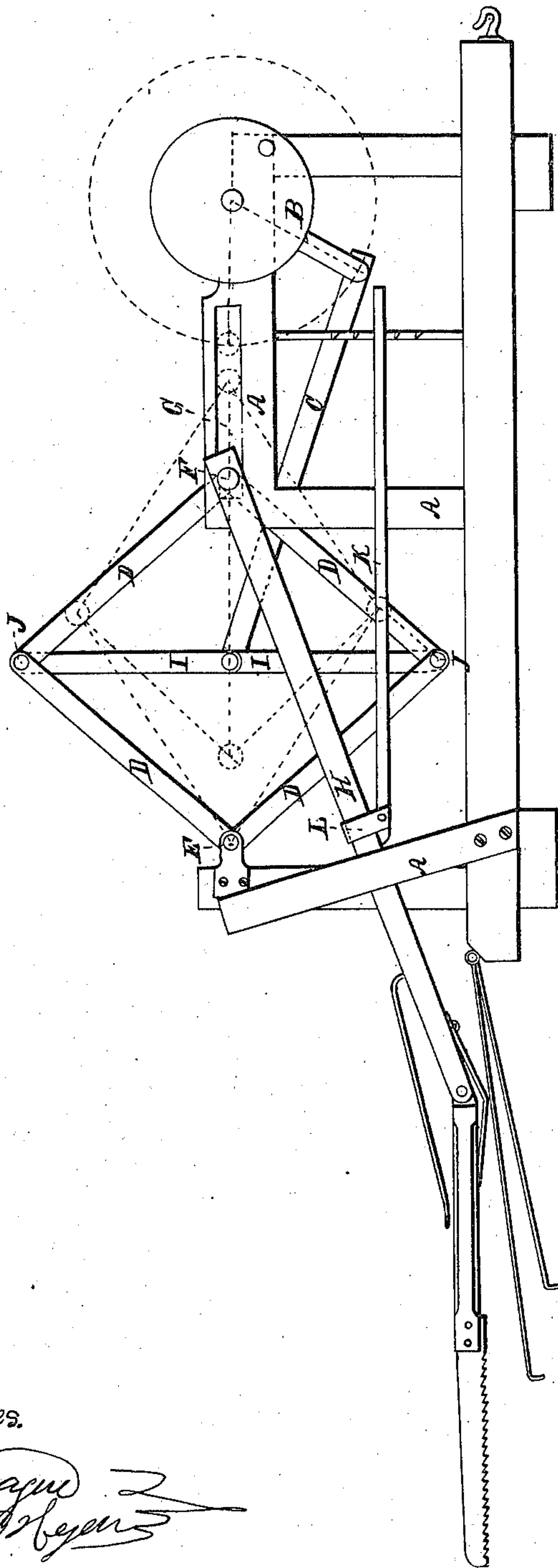


*D. S. Merritt,*

*Converting Motion.*

*N<sup>o</sup> 81,393.*

*Patented Aug. 25, 1868.*



*Witnesses.*

*H. J. Sprague*  
*Louis C. Meyer*

*Inventor.*

*D. S. Merritt*  
*Per Attorney*  
*Thos L. Sprague*

# United States Patent Office.

DANIEL S. MERRITT, OF MOUNT MORRIS, MICHIGAN.

*Letters Patent No. 81,393, dated August 25, 1868.*

## IMPROVEMENT IN MECHANICAL MOVEMENT.

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

### TO WHOM IT MAY CONCERN:

Be it known that I, DANIEL S. MERRITT, of Mount Morris, in the county of Genesee, and State of Michigan, have invented a new and useful Improvement in a Method of Increasing Motion; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification.

The object of this invention is to so construct a combination of levers, cranks, connection-rods, and any proper frame, that the motion may be doubled; or, in other words, that one revolution of the engine will give two reciprocating motions to the pitman. By my arrangement, I contend that, as velocity is power, I am able to increase the power by doubling the velocity; that one man, with my apparatus, can do the work of two without it.

In order to accomplish this result, I construct any suitable frame, A, upon which I hang a balance-wheel and crank, B, to which I attach a pitman, C, which may be attached directly to the piston-rod of an engine, by any proper joint. I then take four levers, D, of equal length, their ends pivoted together, so that the levers form equal sides of a square. I attach, by any proper device, one of the corners of said square to the frame at E, while the opposite corner is pivoted to a proper wrist-pin, F, which works in the slot G. To this wrist-pin is also attached a pitman, H, to which to attach a drag-saw, as seen in the drawings, or any other device to which it is desired to communicate power. The pitman C connects the crank B with the ends of two levers, I, which are pivoted to the end of the pitman C, while the outer ends are pivoted at the other corners of the square, at J. K is a brace or arm, attached to the frame, at the outer end of which is placed the guide, L, to sustain and hold in position the pitman H.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement of the four levers D, the pitmen C and H, and the levers J, when attached to any suitable frame, A, and constructed and operating substantially as and for the purposes set forth.

DANIEL S. MERRITT.

Witnesses:

H. F. EBERTS,  
LOUIE C. HYDE.