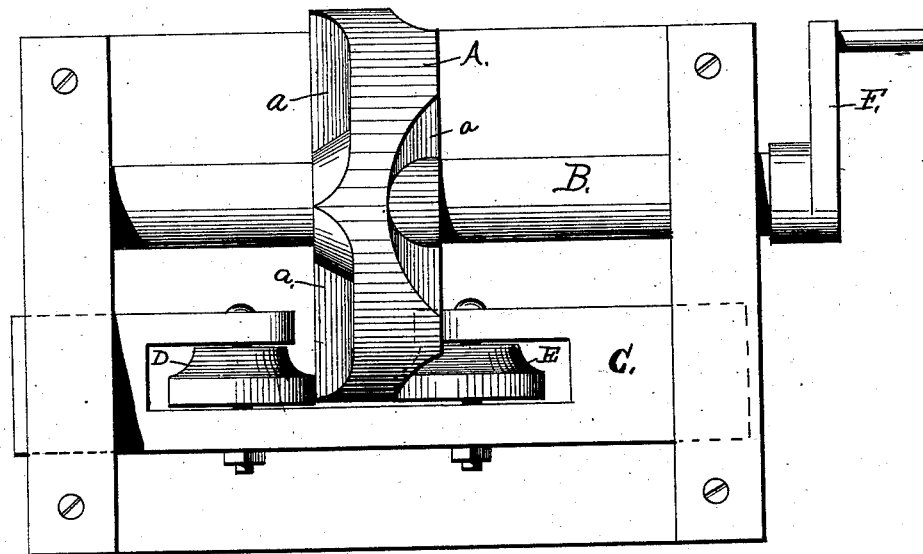


D. ABREY.  
Mechanical Movement.

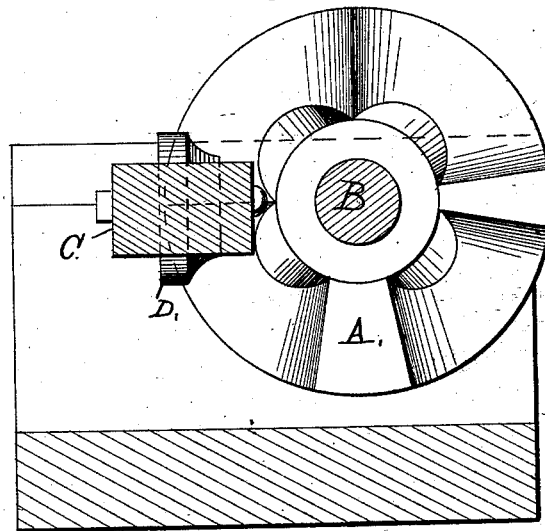
No. 216,638.

Patented June 17, 1879.

*Fig. 1.*



*Fig. 2.*



*Witnesses.*  
*Frank L. Curand*  
*John D. Donoghue*

*Inventor.*  
*Daniel Abrey*  
*By H. F. Davis*  
*Attorney*

# UNITED STATES PATENT OFFICE.

DANIEL ABREY, OF GREENVILLE, MICHIGAN.

## IMPROVEMENT IN MECHANICAL MOVEMENTS.

Specification forming part of Letters Patent No. **216,638**, dated June 17, 1879; application filed May 13, 1879.

### *To all whom it may concern:*

Be it known that I, DANIEL ABREY, of the city of Greenville, in the county of Montcalm and State of Michigan, have invented certain new and useful Improvements in Mechanical Movements; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a side elevation of my invention; and Fig. 2 is an end view of same, partly in section.

This invention has relation to mechanical movements, and more particularly to that class in which a rotary is converted into a reciprocating motion; and it consists of certain improvements in the construction of the same, hereinafter more fully described, and particularly pointed out in the claim.

A is a wave-wheel of peculiar construction, mounted upon a shaft, B, and by means of which it gets its motion when operated by the crank F. A vibrating bar, C, is mounted parallel to the shaft B, and is provided with a

pair of rollers, D and E, the peripheries of which bear against or come in contact with the opposite faces of the wave-wheel A.

By turning the crank F a rotary motion is given to the wheel A, and it, by means of its corrugations *a*, imparts a reciprocating motion to the bar C.

By varying the length and shape of the corrugations *a*, a continuous or an intermittent vibratory motion may be given to the bar C.

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

In a device for converting motion, the shaft B, provided with the wave-wheel A, having a series of irregular corrugations, *a*, on its opposite faces, in combination with the vibrating bar C, mounted parallel with the shaft B, and having rollers D and E secured to it, so as to bear on the opposite faces of the wheel A, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

DANIEL ABREY.

Witnesses:

F. L. SPENCER,

WILLIAM BRADLEY.