

W. Hammill,

Motor.

N^o 104,451.

Patented Jun. 21. 1870.

Fig 1

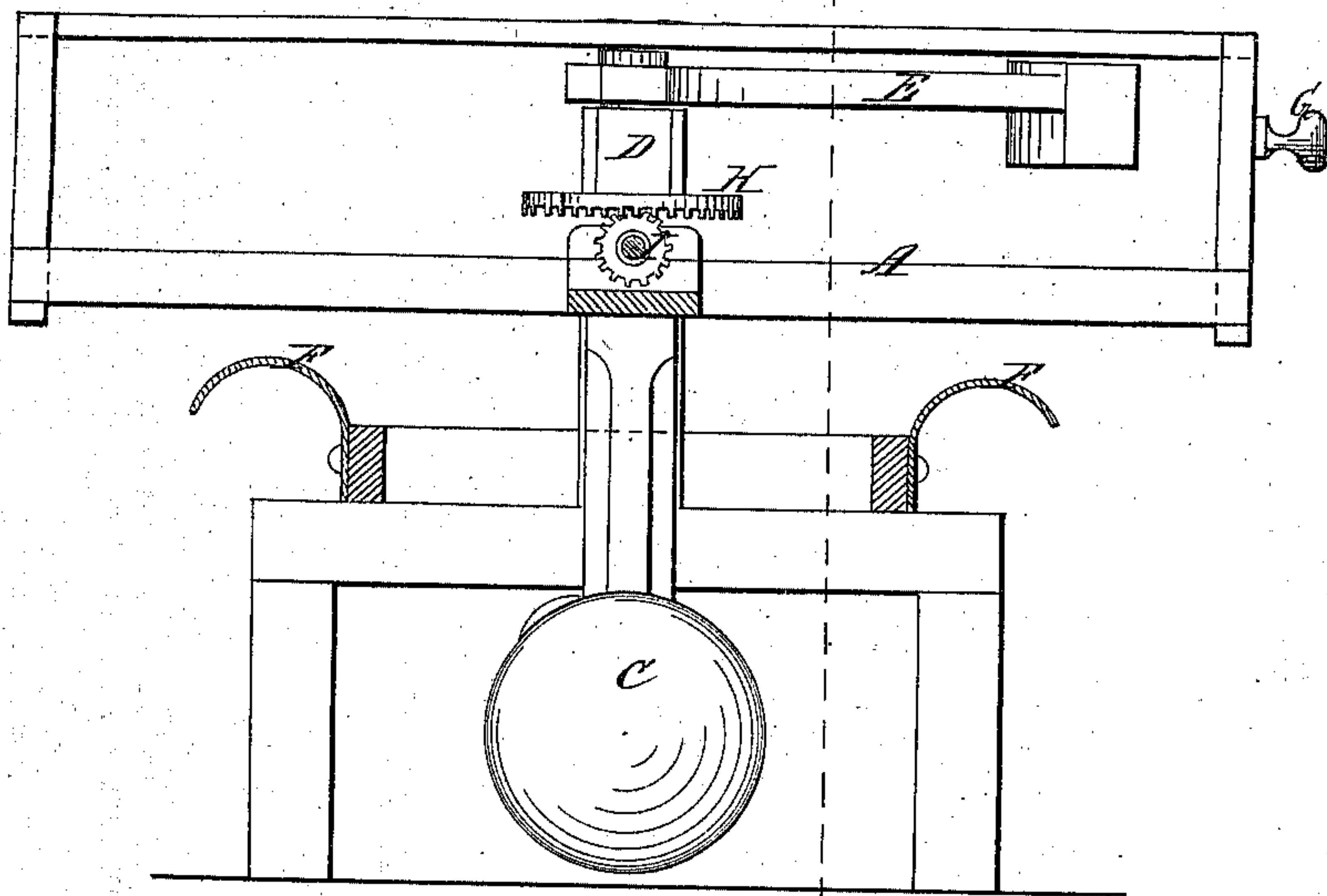
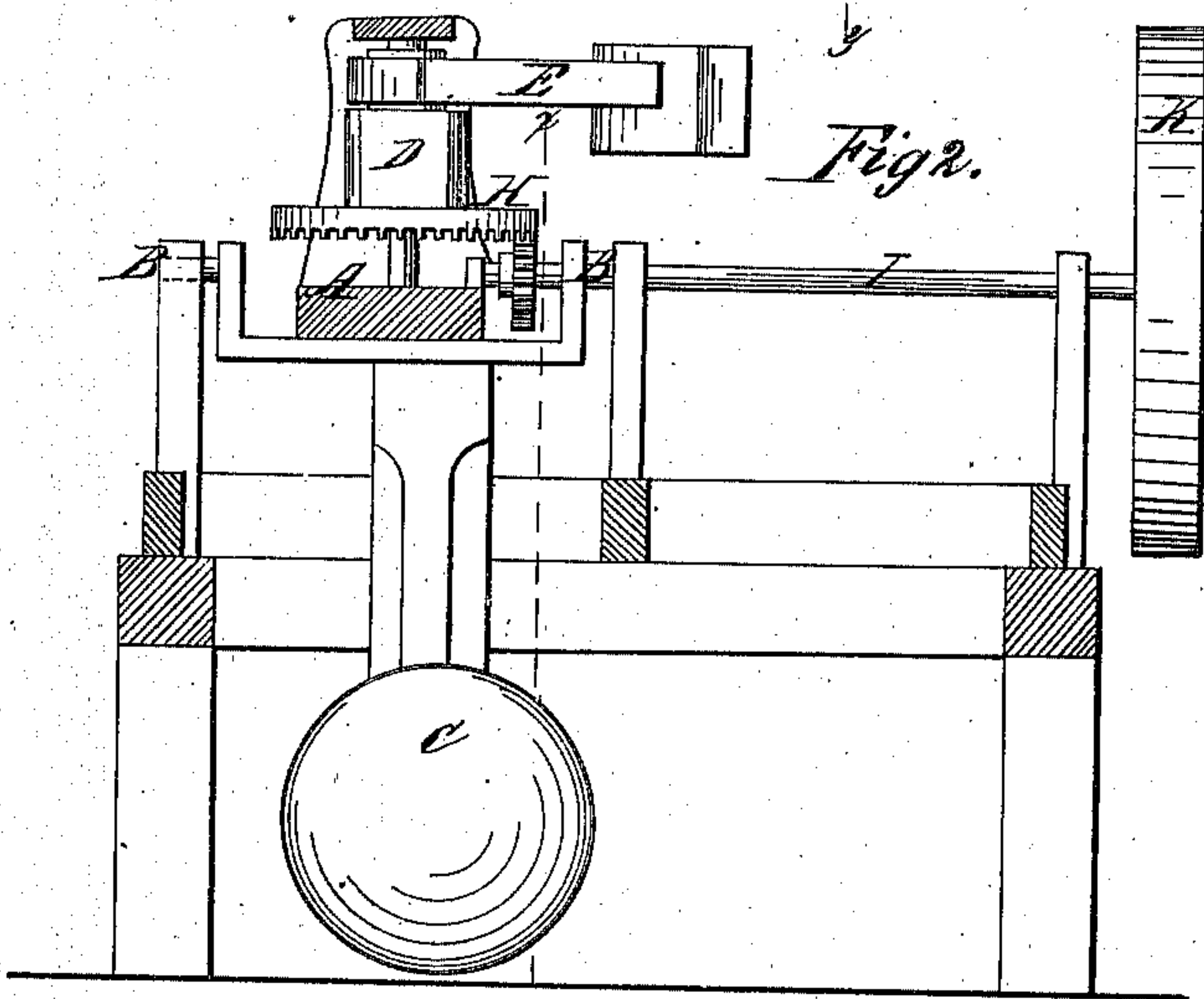


Fig 2.



Witnesses.

Chas. A. de
Hinchman.

Inventor.

W. Hammill
Hammill

UNITED STATES PATENT OFFICE.

WILLIAM HAMMILL, OF PARMA, MICHIGAN.

IMPROVEMENT IN MECHANICAL MOVEMENT.

Specification forming part of Letters Patent No. **104,451**, dated June 21, 1870.

To all whom it may concern:

Be it known that I, WILLIAM HAMMILL, of Parma, in the county of Jackson and State of Michigan, have invented a new and Improved Power Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to improvements in machinery for generating power for employment in driving light machinery; and has for its object to provide a simple arrangement of vibrating and swinging weights or pendulums and springs, which, with the aid of an attendant for moving them past the "dead-points," may be set into and kept in motion, as hereinafter more fully described.

Figure 1 represents a sectional elevation of a machine constructed according to my improvement, taken on the line *x x* of Fig. 1. Fig. 2 represents a section taken at right angles thereto on the line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents a strong rectangular frame, suspended edgewise at the center by an axis, B, so as to balance and vibrate thereon.

From the center, and below the axis, a heavy pendulum is suspended, and between the upper and lower rails of the frame, above the axis, a vertical shaft, D, is placed, having a weighted arm, E, projecting radially therefrom.

F represents counteracting springs each side of the axis, against which the frame strikes for arresting and reversing the motion. G represents a handle at one end of the frame, for vibrating it by hand.

The shaft D is provided with a bevel-gear wheel, H, gearing with a bevel-pinion on a shaft, I, coincident with the axis B of the frame A, and provided with a pulley or balance-wheel, K, for transmitting the motion.

Vibratory motion, being imparted to the oscillating frame A, will cause the weighted arm E to swing toward the lowest end of the frame, and the momentum thus acquired will carry it to some extent beyond the said lowest point. Then, if the low end of the frame A be raised by the hand to carry the arm G a little above the horizontal plane, the motion of the said arm will be continued around the circle. The continuation of these movements will give to the said arm a continuous rotary movement, accelerated to some extent by the action of the weighted pendulum and springs.

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

The combination of the vibrating frame A, pendulum C, weighted arm E, springs, and transmitting-gears, when arranged substantially as specified.

WILLIAM HAMMILL.

Witnesses:

JAS. HAMMILL,
NORMAN ALLEN.