T. S. HUNTINGTON.

MECHANICAL MOVEMENT.

No. 183,854. Patented Oct. 31, 1876.

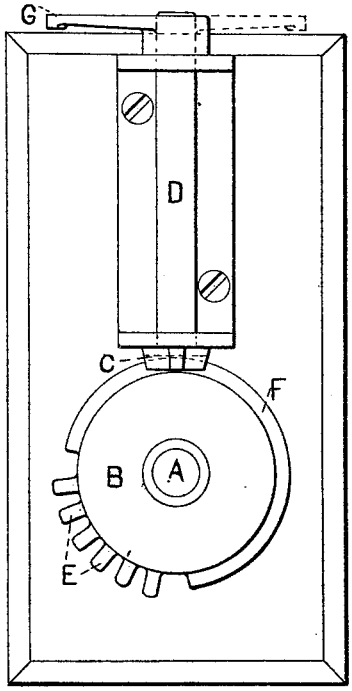

FIG. 1.

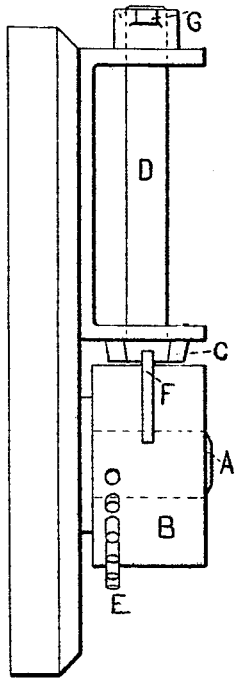

FIG. 2.

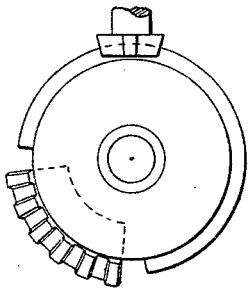

FIG. 3

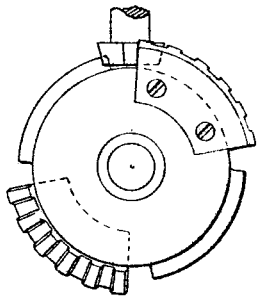

FIG. 5.

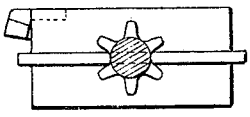

FIG. 4.

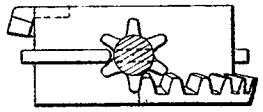

FIG. 6.

WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS S. HUNTINGTON, OF NEW YORK, N. Y.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

Specification forming part of Letters Patent No. **183,854**, dated October 31, 1876; application filed August 18, 1876.

To all whom it may concern:

Be it known that I, THOMAS S. HUNTINGTON, of the city, county, and State of New York, have invented an Improved Mechanical Movement, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

This invention consists, first, in a method of retaining an oscillating axis and gear-wheel in proper working position with a continuously-rotating axis and gear-wheel, in such a manner that the points of rest in the oscillating wheel will be preserved until the rotating points may be brought into proper working position for engaging with the oscillating teeth, as will hereinafter appear. Second, the invention also consists in the method of retaining a rotating axis and gear-wheel in a fixed position with a continuously-revolving shaft, so that the one may rest in its rotation while the other revolves, as will hereinafter appear.

Figure 1 is an elevation of two gear-wheels. Fig. 2 is a view of the same, taken at a right angle to Fig. 1. Figs. 3, 4, 5, and 6 show modifications of the same devices.

To illustrate this invention, the letter A represents a continuously-revolving shaft, and B the cylinder or driving-wheel thereon. At C is shown a pinion upon a shaft or axis, D, which, in this case, is mounted upon bearings to carry it at a right angle to the axis A, or so that the two wheels shall work at a right angle to each other. When it is desired to give a partial rotation to the pinion, and then let it rest and again set it in motion in the same direction, the driving-wheel B is provided with only a sufficient number of teeth, as at E, to give the desired rotation to the pinion C, and to hold the pinion at rest and in a proper position to start again at the right time. A rib, as at F, is formed upon the circumference of the wheel B, and is so placed as to engage in a groove in the pinion in such a manner that when the last tooth at E has acted upon the pinion the rib F enters said groove, and thereby holds the pinion from rotating, and preserves its proper position ready to engage with the first tooth at E as the driving-wheel continues its revolution.

Instead of pins and spur-teeth, as shown at Figs. 1 and 2, bevel or miter-toothed wheels, as shown at Figs. 3 or 4, may be used, where also the pinion is represented as being held by the rib F.

At Figs. 5 and 6 a modification of the same devices is shown for producing a reciprocating motion of the pinion, so that an arm placed on its axis, as at G, would be caused to vibrate to and fro, and be held at rest between the points of vibration. This is accomplished by placing a segment of teeth on the opposite side of the driving-wheel B, and between two segments of ribs, so that the pinion gears first into one segment, and is there held by the first rib, and then gears into the second segment, which, being opposite to the first, and on the opposite side of the pinion, reverses the pinion, which returns it to its first position, and holds it by the second rib until it engages again with the first segment of teeth, as before. The same principle may be applied to wheels working on shafts at other angles than right angles, as here shown, the peculiarity being that a rib on the driving-wheel or its shaft serves to hold the pinion at rest when not in gear.

It is evident that instead of the rib being formed on the driving-wheel, a groove may be formed thereon, and a rib may project from the pinion into it, to hold the proper relation between the two.

Such a combination will be found very useful in the variable movements of sewing-machines, harvesters, looms, and in all those places where similar variable motions are desired.

I therefore claim—

As a new mechanical movement, the combination of the toothed wheels B and C and intermediate rib and groove, in which the rib works for holding them in proper working position, substantially as described.

THOMAS S. HUNTINGTON.

Attest:
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BOYD ELIOT.