

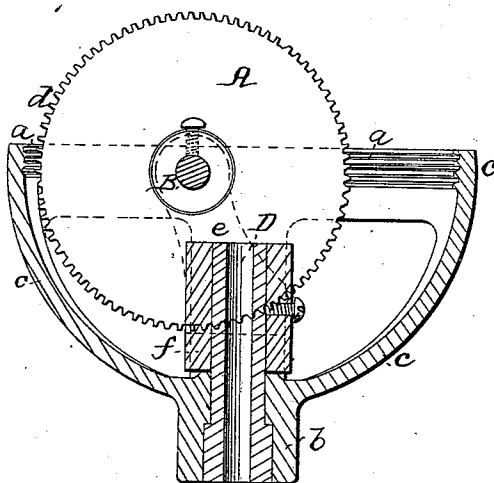
I. E. Palmer,

Mechanical Movement.

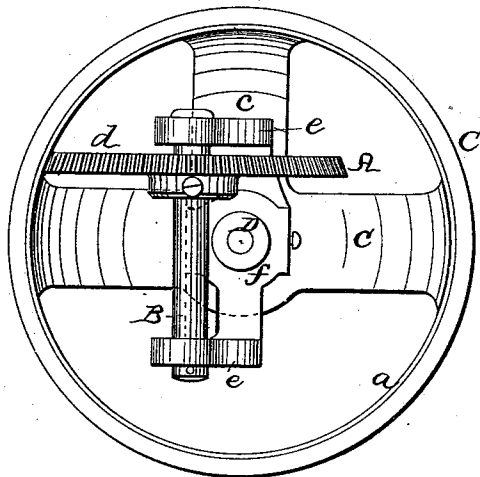
N^o 82,436.

Patented Sep. 22, 1868.

Fig; 1.



Fig; 2.



Witnesses;
J. M. Coomb
A. Allen

Inventor;
Isaac E. Palmer

United States Patent Office.

ISAAC E. PALMER, OF HACKENSACK, NEW JERSEY.

Letters Patent No. 82,436, dated September 22, 1868; antedated September 14, 1868.

IMPROVEMENT IN MECHANICAL MOVEMENT.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ISAAC E. PALMER, of Hackensack, in the county of Bergen, and State of New Jersey, have invented a new and useful Mechanical Movement, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a sectional elevation or sectional view, taken longitudinally through the one shaft and transversely through the other, of my improved mechanical movement, and

Figure 2 a plan or view, at right angles to fig. 1, of the same.

Similar letters of reference indicate corresponding parts.

My invention consists in a combination, for operation together, of a toothed wheel with a ring, having a female thread in and around it, and arranged to gear with the wheel on one side of it, the axis of the ring being transverse to that of the wheel, that, in being rotated around or about the axis of the ring, or the ring rotated around the wheel, serves to give a slow but powerful motion to the latter about its own axis.

This movement is the reverse of the ordinary screw-and-worm wheel, and applicable to a variety of purposes, including, among others, the take-up action of a rope-twisting machine or apparatus, for which purpose it is shown suitably arranged in the accompanying drawing, by, say, locating the axis of the wheel A and its shaft B transversely to the axis of the ring C, but on one side of it, and constructing the wheel of bevel-form, for gear with the ring on one side of a plane intersecting the axis of the ring, and parallel to the face of the wheel, in order that there may be room for taking up the rope by a reel on the shaft B, as it is passed through a vertical shaft, D, which occupies a concentric relationship to the axis of the ring C, and which is made hollow for the passage of the rope. Where the movement is designed for other purposes, this special arrangement may be changed, in so far as regards the bevelled construction of the wheel, and lateral position of it and its shaft, relatively to the axis of the ring, and hollow construction of the shaft lying concentric to the latter.

The operation of the device is the same in any case; that is to say, a slow but powerful rotary motion is communicated to the shaft B, for any driving purpose that may be required, by rotating the wheel, that has its axis transversely disposed relatively to that of the ring, round or about the axis of the latter, or revolving the ring around the wheel. Thus, on turning the ring C, having the female thread *a* in and around it, about or round the shaft D, for which purpose it may be hung on said shaft through a sleeve, *b*, connected to it by arms *c*, said ring, by its female thread *a* in gear with the teeth *d* of the wheel A, will cause the latter and its shaft B to slowly rotate about their own axis, the wheel and its shaft being, in such case, stationary in relation to the axis of the ring, and to secure which the shaft B may be carried by brackets *e*, branching from a boss, *f*, fast to the shaft D, made stationary; or, on the other hand, the ring C may be stationary, and the wheel A, with its shaft B, rotated round or about the axis of the ring, by, say, rotating the shaft D, which will communicate a like powerful motion to the wheel A or its shaft B.

In this mechanical movement it will be perceived that the screw-thread is a female one, instead of, as in the ordinary screw-and-worm-wheel motion, a male one, and there are many purposes to which the former movement may be made applicable, that the latter is not, or for which it is inferior.

What is here claimed, and desired to be secured by Letters Patent, is—

The combination of the toothed wheel A with the ring C, having a female thread, *a*, in or around it, arranged relatively to each other for operation together, substantially as shown and described.

Witnesses:

J. W. COOMBS,
A. LE CLERC.

ISAAC E. PALMER.