

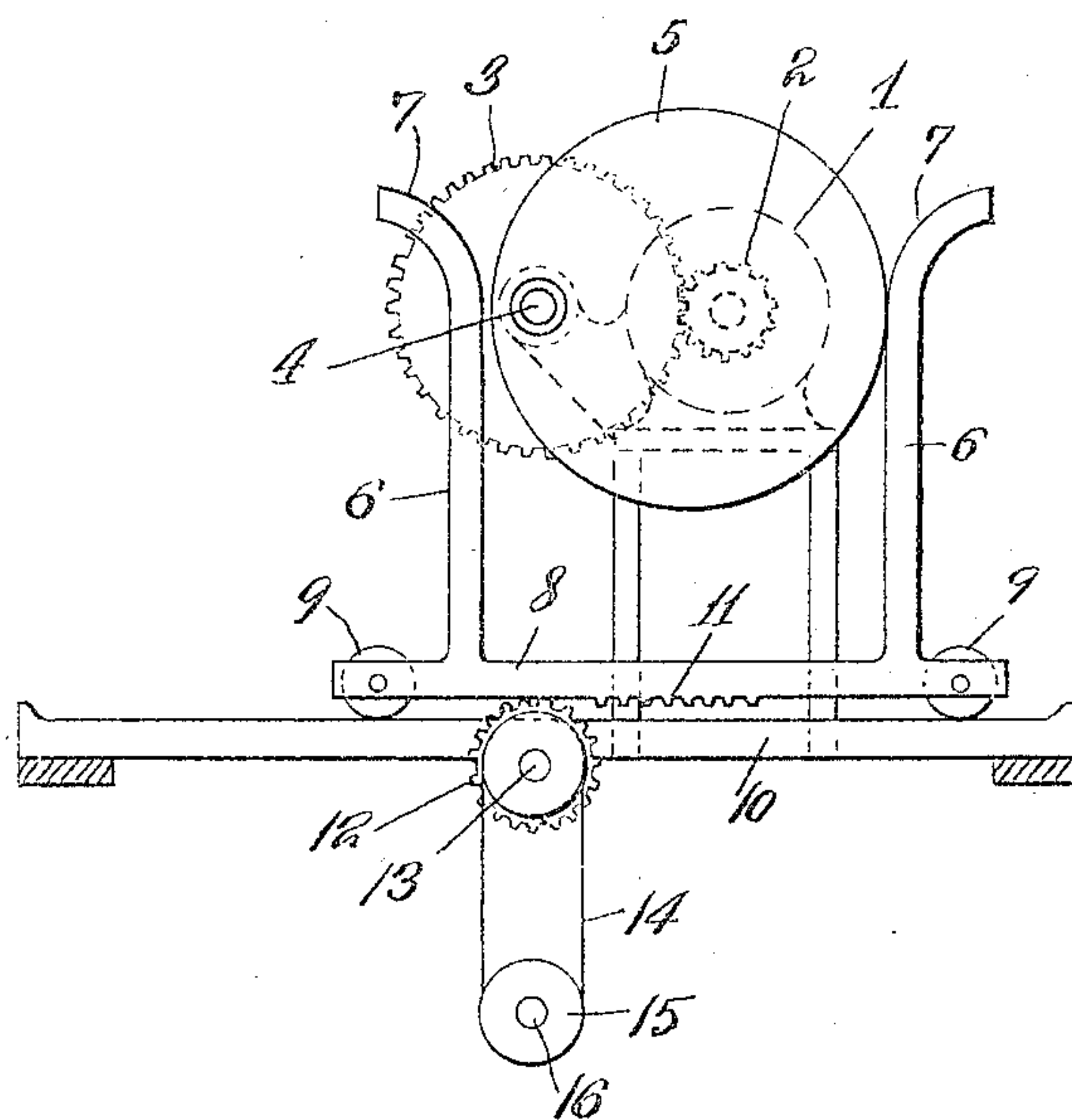
No. 813,189.

PATENTED FEB. 20, 1906.

E. WIGHTON.

GEARING.

APPLICATION FILED AUG. 25, 1904.



Witnesses
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UNITED STATES PATENT OFFICE.

ERNEST WIGHTON, OF NEW YORK, N. Y.

GEARING.

No. 813,189.

Specification of Letters Patent.

Patented Feb. 20, 1906.

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To all whom it may concern:

Be it known that I, ERNEST WIGHTON, a subject of the King of Great Britain, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Gearing, of which the following is a specification.

The present invention relates to mechanical movements for the purpose of intermittently oscillating a shaft.

The motion of the said shaft may in turn be utilized in various ways—as, for instance, to turn the tablets in a so-called “Jacob’s Ladder,” which is a well-known medium sometimes employed for advertising purposes. In such case it is necessary that the shaft be at rest between each turn; and it is the object of this invention to provide a construction which will accomplish the desired result with as few parts as possible and in an efficient manner.

Referring more particularly to the drawing accompanying this invention, 1 indicates the source of power, in this instance represented by a motor, on the shaft of which is the pinion 2, which meshes with the large gear 3 on the counter-shaft 4. By this means the speed of the shaft 4 is considerably reduced from that of the motor-shaft. On shaft 4 is the eccentric disk 5, which as it rotates alternately engages the uprights 6, having the cam-surfaces 7, with which the disk coöperates. These uprights are carried by the frame 8, which by this means receives a reciprocating motion. The frame is provided with rollers 9, running on track 10 for the purpose of guiding the same.

11 indicates a number of teeth on the under side of the frame, thus forming a rack with which coöperates the gear 12 on shaft 13, which in turn by means of belt 14 transmits the power to pulley 15 on shaft 16. Shafts 13 and 16 may be supported in any suitable manner.

The operation of the device is as follows: As the eccentric disk 5 is rotated it will al-

ternately engage the uprights 7, thereby imparting an intermittent reciprocating motion to the frame 8 and rack 11, intermittent because the disk does not engage the uprights while in its uppermost travel when the frame and rack are at rest.

While the disk travels from one upright to the other in its lower or effective arc it will move the frame and rack in one direction. Hence the gear 12, and consequently shaft 16, will rotate in the same direction; but this rotation will be finished before the frame has moved to the extreme position in that direction, so that shafts 13 and 16 will be at rest for a longer period than the frame. This will be more clearly understood by a close inspection of the drawing, where the rack is shown of a length substantially equal to half the length of the periphery of the gear 12. It is thus seen that while the eccentric disk rotates continuously in one direction the reciprocating frame has a period of rest after being moved in one direction and before its return motion and that by reason of the rack being placed in the center of the frame the shaft 13 has a still longer period of rest between each oscillation.

What is claimed is—

In a device of the character described, a gear capable of an oscillatory motion, a rack having teeth for a distance less than the length of the periphery of the said gear, and means for reciprocating said rack in such a manner that a period of rest intervenes between each stroke in either direction, so as to alternately engage and disengage said gear, whereby an oscillatory motion is imparted to the said gear with periods of rest intervening between each movement in either direction.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERNEST WIGHTON.

Witnesses:

A. B. SALIGER,
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