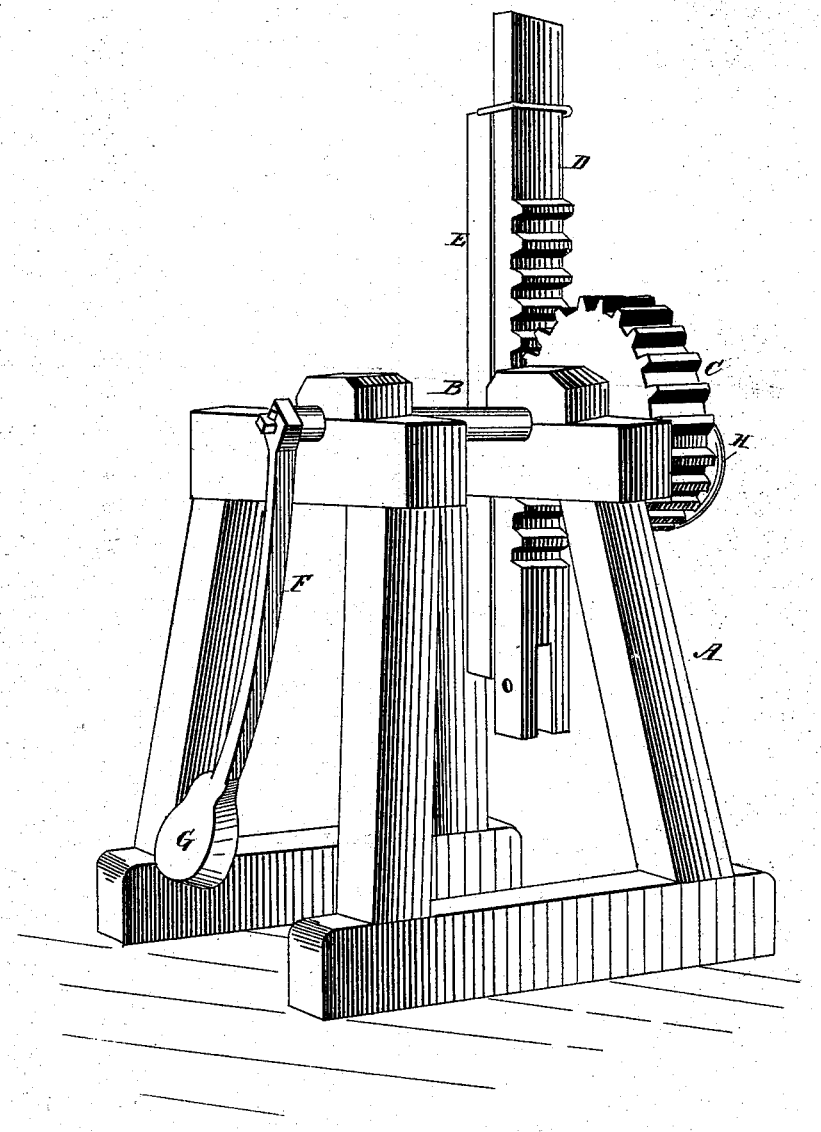
(No Model.)

A. DILGER.

MECHANICAL MOVEMENT.

No. 262,020. Patented Aug. 1, 1882.



WITNESSES:

Francis M. Ardle.

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UNITED STATES PATENT OFFICE.

ANTON DILGER, OF ROCKVILLE, WISCONSIN.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 262,020, dated August 1, 1882.

Application filed May 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, ANTON DILGER, of Rockville, in the county of Grant and State of Wisconsin, have invented a new and useful Improvement in a Mechanical Movement, of which the following is a full, clear, and exact description.

My invention is intended for use wherever reciprocating movement is desired—as, for instance, for working pumps, for drilling, or for raising and lowering head-gates of mills, and also for lifting heavy weights—the object being to accomplish the work with great facility and with an expenditure of but little power.

It consists in the combination of a pendulum with a rack and pinion, as hereinafter described, and pointed out in the claim, reference being had to the accompanying drawing, wherein my improved mechanical movement is shown by a perspective elevation.

Upon a suitable frame, A, is fitted a shaft, B, that carries at one end a pinion, C.

D is a rack fitted for vertical movement in suitable guides upon an upright, E, and formed at its lower end with a slot for connection to a pump-rod or other device to be lifted.

Upon the shaft B is hung a pendulum, F, provided with a weight, G, at its lower end, of suitable size, according to the character of work that is to be done, the power required, and the length of stroke desired.

I have shown one rack only; but two racks can be used, both engaging the pinion, so that as one moves up the other will move down.

In operation the swinging of the pendulum gives a rocking motion to the shaft B, and the forward-and-backward movement of the pinion effects the vertical reciprocation of the rack and the pump-rod or other device to which it may be connected. The pendulum is to be operated by hand, and the length of its movement determines the stroke of the pump-rod.

This apparatus is especially applicable to operating deep-well pumps where a windmill or other power would be too expensive. But little power is required for moving the pendulum; and it will be understood that the size of the cog-wheel is to be varied according to the stroke desired and the work to be done. The frame may be of any suitable height, according to the length of pendulum required. For lifting head-gates the rack is to be connected to the post of the gate, and the gate raised and lowered by the movement of the pendulum to the right or left. The apparatus may also be used for other purposes of a similar nature.

In single machines where only a single rack is used I prefer to fit the pinion C with a weight placed diametrically opposite the rack, as shown at H, this weight to be of greater or less size, according to the depth of the well, and serves to balance the rack and pump-rod.

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

In a mechanical movement, the combination, with the shaft B, having pinion C, and pendulum F secured thereon, of the rack D, engaging the pinion C, as shown and described.

ANTON DILGER.

Witnesses:
A. W. GAMMON,
C. KALTENBACH.