

No. 645,364.

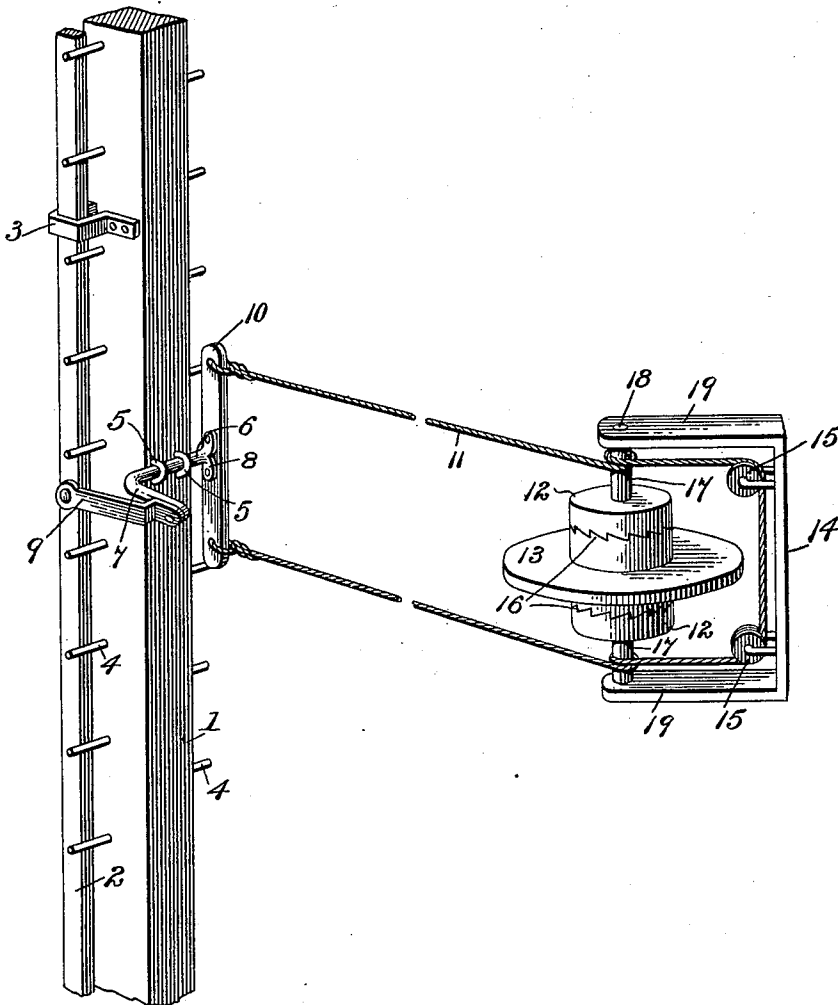
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A. KRESEN & F. & A. LEASMAN.

MECHANICAL MOVEMENT.

(Application filed Apr. 20, 1897.)

(No Model.)



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By

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Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT KRESEN, FRANK LEASMAN, AND ANDY LEASMAN, OF BUFFALO LAKE, MINNESOTA, ASSIGNORS OF ONE-THIRD TO JOHN C. RIEBE, OF SAME PLACE.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 645,364, dated March 13, 1900.

Application filed April 20, 1897. Serial No. 633,035. (No model.)

To all whom it may concern:

Be it known that we, ALBERT KRESEN, FRANK LEASMAN, and ANDY LEASMAN, citizens of the United States, residing at Buffalo Lake, in the county of Renville and State of Minnesota, have invented a new and useful Mechanical Movement, of which the following is a specification.

This invention relates to mechanical movements, and is especially designed for use on windmills, although it will be apparent as the description proceeds that the said movement may be used in other and various places.

The object of the invention is to provide mechanism whereby the reciprocating movement of the pump-rod may be converted into rotary movement, so as to enable the power derived from the mill to be utilized for driving machinery, especially that of a light and easy-running nature.

The invention consists in a mechanical movement embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, and illustrated in the drawing, and incorporated in the claim.

The accompanying drawing represents a perspective view of a portion of the standard, post, or tower of a windmill, showing also a portion of a pump-rod and the mechanical movement operatively connected thereto.

Referring to the accompanying drawing, 1 designates the standard, post, or tower of an ordinary windmill, and 2 the pump-rod, which is arranged to slide and reciprocate through suitable guides or bearings 3.

4 designates a series of lateral projections forming steps, by means of which an attendant is enabled to mount the standard.

Journalled in suitable bearings 5 on the standard 1 is a horizontally-disposed rock-shaft 6, having at its opposite ends arms 7 and 8. The arm 7 is connected with the reciprocating pump-rod 2 by means of a link 9, so that as the pump-rod moves up and down the arm 7 will be vibrated, thereby rocking the shaft 6. The other arm 8 of the rock-shaft has rigidly secured thereto an oscillating bar 10. A cord or belt 11, having its opposite extremities secured to the ends of the oscil-

lating bar, passes around the sleeves or hubs of ratchet-wheels 12, mounted at opposite sides of a pulley 13, the said ratchet-wheels being adapted to impart a continuous rotary movement to the pulley. The pulley 13 is mounted in a frame 14, provided with guide-pulleys 15, around which the cord 11 passes. The pulley 13 is provided with oppositely-disposed ratchet-faces 16, which are engaged by the corresponding faces of the ratchet-wheels 12. The ratchet-wheels 12 and their hub portions or sleeves 17, together with the pulley 13, are all preferably journalled loosely on a shaft 18, mounted between and connected with bracket-arms 19, extending in substantially-parallel relation to each other upon the same side of the body portion of the frame 14, said bracket-arms forming parts of the frame.

From the foregoing description it will be seen that as the bar 10 is oscillated by the means described the opposite end portions of the cord or belt are caused to move in opposite, directions and the cord therefore operates upon the ratchet-wheels 12 to cause said ratchet-wheels to rotate simultaneously in opposite directions. The intermeshing teeth comprised by the ratchet-faces of the wheels 12 and pulley 13 are so disposed that they will engage positively with each other when the ratchet-wheels 12 move in one direction and slip by each other or disengage when said ratchet-wheels are turned in the opposite direction. Thus one or the other of the ratchet-wheels is turning at all times in a direction to impart a rotary movement to the pulley 13, and said pulley is consequently driven continuously in the same direction.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What we claim is—

In a windmill, the combination of a reciprocating pump-rod, a rock-shaft provided

with a pair of arms one of the arms being connected with the pump-rod, an oscillating bar carried by the other arm, a frame, a pulley 32 mounted therein, ratchet-wheels located at 5 opposite sides of the pulley, adapted to engage the same and provided with sleeves, guide-pulleys arranged within the frame, and a cord passing around the guide-pulleys, engaging the said sleeves and connected with the 10 oscillating bar, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

ALBERT KRESEN.
FRANK LEASMAN.
ANDY LEASMAN.

Witnesses:

F. G. NELLERMOE,
C. F. HALLGREN.