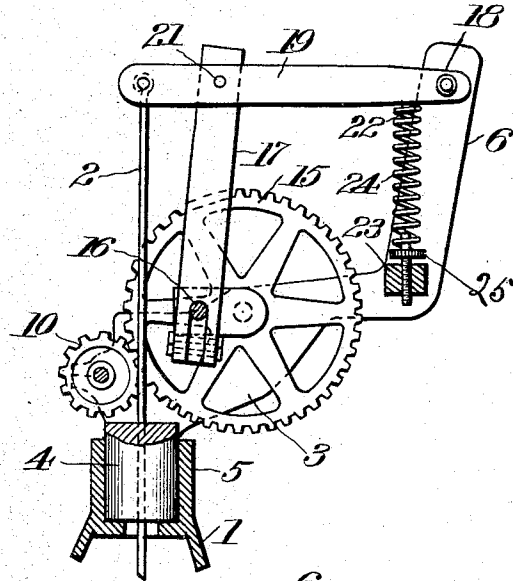


J. R. BYRNES.  
WINDMILL POWER SAVER.  
APPLICATION FILED FEB. 6, 1909.

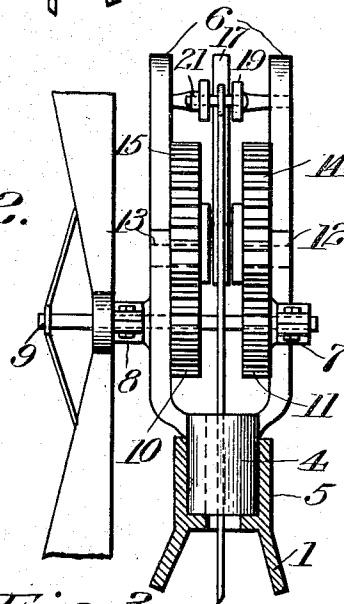
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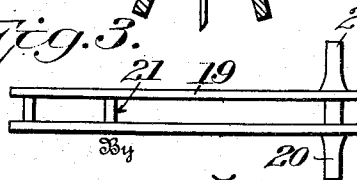
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN R. BYRNES, OF HUTCHINSON, KANSAS.

WINDMILL-POWER SAVER.

938,966.

Specification of Letters Patent.

Patented Nov. 2, 1909.

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*To all whom it may concern:*

Be it known that I, JOHN R. BYRNES, a citizen of the United States, residing at Hutchinson, in the county of Reno and State of Kansas, have invented certain new and useful Improvements in Windmill-Power Savers, of which the following is a specification.

My invention relates to means for saving the power of wind mills and the object of the invention is to provide a power saver which may be readily attached to the tower and the strength of which being overcome by the downward thrust of the pump rod will aid or assist in raising the pump-rod with the load thereon.

With this end in view, the invention consists in the novel construction, arrangement and combination as will be hereinafter more fully described and claimed.

The invention will be more readily understood by reference to the accompanying drawing which forms part of the specification, and in which:—

Figure 1, is a view in elevation, partly in section, showing the transmission device. Fig. 2 is a front elevation and Fig. 3, is a view of the lifting arm.

Similar numerals of reference indicate corresponding parts in the several views of the drawings.

1 indicates the tower and 2 the pump rod which may be of ordinary construction.

According to my invention, I provide a rotatable frame 3 which is provided with a head 4 adapted to rotate in the collar 5 which is a part of the tower and provides a turntable for the head of the frame. The head and collar are both provided with an opening through which the pump-rod can reciprocate. I form integral with the frame and approximately L-shape, arms or supports 6, 6. The frame 3 is also provided with bearings 7 and 8 in which the wind wheel shaft 9 is journaled and upon which I secure two small pinion wheels 10 and 11. I also form bearings 12 and 13 on the frame 3 which support the shaft for gear wheels 14 and 15 in order that the gear wheels will mesh with the small pinion wheels. The gear wheels are connected by a rod 16, to

which one end of a pitman rod 17 is connected. In the top of the arms 6, 6, I provide bearings 18, 18. A lifting arm 19 having lugs 20 which seat in the bearings 18, 18 is pivotally connected at its opposite end to the upper end on the pump-rod. The lifting arm is secured at 21 to the upper end of the pitman rod 17. The lifting arm is provided with a lug 22 formed integral therewith near the bearing lugs 20.

At the base of the arm 6, 6, I form a lug 23 having an aperture therein and a collar 25 secured thereon and upon which one end of a spiral spring 24 is seated. I secure the other end of said spring over the lug 22 on the lifting rod, and by changing the pin 25 in the aperture of the lug, the tension of the spring may be increased. The spring is of sufficient tension to overcome the force that is exerted by the wind wheel in depressing the pump-rod, and therefore upon the upper stroke of the rod, the spring will be exerted to help raise the load on the pump rod, and prevent the jerking and vibrating of the same.

It will be understood that the spring 24 is adjusted with reference to the height of the column of water to be lifted and also to the weight of the volume of the water raised by the pump-rod.

The operation, construction and advantages will, it is thought be understood from the foregoing description, it being noted that various changes may be made in the proportions and details of construction without departing from the scope of the invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent is:—

In a device of the character described, a windmill tower, a turntable secured on the tower, a frame provided with L-shaped arms rotatably mounted on the turntable, a wind wheel shaft journaled on said frame and provided with pinion wheels, gear wheels carried by the frame and adapted to mesh with the pinion wheels on the wind wheel shaft, a lifting rod pivotally secured to the upper ends of the L-shaped arms of the frame at one end and having its opposite

end connected to the pump rod, a pitman rod secured at one end to the gear wheel and having its opposite end connected to the lifting rod, a lug formed integral with the lifting rod, a spiral spring having one end seated on the frame between the base of the arms and its opposite end secured over the lug on the lifting rod and means for increasing the

tension of the spring as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN R. BYRNES.

Witnesses:

JAMES HETTINGER,  
CON W. TAYLOR.