

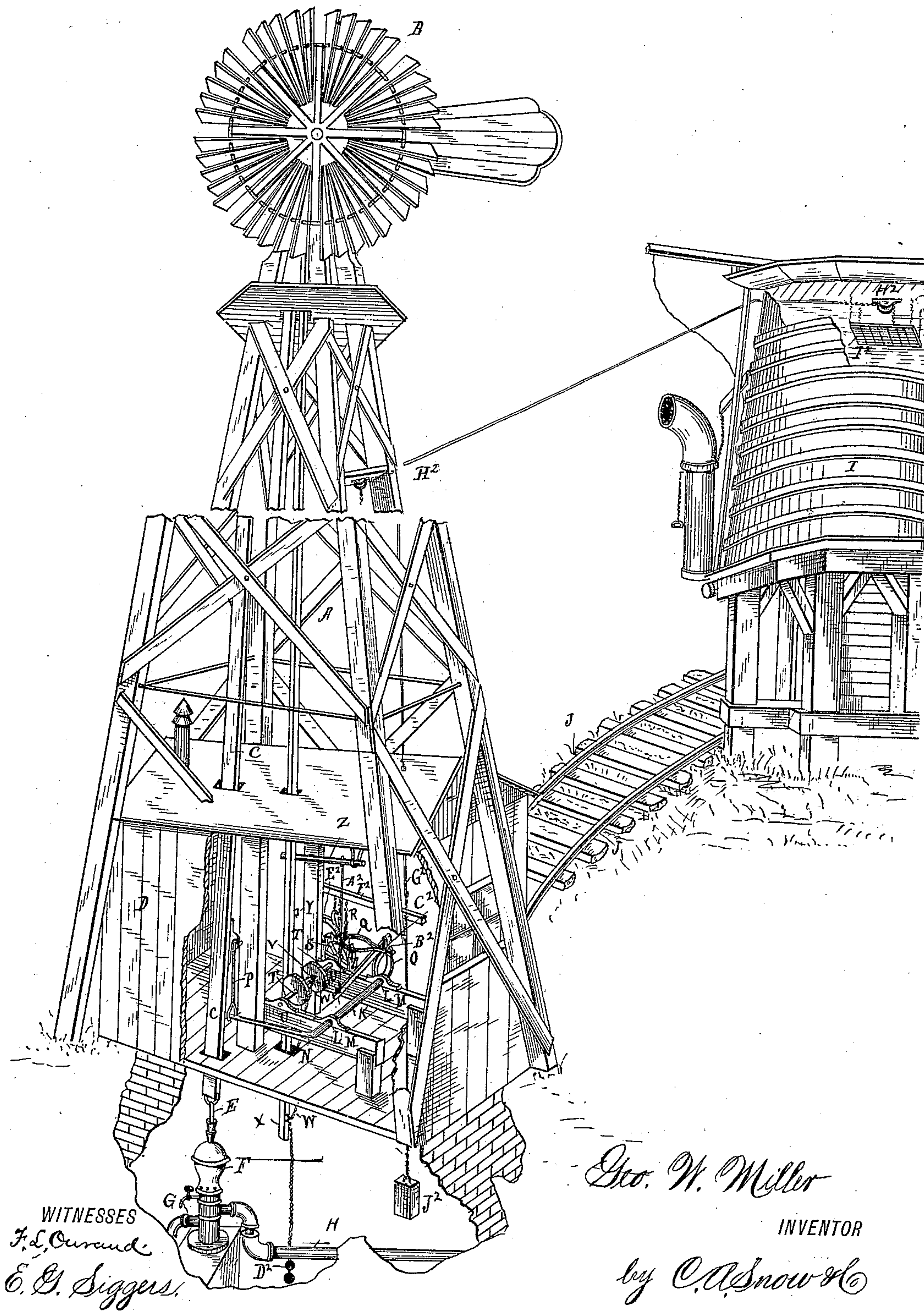
(No Model.)

G. W. MILLER.

ATTACHMENT TO WINDMILLS.

No. 292,030.

Patented Jan. 15, 1884.



WITNESSES
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UNITED STATES PATENT OFFICE.

GEORGE W. MILLER, OF CLARINDA, IOWA.

ATTACHMENT TO WINDMILLS.

SPECIFICATION forming part of Letters Patent No. 292,030, dated January 15, 1884.

Application filed July 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MILLER, a citizen of the United States, residing at Clarinda, in the county of Page and State of Iowa, have invented a new and useful Attachment to Windmills, of which the following is a specification, reference being had to the accompanying drawing.

This invention relates to attachments to wind-wheels for throwing the wheel into and out of operation; and its object is to provide mechanism possessing superior advantages in point of simplicity, convenience, and general efficiency, by which the wheel will be automatically thrown into and out of operation by a float in a tank, and the water in the latter will be automatically kept at the same level.

In the drawing hereto annexed, which represents a perspective view of my invention, A designates the tower or frame-work that carries the wind-wheel B, by which the pitman C is operated, this mechanism being of any suitable construction, and preferably having a house, D, at the bottom of the tower, in which the machinery is arranged. The pitman C of the wind-wheel is connected with the piston E of a suitably-disposed pump, F, that receives the water from a suitable source through a pipe, G, and discharges it through a pipe, H, that leads to a tank, I, which, in the present instance, is elevated above the level of a railroad-track, J, and is adapted to supply water to the locomotives by means of any suitable draw-off mechanism.

K is a rock-shaft, which has its bearings LL on a suitable frame, M, and is provided with crank-arms N and O, arranged one at each end and at right angles to each other. The arm N is connected by a pitman, P, with the pitman C of the wind-wheel, so that the said shaft will be operated by the latter, while to the other arm, O, is pivoted a latch or loop, Q, that will normally rest in engagement with the teeth R on a ratchet wheel or disk, S, that is fixed on the end of a shaft, T, having its bearings UU on the frame M, and carrying a fixed drum, V, as shown. To this drum V is secured a chain, W, extending up from near the lower end of the stop-rod X of the wind-wheel, the stop-rod being also provided with a lateral pin or

arm, Y, that is adapted to engage a lever, Z, that is connected by a rod, A², with another lever, B², fulcrumed on a standard, C², and arranged under the latch Q. A weight, D², is preferably attached to the lower end of the stop-rod, to assist in returning the same to its normal position. A pivoted pawl, E², engages the ratchet-disk S, to retain the same from back movement during the operation of the wind-wheel, and this pawl and also the loop Q are both connected with a lever, F², that is operated by a line, G², which passes up and over suitably-disposed pulleys, H², and is secured to the float I² in the tank I, this line being preferably provided with a weight, J², at its lower end, below the lever F², to effect the positive elevation of the float as the water rises in the tank.

The operation and advantages of my invention will be readily understood. When water is drawn from the tank, the corresponding fall of the float will raise the lever F² and the pawl E² will be lifted from engagement with the ratchet-wheel S. The loop Q is also lifted from engagement with the ratchet-wheel, and the latter will be turned with its shaft, as the gravity of the stop-rod X will cause it to fall as soon as the ratchet is released and unwind its chain W from the drum V. As soon as the stop-rod thus falls by reason of the lower level of the water in the tank, the pitman of the wind-wheel will operate to pump the water into the tank, the float will rise, and the lever F² will fall and permit the pawl E² and loop Q to engage the ratchet-wheel S again, when the loop Q will be operated by the rock-shaft K, to wind the chain of the stop-rod on the drum, by turning the shaft by means of the ratchet-disk, the latter being held from backward movement by the pawl E². During the elevation of the stop-rod, as soon as its pin Y lifts the end of the lever Z, the lever B² will lift the loop Q from engagement with the ratchet-wheel S, and the operation of the wind-wheel pitman will cease, sufficient water having been pumped into the tank by this time to elevate the float to its normal level.

By this mechanism the whole operation of starting and stopping the wind-wheel is auto-

matic, and the mechanism is governed by the simple variations of the level of the float in the tank.

I claim as my invention—

- 5 1. The combination of the rotary shaft T, connected with the stop mechanism and carrying the ratchet-wheel, the pawl to hold the latter, the pitman, the rock-shaft having the crank end carrying the pivoted loop that en-
 10 gages the ratchet-wheel, the lever connected with the pawl and loop, the tank, the float in the tank, and the line connecting the float with the said lever, substantially as and for the purpose set forth.
- 15 2. The combination of the pitman of the wind-wheel mechanism, the rock-shaft having

the crank ends and operated by the pitman, the loop arranged on the end of the rock-shaft, the rotary shaft carrying the ratchet-wheel and drum, the stop-rod having the chain ar- 20
 ranged to wind on the drum, the pawl, the lever connected with the pawl and loop, the float, and the line connecting the float with the latter lever, substantially as and for the purpose set forth. 25

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE W. MILLER.

Witnesses:

H. L. STILWELL,
 W. G. ANDERSON.