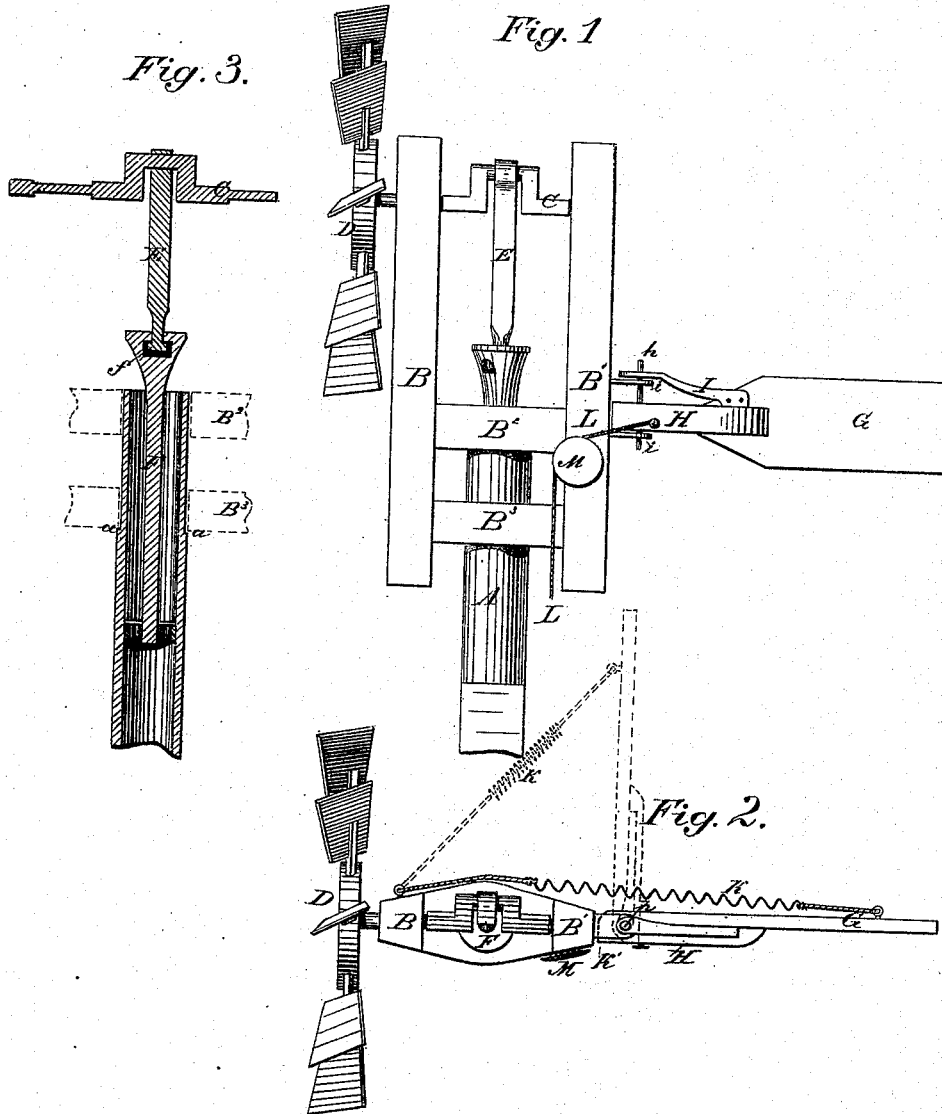


S. RITTENHOUSE.

WIND-WHEEL.

No. 187,672.

Patented Feb. 20, 1877.



Attest:  
*W. B. Smith*  
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# UNITED STATES PATENT OFFICE.

SAMUEL RITTENHOUSE, OF PIONEER, OHIO.

## IMPROVEMENT IN WIND-WHEELS.

Specification forming part of Letters Patent No. 187,672, dated February 20, 1877; application filed June 16, 1876.

*To all whom it may concern :*

Be it known that I, SAMUEL RITTENHOUSE, of Pioneer, in the county of Williams and State of Ohio, have invented certain new and useful Improvements in Wind-Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side elevation. Fig. 2 is a top plan; and Fig. 3 is a vertical section of the pump cylinder and rod.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to that class of wind-wheels that are used principally on farms for pumping water; and it consists in the construction and arrangement of parts whereby a cheap, durable, and efficient mill is made, that, while it is simple in its construction, shall operate with absolute certainty and without danger of getting out of order.

In the drawings, A is the pump-cylinder, upon which is pivoted frame B. The latter consists of two vertical beams, B and B<sup>1</sup>, united by cross-pieces B<sup>2</sup> and B<sup>3</sup>, that are perforated, so as to admit of the insertion of the pump-cylinder A. The latter has a step, *a*, upon which rests cross-bar B<sup>3</sup>, so that the frame will readily turn or rotate around the cylinder. The upper parts of beams B and B<sup>1</sup> form bearings for the crank-shaft C, upon one end of which the wheel D is rigidly affixed. E is a rod, pivoted upon crank C, and united to the pump-rod F by a swivel-joint, *f*, as shown in Fig. 3. The vane consists of the blade G, secured to one side of the swinging beam H, which swings upon a rod, *h*, resting in brackets or bearings *i*, that project from beam B<sup>1</sup>. The swinging beam H is so arranged or pivoted upon rod *h* that its shoulder K' will, when

the vane is placed at right angles with the wheel, abut or bear against the face of beam B<sup>1</sup>, and prevent the vane from swinging too far. *l* is a supporting arm or bracket, which is secured to the blade G, and rests upon the upper bearing *i*, the rod *h* passing through it. K is a spiral spring affixed upon the beam B, and also upon the vane G, in such a manner as to draw the vane into a position parallel to that of the face of the wheel D. L is a chain affixed upon the swinging beam H, and passing over pulley M.

From the foregoing the operation of my improved wind-wheel will be readily understood. The tension of spring K will, as above stated, place the vane parallel to the wheel, so as to throw the latter out of operation; and when it is desired to operate the mill the vane G is placed in a position at right angles to that of the wheel by pulling chain L, and securing the end of the chain at the bottom of the pump-rod. The moment the hold upon chain L is let go the spring K will force the vane G H back into its normal position parallel to the wind-wheel, and the mill will cease operation.

I am aware that it is not new to arrange the vane of a wind-wheel in such a manner that it may be turned to a position parallel to that of the wheel; hence I do not claim such an arrangement, broadly; but,

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination of the pivoted frame B, carrying wind-wheel D, spring K, vane G H, chain L, and pulley M, all arranged to operate substantially as and for the purpose hereinbefore set forth.

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

SAMUEL RITTENHOUSE.

Witnesses:

LEVI HAWK,  
RICHARD FRISBIE.