

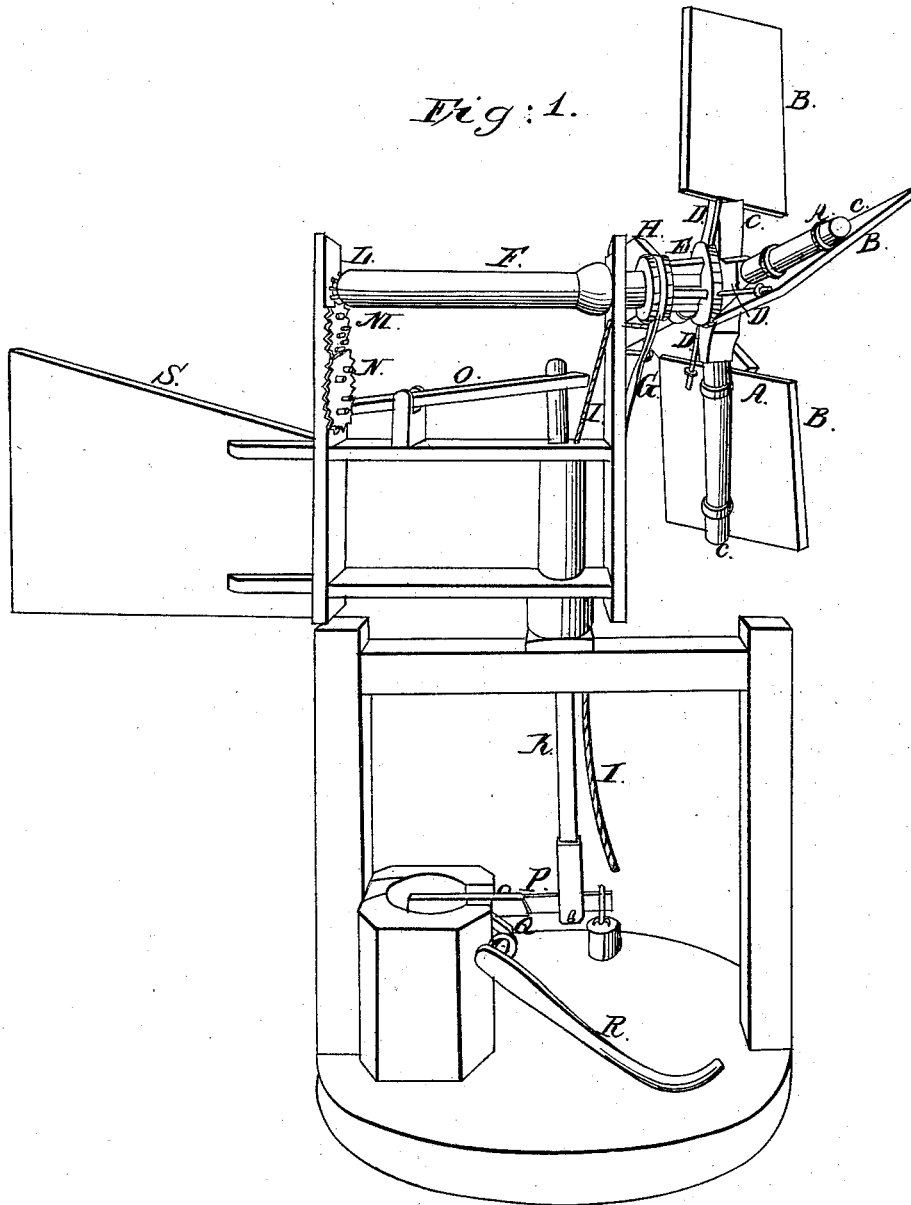
Garver & Fahrney,

Wind Wheel,

N^o 1914.

Patented Dec. 28, 1840

Fig: 1.



UNITED STATES PATENT OFFICE.

SAMUEL FAHRNEY AND ISAAC GARVER, OF BOONSBOROUGH, MARYLAND.

IMPROVEMENT IN WINDMILLS, &c.

Specification forming part of Letters Patent No. 1,914, dated December 28, 1840.

To all whom it may concern:

Be it known that we, SAMUEL FAHRNEY and ISAAC GARVER, of Washington county, State of Maryland, have invented a new and useful Improvement in Windmills for Raising Water and for other Purposes, which is described as follows, reference being had to the annexed drawing of the same, making part of this specification, in which the figure is a perspective view of the windmill.

The windmill generally in its construction resembles other windmills in use.

The improvement consists, principally, in a combination and arrangement of parts for setting and holding the sails to the wind and for changing their position, so as to present their edges to the wind when it is desired to stop the motion of the wheel or remove the danger of its being destroyed by high winds, and in order to effect this object the wings are made to turn on the arms of the wheel by fastening rings A to the backs of the wings B, through which the arms C are inserted, and attaching rods D to the backs of the wings, which radiate from the periphery of a thimble or collar E on the horizontal shaft F of the mill, and which thimble has a backward and forward movement on the shaft in changing the position of the wings by means of a spring G, whose upper end passes into a circular groove H, made round the thimble near one end, which allows the thimble to revolve over said end of the spring, while its other end is made fast to the side of the frame by riveting or otherwise. The spring keeps the thimble extended outward near the arms of the wheel and the sails consequently extended or set at the required angle to the wind, and when it is required to turn the sails so as to present their edges to the wind in order to stop the wheel a cord I, attached to the spring and leading over a pulley and down through the frame to within reach of the attendant, must be drawn by him to accomplish the aforesaid object.

Instead of having a crank on the main shaft, to which the vertical connecting-rod K of the

pump-handle is attached, a cog-wheel L may be put on the end of said shaft, which works into a larger cog-wheel M, turning on a horizontal stud or pin inserted into the frame, from the face of which there projects a circle of pins or cogs, which work into another large cog-wheel N, from which projects another circle of pins, which strike upon the short end of a lever O, attached to the upper end of the vertical jointed rod attached to the pump-handle P, vibrating on a crank-axle Q for raising it, which pump-handle being weighted for the purpose of lifting the water as it descends, the pins in the face of the cog-wheel striking upon the short end of the lever O, depressing the same and raising the long end with the jointed rod K and pump-handle, which causes the piston or box to descend and its valve-box to dip into the water, and the cog-wheel continuing to turn the pins slip over the said short end of the lever, when the weighted pump-handle descends, and consequently lifts the water.

The axle Q of the pump-handle has a crank on it, so that a separate handle R may be fixed on it and be used separately by hand, when necessary, or in conjunction with the wind-wheel. The frame of the wheel is furnished with anti-friction wheels and a tail-piece S of the usual construction for giving the wheel its proper direction to the wind.

What we claim as our invention, and which we desire to secure by Letters Patent, consists—

In the before-described arrangement of the inflexible rods D, attached to the backs of the sails B and to the rim of the thimble E, and in combination therewith, a spring G for keeping the springs in an extended position, instead of cords and weights, which have been used.

SAMUEL FAHRNEY.
ISAAC GARVER.

Witnesses:

MARTIN SHULER,
SAMUEL GEARHART.