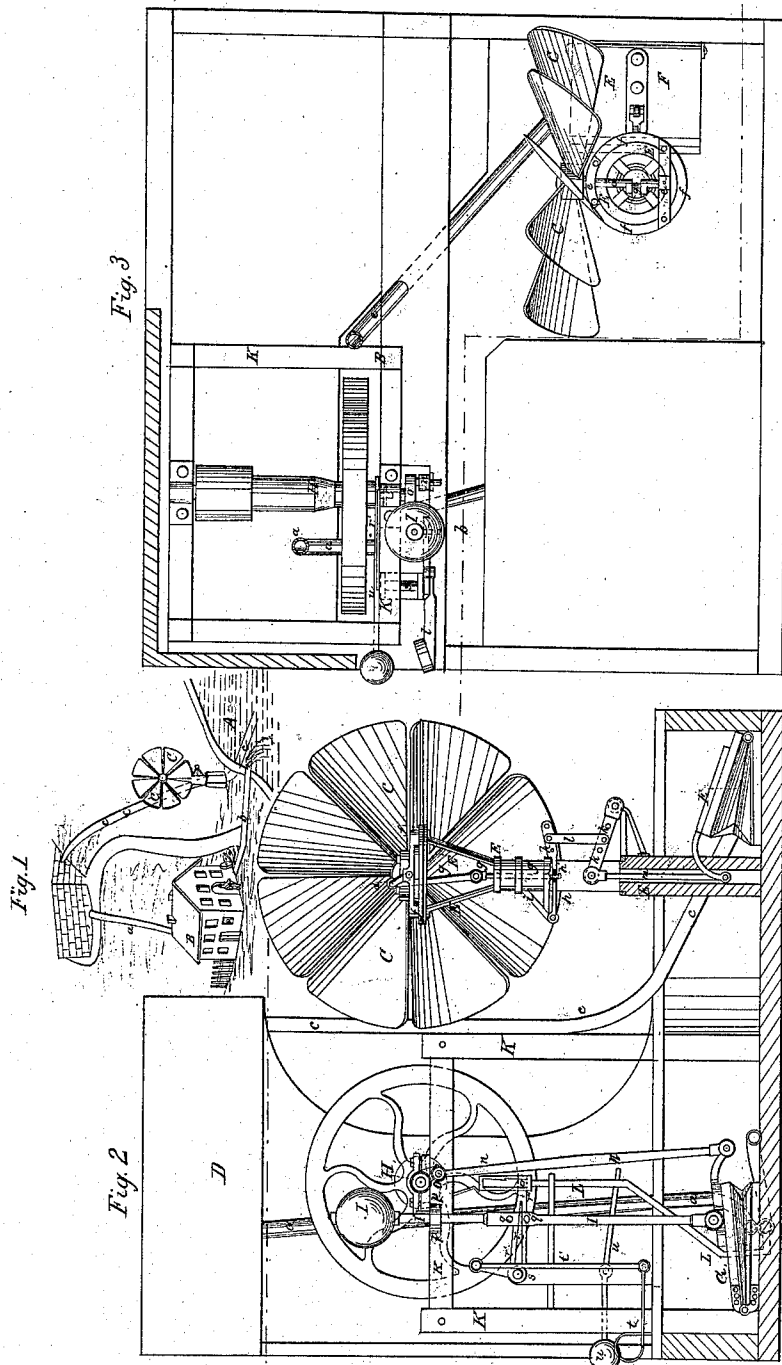


J. Schenker,
Wind Wheel,

N^o 68,007.

Patented Aug. 20, 1867.



Witnesses
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JOSEPH SCHENKER, OF BROWNSVILLE, MINNESOTA.

Letters Patent No. 68,007, dated August 20, 1867.

IMPROVEMENT IN WINDMILLS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOSEPH SCHENKER, of Brownsville, in the county of Houston, and State of Minnesota, have invented a new and improved Windmill-Power Regulator; 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 make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of this invention is to provide a machine whereby standing or stagnant water, either in lakes or tanks or cisterns, may be utilized to drive heavy machinery in such a manner that by the use of a windmill the water is pumped into an elevated tank or reservoir, whence it falls down, and by the fall enough power is developed, in proportion to the height and diameter of the column of water, that a large machine may thereby be driven.

The invention consists in the construction and arrangement of the working parts of the machine so that the aforesaid results may be obtained in the simplest and easiest manner, as will be hereinafter more fully described. In the accompanying drawing my invention is completely illustrated—

Figure 1 being a perspective view, showing how this invention is to be applied.

Figure 2 is a side elevation of my invention, and

Figure 3 is a plan or top view of the same.

Similar letters of reference indicate like parts.

To make it fully understood how this invention is to be applied, I will proceed to describe its general principle.

A, fig. 1, represents a lake or reservoir which is on about the same level as the machinery contained in the building, B, which machinery is to be driven by the water in A. For this purpose the water is pumped by the windmill C into a reservoir, D, which is situated sufficiently high that when the water in it falls through the pipe *a* towards and against the machinery in B, sufficient power will be developed to drive the same. *b* is the waste pipe through which the water is returned to A again. *c* is the pipe through which the water is pumped into the reservoir D. The windmill C and its construction, as well as the driving parts of the machinery in B, are more fully shown in figs. 2 and 3. The wings of the mill C are secured to crank-shaft *d*, which is hung in boxes *e*, the latter being rigidly secured to the upper surface of a ring, *f*. A vertical rod, *g*, is secured to the crank, and receives a reciprocating motion by the revolutions of the shaft *d*. The rod *g* consists of two parts which are hinged together, as shown, and at its lower end the said rod is secured to a horizontal bar, *h*, by a swivel-joint, *h'*. By means of this swivel-joint, and also by the ring *f*, which revolves freely on top of the standard E, by which the whole mill is supported, the wings C may be turned towards the wind or in any desired direction. The bar *h*, which is hinged to an arm, *i*, which is secured to the upright E, receives an oscillating motion by the up-and-down motion of the rod *g*, and imparts a similar oscillating motion to a bar, K, which is secured to an arm, K', that is attached to the upright E, and with which bar K the said bar *h* is connected by a rod, *l*. The bar K is pivoted to a vertical rod, *m*, which connects with the upper flap of a bellows, F. Thus, as the shaft *d* is revolved the water from the lake or reservoir A is pumped through the pipe *c* into the upper reservoir D. The apparatus is so arranged that it will work equally well with more or less wind, and may be accordingly adjusted by securing the rod *l* to the bars K and *h* at a greater or less distance from the upright E. The bellows F are made of iron or metal, with leather joints, and operate in the same manner with water as ordinary bellows usually do with air. The water falls from the reservoir D through a pipe, *a*, and enters another bellows, G, which is of similar construction as the bellows F. The upper flap of G connects by a vertical rod, *n*, with the crank *o* of the driving-shaft H of the machine, so that as the flap of G moves up and down the shaft H will receive a rotary motion. The bellows G are provided with two water-ports which are alternately opened and closed by the self-regulating apparatus arranged on it. The same consists of a weighted vertical bar, I, (the weight of which is half that of the pressure of the water,) which is hinged to the upper flap of the bellows G, and is guided in staples, *p*, which are secured in the frame K, by which frame the shaft H is supported. The pressure of the water presses the upper flap of the bellows and also the rod I up. On the rod I are secured two pins, *q* and *q'*. The latter, as the rod I is moved up, presses an arm, *r*, which is secured to an oscillating shaft, S, up, and another arm, *r'*, in the same shaft, raises by that motion the rod L, on the lower end of which the valve is secured, whereby the supply will be shut off. Thus, as the rod I is raised, the supply through the

pipe *a* to the bellows is stopped, and the weight on the said bar can then depress the bellows again and force the water out through the pipe *b*. As soon as the rod *I* is down far enough the pin *q* will depress the arm *r* on the shaft *S*, and with it the arm *r'*, so that the rod *L* will be thrown down and close the port for the escape, while it opens the supply, and so forth. The motions of the rod *L* are made sudden by the application of the spring *t*, operating on a rod, *t'*, which is connected to a crank on the shaft *S* for depressing *L*, and for stopping the escape and reopening the supply. For suddenly opening the escape and closing the supply, the rod *L* is operated on by a weighted arm, *u*, which is pivoted to the frame *K*.

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

The self-acting shut-off of the bellows *G*, operated by the weighted rod *I*, pins *q q'*, arms *r* and *r'*, on rod *S* and rod *L*, and by the aid of the spring *t* and weighted lever *u*, all substantially as and for the purpose herein shown and described.

JOSEPH SCHENKER.

Witnesses:

ABRAM RHOADS,
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