JAMES J. HOSEY.

Wind-Wheel.

No. 127,771. Patented June 11, 1872.

Fig. 1.

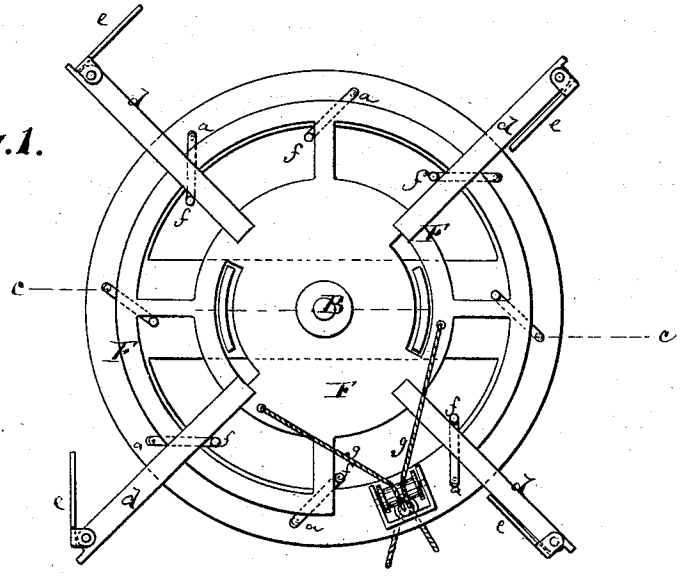


Fig. 2.

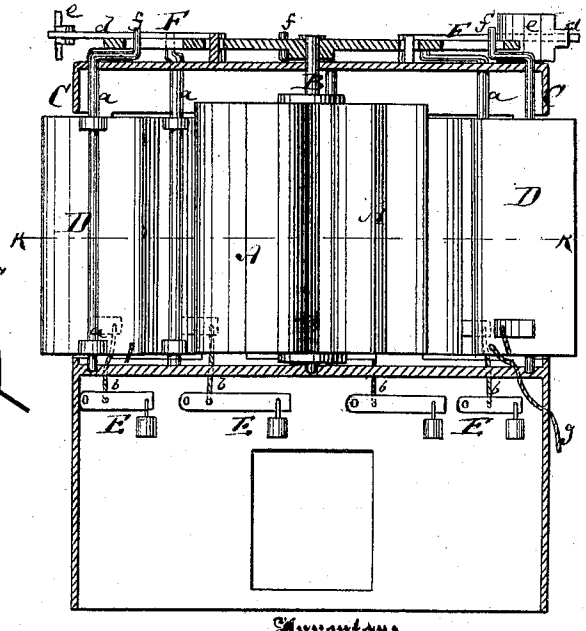
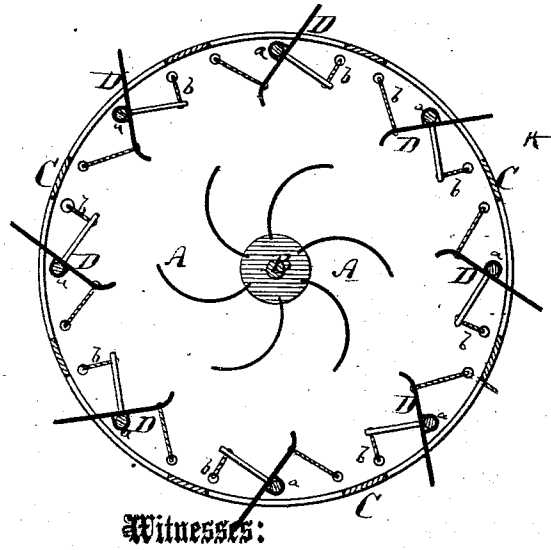


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES J. HOSEY, OF CAPE GIRARDEAU, MISSOURI.

IMPROVEMENT IN WIND-WHEELS.

Specification forming part of Letters Patent No. 127,771, dated June 11, 1872.

Specification describing a new and Improved Windmill, invented by JAMES J. HOSEY, of Cape Girardeau, in the county of Cape Girardeau and State of Missouri.

Figure 1 represents a top view of my improved windmill. Fig. 2 is a vertical section of the same on the line *c c*, Fig. 1. Fig. 3 is a horizontal section of the same on the line *k k*, Fig. 2.

Similar letters of reference indicate corresponding parts.

This invention relates to a new self-regulating windmill—that is, to a windmill whose power and motion will always be equal and steady though the wind may be heavy and light alternately. The mill will thereby become applicable to all kinds of work, and be reliable. It is the great and just objection to the windmills now in use that they vary in their motion and power with the varied power of the wind. They are therefore not useful for fine work, nor can they be relied upon as steady. My invention consists in the application about the mill of weighted doors, which, being exposed to the wind, become the more shut the stronger the wind strikes them. They therefore keep from the fan or mill proper a larger proportion of air-contact; and thus, the more powerful the effect of the remaining portion will be on such fan, and this will consequently serve to equalize the motion. The invention also consists in several details of arrangement, as hereinafter more fully described.

A in the drawing represents the fan or wheel which is revolved by contact with the wind. It is mounted upon a shaft, B, which hangs in a stationary frame of suitable kind, and serves to transmit its motion by suitable means to the mechanism to be acted upon. C is an upright stationary cylinder surrounding the fan or wheel A, and provided with eight, more or less, large openings through which the wind is admitted to the wheel for turning it. For each opening in the cylinder C is provided a swivel-gate, D, turning on a vertical pivot, *a*, near its middle, though one of its sides, the one swinging inwardly, is so much larger than the other, swinging outwardly, that the wind striking a gate will have the tendency to close it. Each gate D is, by a cord, *b*, or its equivalent, connected with a weighted lever, E, hanging in the cylinder. The tendency of this lever is to keep the gate open. Thus the wind and the levers E counteract each other as far as the gates are concerned.

The more powerful the wind the more will it succeed in reducing the openings left by the gates, and the smaller will, therefore, be the quantity of air admitted to the wheel A. The lighter the wind the more will the weights succeed in opening the gates and admitting more air to the wheel. In this manner the device is self-regulating, and can be adjusted by more or less weighting the levers E.

In some cases the gates can be tied, if desired, to keep them open against the force of wind, especially when the wind is so strong as to threaten to shut the gates altogether.

The drawing shows a further attachment whereby the self-controlling mechanism is aided. It consists of a wheel, F, fitted upon the cylinder, and provided with projecting arms *d d*, to which fan-blades *e e* are hinged. The wheel F has slots cut through it, into which cranks *f*, projecting from the pivots *a* of the gates, are fitted. The blades *e* are so hinged that the wind will only act on them in one direction—*i. e.*, try to fan the wheel only in one direction. When thus turned the wheel will shut the gates. Therefore the wheel F aids in making the gates self-closing to a strong wind. By means of cords *g g* the wheel can be arrested in very strong wind.

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

1. The gates D D, arranged about a windmill, and connected with the weighted levers E E, substantially as herein shown and described.

2. The wheel F having the blades *e*, and arranged, in combination with the gates D, substantially as herein shown and described.

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