

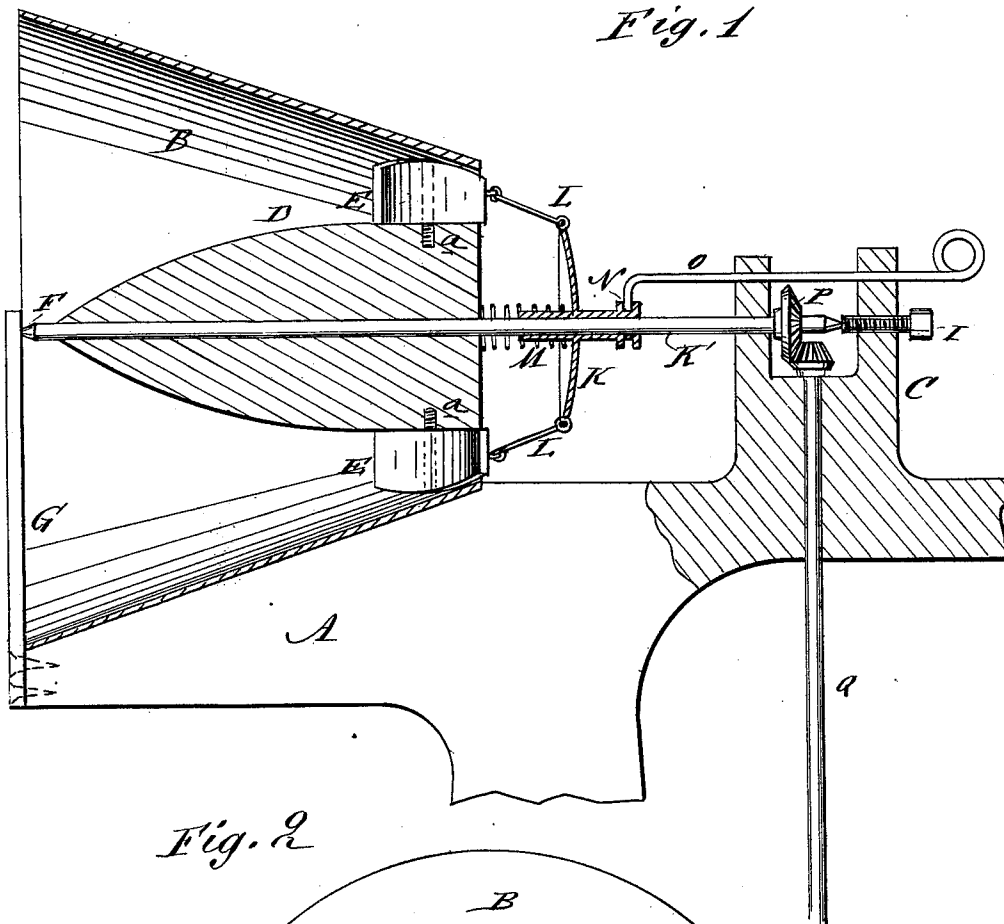
(No Model.)

J. AUSTIN.  
Wind Wheel.

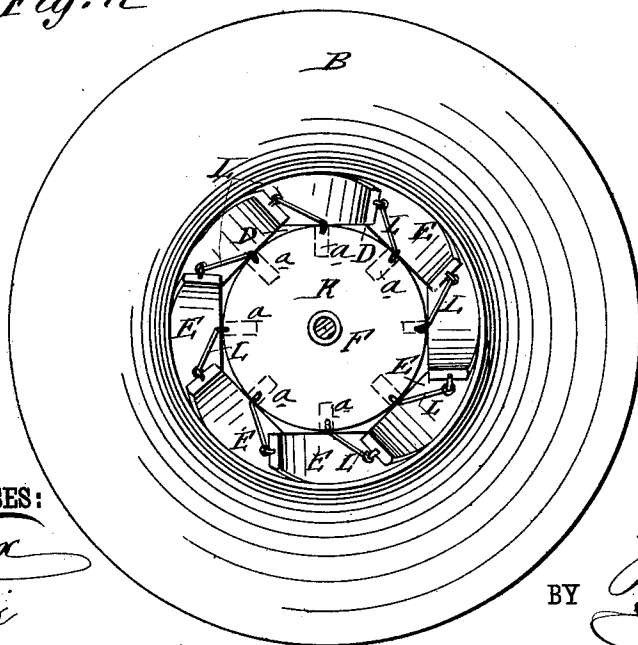
No. 231,253.

Patented Aug. 17, 1880.

*Fig. 1*



*Fig. 2*



WITNESSES:

*C. Severance*  
*C. Sedgwick*

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# UNITED STATES PATENT OFFICE.

JULIUS AUSTIN, OF WAKEMAN, OHIO.

## WIND-WHEEL.

SPECIFICATION forming part of Letters Patent No. 231,253, dated August 17, 1880.

Application filed May 27, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS AUSTIN, of Wakeman, Huron county, Ohio, have invented a new and Improved Wind-Wheel, of which  
5 the following is a specification.

The object of this invention is to provide a simple, inexpensive, and effective device to be operated by the wind for actuating pumping, grinding, and other machinery.

10 Figure 1 is a sectional side elevation of the device, and Fig. 2 is a front elevation of the same.

Similar letters of reference indicate corresponding parts.

15 In the drawings, A represents the horizontal revolving frame, designed to be pivoted vertically on a post, so as to turn in the direction of the wind, and designed also to be provided with a suitable vane at its rear end, for the  
20 purpose of always presenting the sails to the wind.

B represents the funnel fixed horizontally upon the upper face of the said frame A, and C is a standard fixed on the frame A in rear  
25 of the funnel B.

D is the cone, having an octagonal base, as shown, on the faces of which base are the radial pins *a a*. The sails E E are pivoted, so that when the sails E E are closed they overlap each other and form around the base of the cone D a ring, almost entirely closing the space between said base and the surrounding funnel B, the outer edge of said sails E E being curved for this purpose. The cone D, carrying the sails E E, is keyed on the spindle F, that is supported in a horizontal position centrally with the funnel B, with the apex of the cone at the mouth of the said funnel. The front end of said spindle F is journaled in the upright support G, which projects upward from the frame A, while the rear end of said spindle F passes through one upright of the standard C, and is pivoted against the end of the adjustable screw I, which rests in the opposite  
45 upright of said standard C.

A metallic concave disk, K, is fitted on the sleeve K', that fits loosely about the spindle F in rear of the funnel B, and said disk K is connected by rods L to each of the sails E E

in such a manner that the movement of said  
50 disk forward or rearward on said spindle F will close or open the sails E E, as the case may be. A spiral spring, M, encircles the spindle F between the cone D and the disk K, and serves to press said disk forward and  
55 thereby hold the sails E E closed.

The grooved sliding collar N encircles the sleeve K', and is grasped by one end of the rod O, by means of which the operator can push said collar N against the rear of the disk  
60 K, and thereby force said disk forward with the effect of closing the sails E E to any desired degree.

About the rear end of the spindle F is keyed a beveled wheel, P, that gears into a corresponding wheel on the vertical shaft Q, and thereby transmits the motion of the device. A crank could be used instead of wheels, if  
required.

I am aware that a wind-wheel has been arranged at the inner end of a wind-flume and hinged blinds at the outer end, the whole to be operated together; also, that blades have been fitted to revolve on radial hub-arms and connected to the fans, which are themselves  
75 connected with a spring-actuated sliding sleeve.

My cone diverts the wind to the outside of the diameter of the wheel, so as to obtain more power than if it acted on the whole face of  
80 the wheel, while the funnel, being larger at the end next to the wind, catches more wind than if it was no larger than the wheel.

What I do claim as new and of my invention is—  
85

In a windmill, the combination with the horizontally-revolving frame A C, of the outwardly-flaring funnel B, fixed horizontally on said frame, and the inwardly-enlarging cone D, having an octagonal base carrying sails E, said  
90 cone being keyed on spindle, and said sails being connected with the spindle by rods L and disk K, as shown and described.

JULIUS AUSTIN.

Witnesses:

JOHN CALKINS,  
J. McMANN, Jr.