

(No Model.)

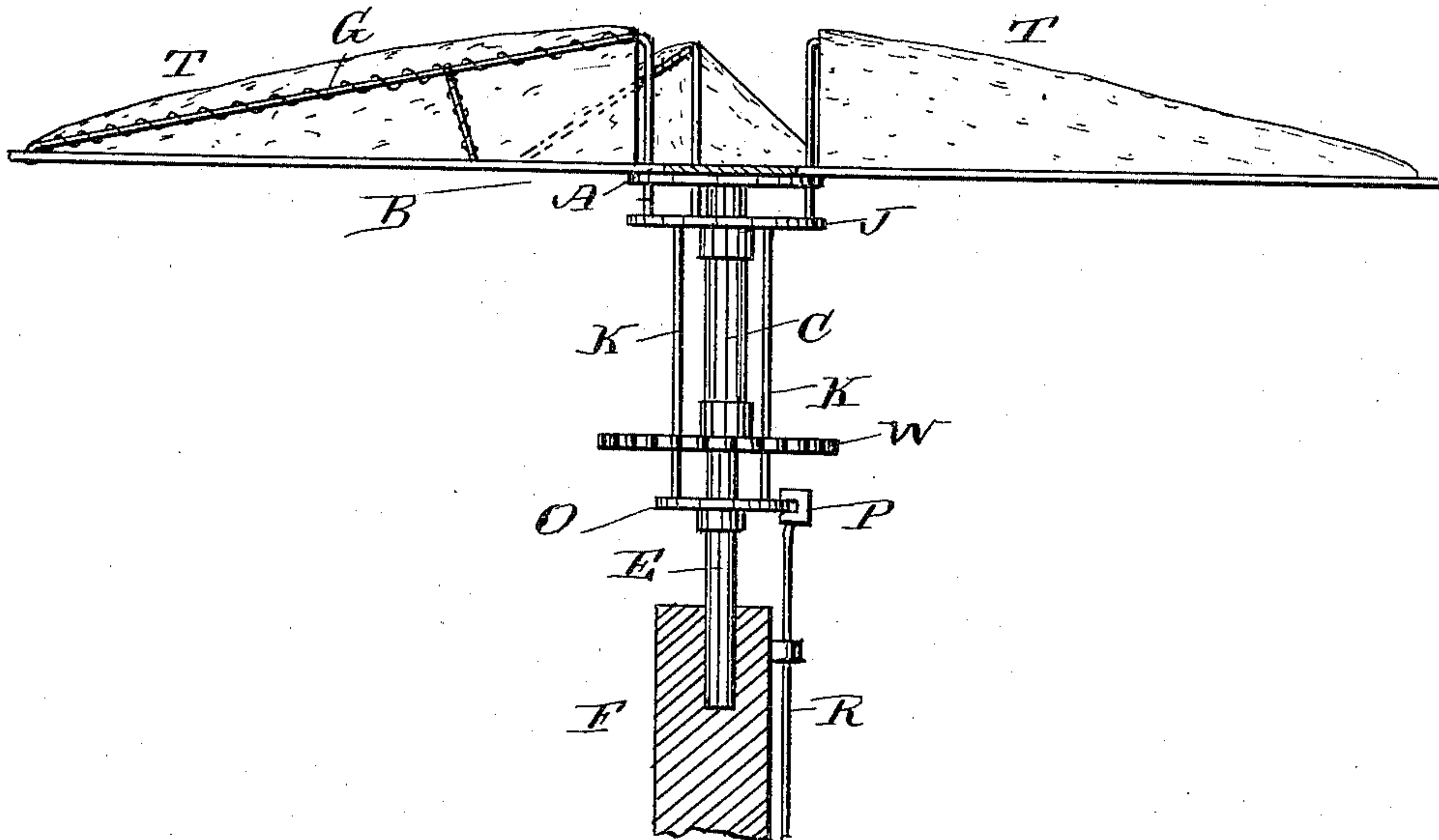
F. G. TALLERDAY.

WIND WHEEL.

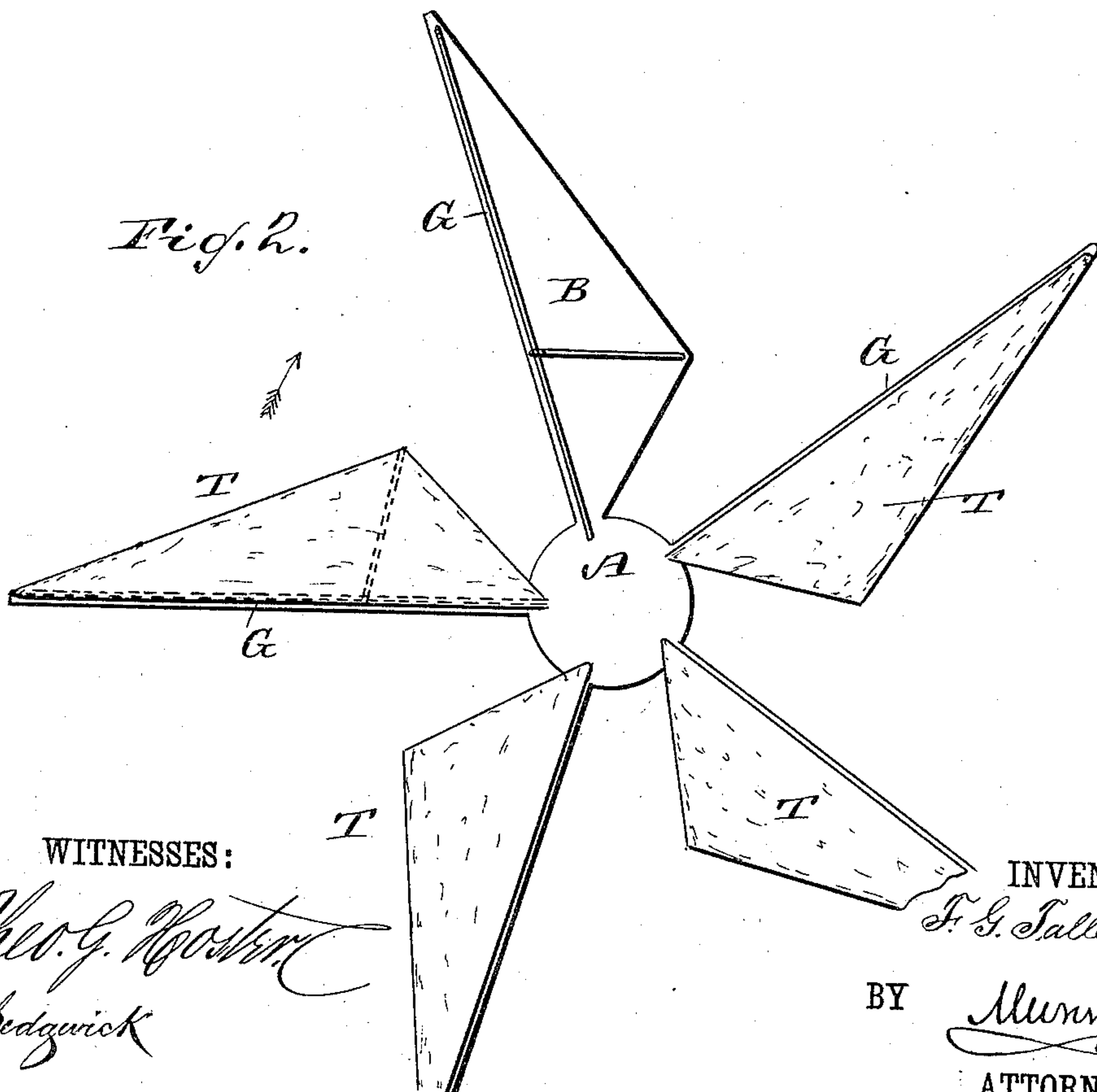
No. 330,168.

Patented Nov. 10, 1885.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FRANKLIN G. TALLERDAY, OF POPLAR GROVE, ILLINOIS.

## WIND-WHEEL.

SPECIFICATION forming part of Letters Patent No. 330,168, dated November 10, 1885.

Application filed September 7, 1885. Serial No. 176,453. (No model.)

*To all whom it may concern:*

Be it known that I, FRANKLIN G. TALLERDAY, of Poplar Grove, in the county of Boone and State of Illinois, have invented a new and  
5 Improved Wind-Wheel, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved wind-wheel which is simple in construction, strong and durable, and  
10 develops great power.

The invention consists in the construction of parts and details and combinations of the same, as will be fully described and set forth hereinafter, and then pointed out in the claims.

15 Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side view of my improved  
20 wind-wheel, partly in section. Fig. 2 is a plan view of the same, parts of the same being broken out.

The central disk, A, is provided with a series of radially-projecting flat triangular arms, B, and said disk is secured on the upper end  
25 of a sleeve, C, mounted to turn on a spindle, E, projecting upward from a suitable standard or support, F, the wheel-frame being thus mounted to revolve in the horizontal plane.

30 The triangular wings T, made of sail-cloth or other suitable material, have their angle sides secured to the corresponding angle sides of the arms B, and the straight sides are secured to rods or wires G, having their outer ends  
35 secured to the outer ends of the arms B, and their inner ends bent downward and through apertures in the disk A, and the lower ends of said rods are then secured on a ring or flat collar, J, surrounding the sleeve C, below the  
40 disk A.

Rods K extend downward from the ring J, and on their lower ends a ring, O, is secured, which surrounds the spindle E. A hook, P, is passed over the edge of the disk or ring O,  
45 and is secured on a sliding rod, R, on the standard F, so that by moving said rod up and down the rings J and O are also raised or lowered, and thus the inner ends of the wings T are raised or lowered.

50 On the lower end of the sleeve C a cog-wheel, W, is mounted, from which power is transmit-

ted. The rods K are passed through the cog-wheel W. When the inner ends of the wings are raised, the wind can act on the wings and revolve the sleeve C and the cog-wheel W. 55

My improved wind-wheel can be used on mills, pumping-stations, on sailing-vessels, and for various other purposes.

Very great power can be obtained by means of my improved wheel with a moderate wind, 60 and as the construction is very simple there is very little danger of parts getting out of order.

I do not limit myself to the devices shown and described for transmitting the power or shifting the wings. 65

The radial arms may be made solid or of frame-work. In place of cog-wheels, any other device may be used for transmitting motion, and a governor similar to those used on steam-engines may be used, which governor is to be  
70 connected with the rod R for the purpose of automatically raising the wings to govern the speed. The rods held in the collar or ring J may be arranged to slide about one-fourth of the elevation independently when the wheel 75 is in motion. The wind acting upon the concave part of the wing opens it to its fullest capacity, and when acting on the convex surface closes the fan or wing part way down.

Having thus described my invention, what 80 I claim as new, and desire to secure by Letters Patent, is—

1. In a wind-wheel, the combination, with a disk having flat radial arms, of wings on the arms, the wings having their forward edges  
85 connected with the forward edges of the arms, and of rods or wires connected with the rear edges of the wings for raising and lowering the said rear edges of said wings, substantially as herein shown and described. 90

2. In a wind-wheel, the combination, with a disk having radial triangular arms, of triangular wings secured to the arms along the angular sides, and of rods secured to the straight sides of the wings, which rods are vertically  
95 movable and serve to raise or lower the wings at their rear edges, substantially as herein shown and described.

3. In a wind-wheel, the combination, with the disk A, having the flat radial arms B, of the wings T, having their forward edges connected  
100 to the forward edges of said arms, the rods G,



for adjusting the wings, connected at their outer ends to the arms B, and extending downward at their inner ends through the disk A, the ring J, surrounding the spindle on which the wheel revolves, and connected to the ends of said rods G, substantially as set forth.

4. In a wind-wheel, the combination, with the disk A, having the flat radial arms B, of the spindle E, the sleeve C, provided with means for transmitting power, connected to the disk A, and mounted on the said spindle, the wings T, secured to the arms B, as set

forth, the rods G, connected with the wings, and the radial arms, as described, bent at their inner ends and passed down through disk A, the sliding ring J, to which the bent ends of the rods G are connected, the sliding ring O below the ring J, and vertical rods K, connecting said rings, and the rod for operating said rings, substantially as set forth.

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