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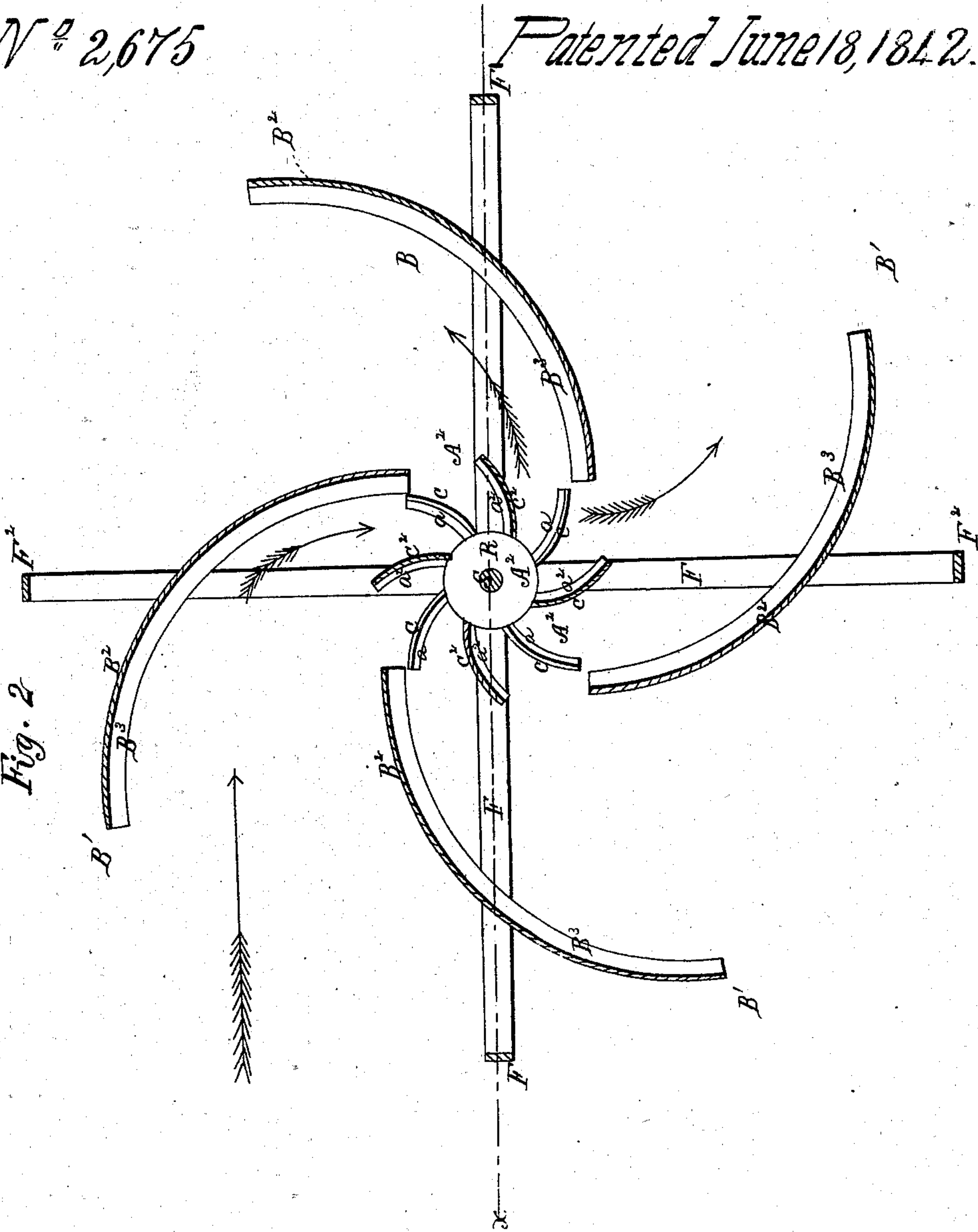
# J. R. Remington,

## Wind Wheel.

N<sup>o</sup> 2,675

Patented June 18, 1842.

Fig. 2





# UNITED STATES PATENT OFFICE.

JOHN R. REMINGTON, OF ABERFOIL, ALABAMA.

## IMPROVEMENT IN WIND-WHEELS.

Specification forming part of Letters Patent No. 2,675, dated June 18, 1842.

*To all whom it may concern:*

Be it known that I, JOHN R. REMINGTON, of Aberfoil, in the county of Macon and State of Alabama, have invented a new and useful Improvement in Windmills, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a vertical section at the dotted line  $xx$  of Fig. 2. Fig. 2 is a horizontal section at the dotted line  $oo$  of Fig. 1. Fig. 3 is a perspective view of the windmill.

Similar letters refer to corresponding parts.

This windmill consists of the following combination of parts: The frame for containing and supporting the wheels may be made in the usual manner—square, polygonal, or round. A vertical shaft  $S$  is placed in the center of the frame, turning in a step or oil-cup fixed in the center of the intersection of the cross-arms of a revolving wheel of concentrating sails, hereinafter described, and in a box in the center of one of the caps of the frame and extending above the top a convenient distance, on which there is a cog-wheel  $D$  or pulley geared to the machine, to be propelled in the usual manner. A wheel  $A'$ , consisting of four segment-arms  $a$ , Fig. 2, and four wings  $C$ , is formed on the lower half of said shaft  $S$ , said arms  $a$  extending horizontally from said shaft or extending from the peripheries of horizontal circular plates  $R$ , fixed on the shaft  $S$ , as represented in the drawings, Fig. 2, to which the sails  $C$  are fixed in the usual manner, extending from the outer extremities toward the shaft to within a short distance therefrom. A similar wheel  $A^2$  is formed on the upper half of said shaft of the same diameter and resting upon the top of the last-described wheel, with its wings  $C^2$  arranged over the center of the spaces between the wings  $C$  of the lower wheel  $A'$ , so that the wings of the two wheels shall not pass the concentrating guides  $B^2$ , hereinafter described, at the same time. A third revolving wheel  $B'$  encircles the aforesaid center wheels  $A' A^2$ , and revolves around them in the same direction and on the shaft  $S$ , the circular space in the center of the same being larger than the outer diameter of the center

wheels  $A' A^2$  revolving within the same, having its wings  $B^2$  longer than the combined wings of the two center wheels  $A' A^2$  and of proportionate width, fastened at top and bottom to segment-arms  $B^3$ , Fig. 3, secured obliquely to four horizontal arms  $F$ , crossed at right angles and perforated in the center of their intersection with circular apertures through which the aforesaid shaft  $S$  passes, and on which the last-mentioned wheel  $B'$  revolves, having the outer extremities of said arms  $F$  connected by four parallel vertical rods  $F^3$ , the chords of the arcs of the aforesaid sails forming an angle of about forty-five degrees with the radiating arms  $F$ , to which the segments are secured and to which the sails are made fast, said sails performing the double office of propellers and concentrating-guides, propelling the larger wheel, and at the same time guiding and concentrating the currents of wind to and against the sails of the small or center wheels, and therefore may be termed "concentrating-guides." These guides may be made stationary by fastening the arms  $F$  to the frame of the wheel, (not shown in the drawings,) in which position they would serve the part of concentrating-guides only; but when they revolve the power of the large wheel is added to that of the small wheels, and is conveyed to the machinery to be propelled by having a hollow hub  $H$  fixed to the arms at the intersection thereof, and around which is passed a band leading to the machinery to be propelled, or the power may be conveyed by means of cogged gearing and in any convenient way. In the center of the intersection of the lower arms  $F$  is fixed an inverted conical point  $I$ , projecting downward into a step or oil-cup  $J$ , fixed on one of the sills or bed-pieces  $K$  of the frame in which it turns.

What I claim as my invention, and which I desire to secure by Letters Patent, is—

The combination of the revolving concentrating-guides with the center revolving wheels, as before described.

JOHN R. REMINGTON.

Witnesses:

ROBT. K. NICHOLS,  
DAVID FARRIOR.