

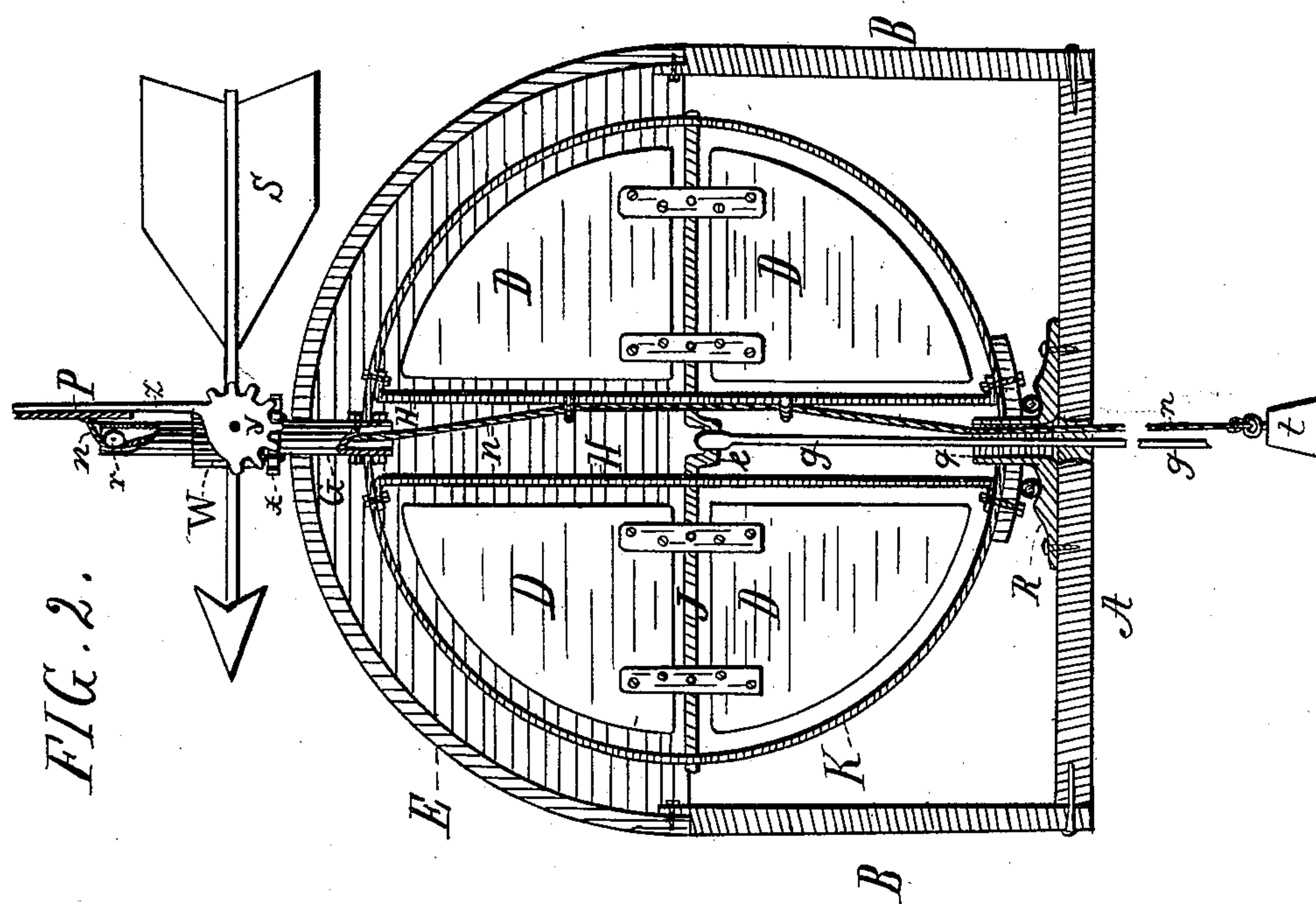
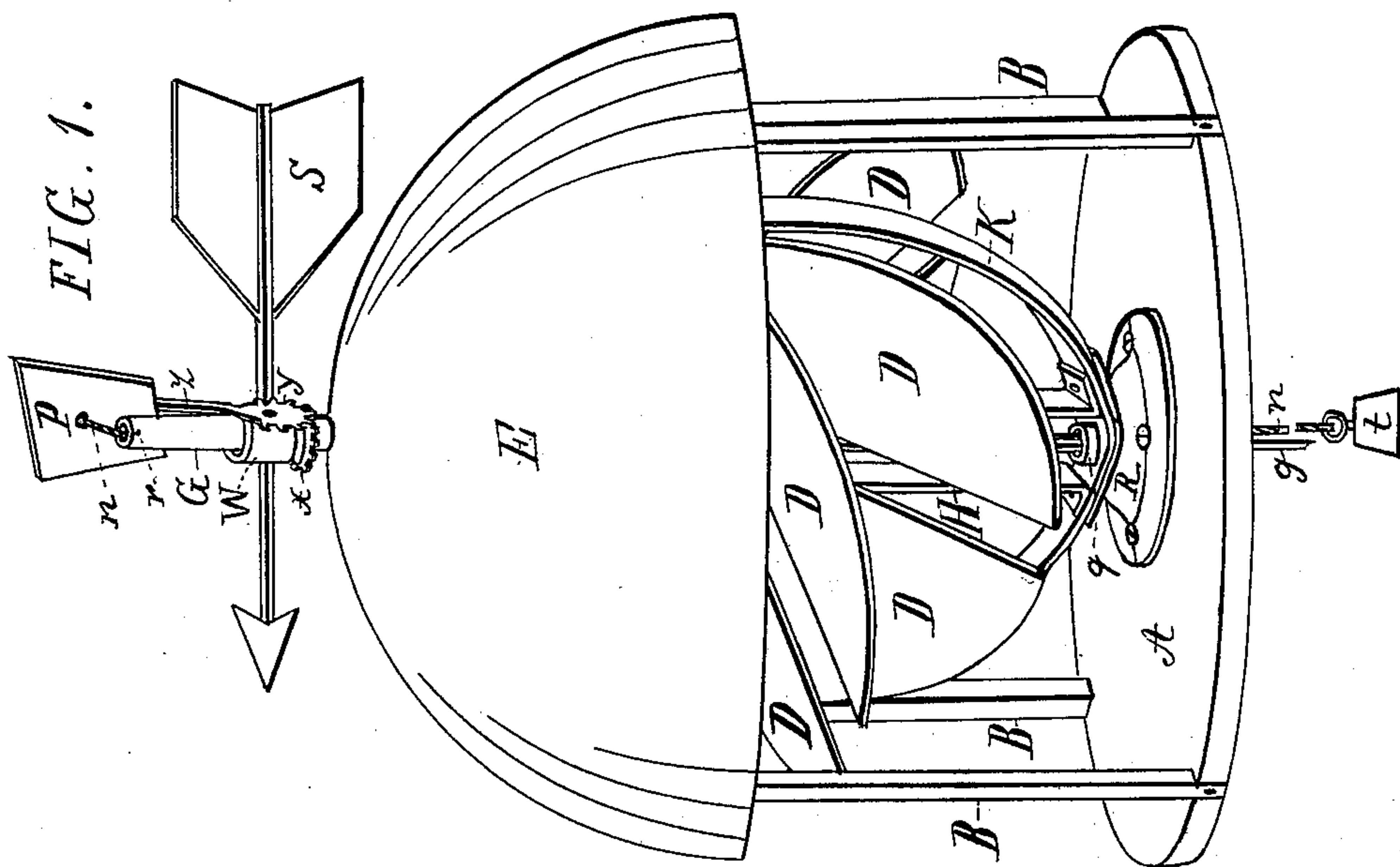
(No Model.)

J. SERDINKO.

WIND ENGINE.

No. 335,388.

Patented Feb. 2, 1886.



Witnesses:
C. H. Holtz
A. Piesenhahn

Inventor.
John Serdinko.

UNITED STATES PATENT OFFICE.

JOHN SERDINKO, OF NEW BRAUNFELS, TEXAS.

WIND-ENGINE.

SPECIFICATION forming part of Letters Patent No. 335,388, dated February 2, 1886.

Application filed March 20, 1885. Serial No. 159,550. (No model.)

To all whom it may concern:

Be it known that I, JOHN SERDINKO, a citizen of the United States, residing at New Braunfels, in the county of Comal and State of Texas, have invented a new and useful Circular Wind-Engine, of which the following is a specification.

My invention relates to an improvement in wind-engines, in which a vertical circular frame having a wind-wheel is covered to the half by a hemispherical roof supported by posts, its construction and arrangement of the different parts, all as more fully hereinafter described and claimed.

The accompanying drawings, to which reference is made, fully illustrate my invention.

Figure 1 is a perspective view of the entire wind-engine, and Fig. 2 is a vertical section of the wind-engine.

Similar letters refer to similar parts throughout the several views.

A is the platform, which may be circular in shape, having at its center a hole bored through. On its sides, at suitable distances apart, are rigidly secured the ends of the vertical posts or columns B B—three or more in number. The other ends of said posts are rigidly secured to and support the hemispherical roof E, which roof has a hole in center. The plate R has an opening in the center and an upward-projecting tube, *g*, which plate is rigidly secured to the center of platform A. Upon the plate R bears and around the projecting tube *g* turns horizontally the circular vertical frame K, the diameter of this frame being some smaller than the diameter of roof E. Anti-friction rollers may be used between said frame K and plate R. The parallel and vertical bars or stays H H have their ends rigidly secured to the upper and lower sides of frame K, some distance apart, to leave a space for the crank *e*. The horizontal shaft J is journaled in the middle of each bar H H and in the opposite sides of frame K. The shaft J has at its middle and between said bars H H a crank or miter-gears, and on its sides and between frame K and bars H H rigidly secured the wind-blades D D, six or more in number, the blades D D being of the shape here shown and of a size so they will pass

easily between the sides of frame K and bars H H while revolving with their shaft J.

G is a vertical tube journaled in the center of roof E. The lower end of said tube passes through the upper side of frame K, and is rigidly secured thereto. The upper end of tube G passes through roof E, and has around it and rigidly secured thereto the horizontal cog-wheel *x*. Above said cog-wheel *x* and around tube G is the loose collar W, which collar has at its opposite sides and rigidly secured thereto the vane S, and at its cross-sides pivoted the arms *z* of wing P. One of the arms *z* has at its pivoted end a vertical cog-wheel or semi cog-wheel, *y*, which engages into the horizontal cog-wheel *x*. The pulley *r* is secured to the top of tube G. The end of the rope or chain *n* is secured to the wing P. The other end passes over the pulley *r*, through tube G, between bars H H, through tube *g*, plate R, and table A to the ground, and has at its lower end attached the weight *t*. The pitman-rod *g* passes from the crank *e*, also through tube *g*, plate R, and table A to the pump rod or machinery.

In operation the parts of the wind-engine are normally in the position shown by the drawings, Fig. 1. The vane S, with its wing P vertically up, turns freely with the variation of the wind, and with it the frame K, with its wind-wheel, consisting of the blades D D, shaft J, crank *e*, facing the wind. As the roof E covers the upper half of frame K and its wind-wheel, thereby only exposing the lower blades to the wind, the wind-wheel will revolve and transmit the power received from the wind by the lower blades, D D, through the shaft J, crank *e*, pitman-rod *g*, to the machinery below. When the power of the wind exceeds a certain force, the wing P will turn with its pivoted arms *z* backward, and cause to turn, through the means of the cog-wheels *y* *x*, tube G of the frame K and its wind-wheel horizontally one-fourth around, and the blades D D now exposing their edges to the wind, the wind-wheel will stop. When the power of the wind decreases, the weight *t* on rope *n* will cause wing P to take its vertical position again, thereby turning, through the means of the cog-wheels *y* and *x*, the tube G of the

frame K and its wind-wheel horizontally back one-fourth around; the blades D D will now face the wind again, and the wind-wheel will revolve. By taking off the weight *t* the mill will be thrown out of the wind, and by increasing or decreasing the weight *t* the wing P will give more or less resistance to the wind. The mill being under cover, durability may justly be claimed.

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

1. In a circular wind-engine, the combination of the circular vertical frame K, with its parallel vertical bars H H, the horizontal journaled shaft J, wind-blades D D, and crank *e*, and the tube G, having its bearings in roof E, and the plate R, upon which said frame bears, and the projecting tube *g*, around which said frame horizontally revolves, substantially as described and shown.

2. In a wind-engine, the combination of a support, a frame journaled vertically thereto, a wind-wheel journaled horizontally in said frame, and a combined roof and shield fitted over the upper end of said wheel, and extended down to approximately the plane of the axis of said wheel, such shield being independent of the wheel-supporting frame, substantially as set forth.

3. The combination of the vertical tube G of the frame K, having bearing in roof E, the rigid horizontal cog-wheel *x*, the loose collar W, with its vane S, and the pivoted arms *z* of the wing P, one of said pivoted arms having a vertical cog-wheel, *y*, which engages into the

cog-wheel *x*, substantially as described and shown.

4. In a wind-engine, the combination of a support, a frame journaled vertically thereto, a wind-wheel journaled horizontally to said frame, a shield, a wind sail or wing, and connections between said sail or wing and the frame, substantially as set forth.

5. In a wind-engine, the combination of a support, a frame, K, journaled vertically therein, a wind-wheel having its shaft journaled horizontally to said frame, a semi-spherical roof and shield, E, fitted over said frame and wheel, and extended down on all sides to and terminating in approximately the plane of the shaft of the wheel, substantially as set forth.

6. In a wind-engine, the combination of a support, a frame, K, journaled thereto, a shaft, J, journaled within said frame, and the blades D, secured on said shaft within the frame K, substantially as set forth.

7. The combination of a support, a frame, K, journaled therein and inclosing a wind-wheel, a projection, G, extended from said frame K, and provided with a cog, *x*, a tube, W, provided with a vane and fitted over the projection G, and an arm, *z*, pivoted to the tube W, and provided with a toothed part, *y*, meshed with the cog *x*, and with a wing, P, all arranged and adapted to be operated substantially as set forth.

JOHN SERDINKO.

Witnesses:

S. H. HOLTZ,

A. FRISENHOHN,