M. C. YOUNG.

WIND-MILL.

No. 183,740. Patented Oct. 24, 1876.

Fig. 1.

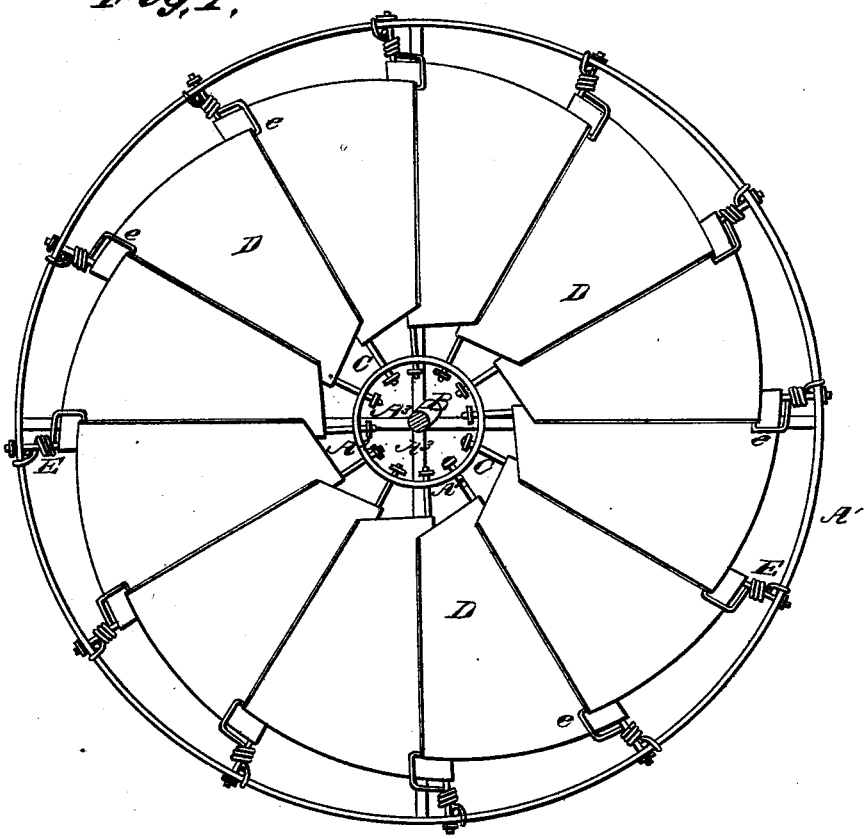
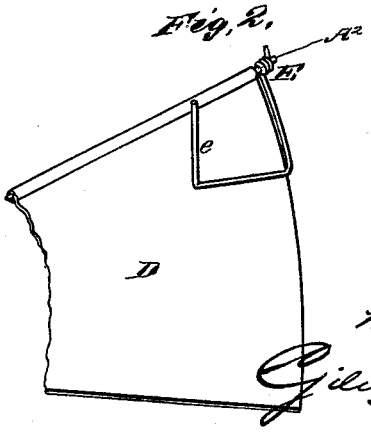


Fig. 2.



WITNESSES

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MICHAEL C. YOUNG, OF EL PASO, ILLINOIS.

IMPROVEMENT IN WINDMILLS.

Specification forming part of Letters Patent No. **183,740**, dated October 24, 1876; application filed June 24, 1876.

To all whom it may concern:

Be it known that I, MICHAEL C. YOUNG, of El Paso, in the county of Woodward and State of Illinois, have invented a new and valuable Improvement in Windmill; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my wind-wheel; and Fig. 2 is a detail, showing a blade and spring.

This invention relates to windmills; and it consists in wind-wheels for said mills, provided with wings or blades which are adapted to be thrown wide open by a strong breeze, thereby regulating the effect thereof, and held partly open so as to catch the wind, by means hereinafter fully set forth.

In the annexed drawings, A^1 designates the frame of a wind-wheel, consisting of outer ring or rim A^1, inner ring A^2, and cross-bars A^3. To cross-bars A^3, at their point of intersection, is secured crank-shaft B, which communicates motion to the machinery of the mill. C C are radial bars or rods, each of which is pivoted to inner ring A^2 and to outer ring A^1. D D are blades or wings, pivoted by one edge to radial bars C C, in the usual manner. E E are springs, which operate to force down each one of said blades by pressing on the back thereof, said springs being wound around rods C C and attached to rim A^1. Each of these springs is also provided with an arm, *e*, which stands at right angles to the blade, against which the spring presses. This arm *e* operates to hold partly open the vane next behind it. By this means the blade is made to present a larger surface to the action of the wind than if it laid quite flat, and is also in position to rotate the wheel as soon as struck thereby. When the force of the wind increases, the springs yield and the blades open more and more, offering less and less surface to the wind. In this way the speed of the wheel and machinery is automatically regulated, so as never to exceed a certain degree.

By the construction above shown, the springs E, pressing on the backs and faces of blades D, re-enforce one another and act as one compound spring.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of rod C with blade D and spring E, provided with extension or arm *e*, substantially as set forth.

2. A series of blades, D, in combination with springs E and extensions *e*, whereby all the blades are held partly open at all times, and all the springs re-enforce one another, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

MICHAEL C. YOUNG.

Witnesses:

JOHN T. HARPER,

JAMES M. HARPER.