

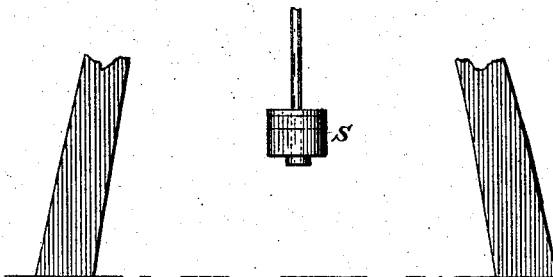
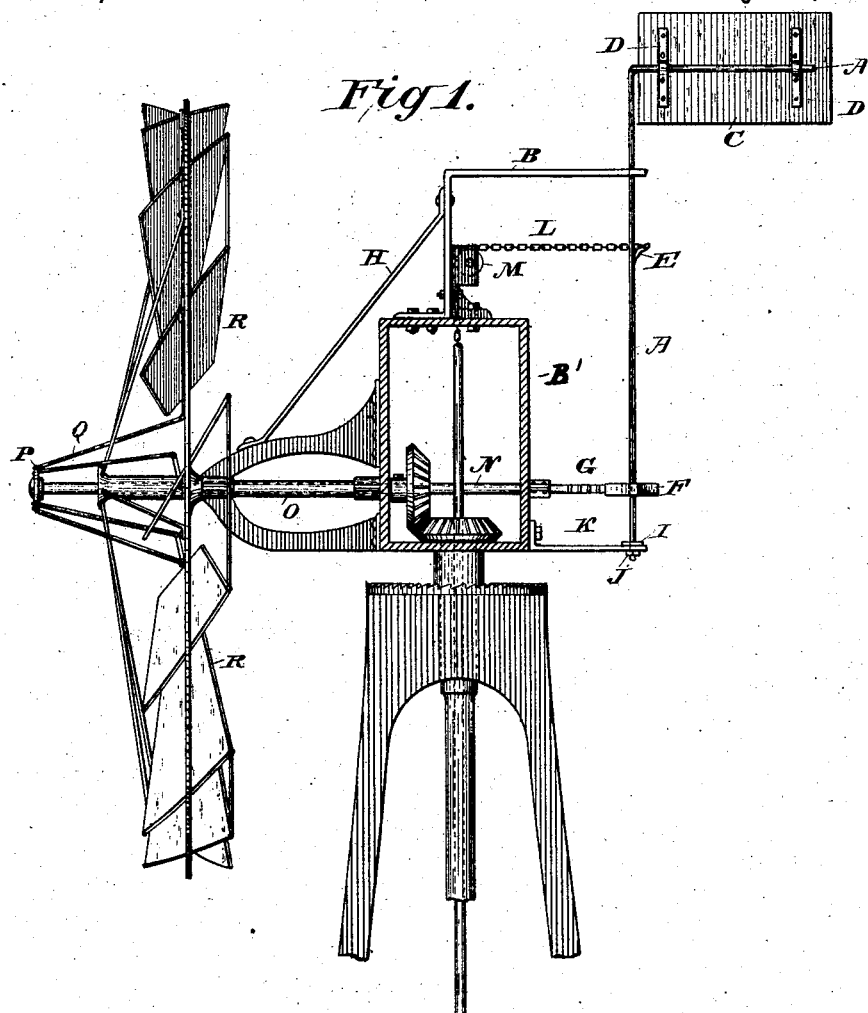
(No Model.)

2 Sheets—Sheet 1.

B. CHAMBERLAIN.
WINDMILL GOVERNOR.

No. 260,841.

Patented July 11, 1882.



Attest:

Geo. T. Smallwood Jr.
S. M. Hopkins.

Inventor:

Blanchard Chamberlain.

By

Knight & Sons
attys

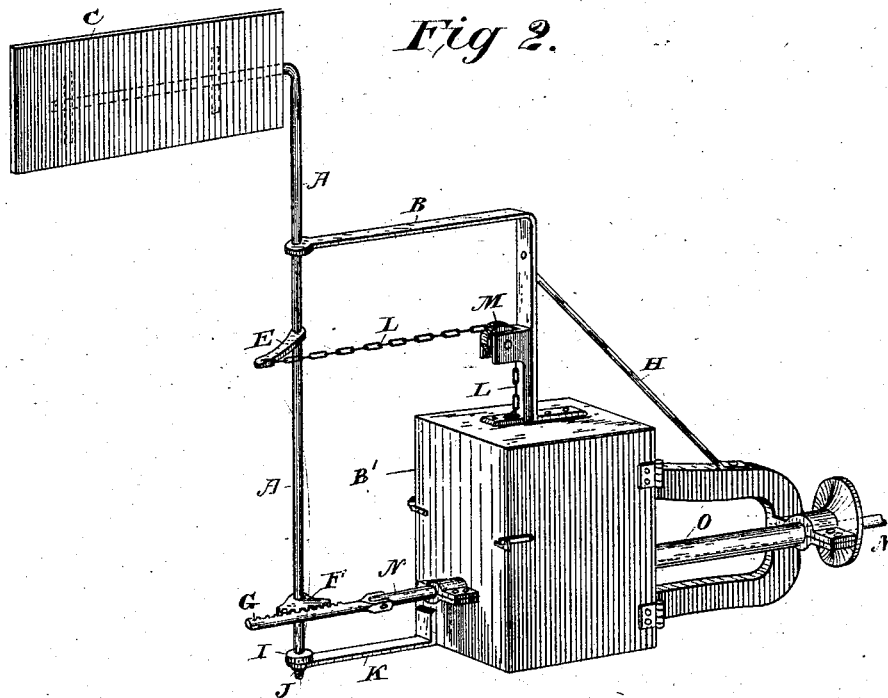
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Lynchburg.

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UNITED STATES PATENT OFFICE.

BLANCHARD CHAMBERLAIN, OF BELLEFONTAINE, OHIO, ASSIGNOR OF
THREE-FOURTHS TO JOSEPH H. WILSON, ROBERT LAMB, H. E. PALMER,
AND G. H. PALMER, ALL OF SAME PLACE.

WINDMILL-GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 260,841, dated July 11, 1882.

Application filed April 12, 1882. (No model.)

To all whom it may concern:

Be it known that I, BLANCHARD CHAMBERLAIN, a citizen of the United States, residing at Bellefontaine, in the county of Logan and State of Ohio, have invented a new and useful Improvement in Windmill-Governors, of which the following is a specification.

My invention relates to the class of windmills which are constructed with pivoted blades adapted to be feathered or turned edgewise in order to graduate the effective surface relatively to the force of the wind and the power required for the work to be performed, the pivoted blades being connected by cranks on their shafts and rods from said cranks to a feathering-rod extending through the hollow shaft of the wheel, and connected by a chain to a counterbalance weight or spring adjustable so as to apply any desirable force or pressure to resist the feathering of the blades.

My improvement consists in the combination, with the above-named appliances, of a vane mounted on a vertical governor-shaft connected by a rigid horizontal arm to the feathering-rod above referred to, and by another arm to the chain of a counter weight or spring, so that the force applied by said counter weight or spring to hold the blades broadside to the wind will be counteracted and regulated in proportion to the pressure by the action of the wind on said vane.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is an elevation of a portion of a windmill with my governor applied. Fig. 2 is a perspective view of the same.

A is a vertical governor-shaft, formed with a horizontal arm, A', and turning in a bracket, B, which is rigidly secured to the turn-table B' of the mill, and is braced by a stay-rod, H, extending from near its upper end obliquely downward to the front portion of the box or bearing of the main shaft.

On the horizontal arm A' of the governor-shaft A a vane, C, of sheet metal, is bolted or

riveted, straps DD being employed to strengthen and support it.

A rigid horizontal arm, E, projects from the governor-shaft A near its mid-length and a segment-arm, F, near its lower end.

Below the segment-arm F the shaft is provided with a collar, I, resting on a lug or bracket, K, formed to receive it, secured to the turn-table of the mill, below which is a nut, J, to secure the shaft in place.

The suspension chain or rod of the counterbalance weight or spring S is shown at L connected to the arm E and passing over a pulley, M.

A rack, G, connects the segment-arm F with the feathering-rod N, which extends through the hollow main shaft O of the mill, and carries on its forward end a loose collar, P, connected by rods Q Q to the crank-shafts of the blades R.

The drawings represent the parts in the position which they will assume when the governor-vane C has thrown the blades of the wheel edgewise to the wind.

By the application of any desired pressure by counter weight or spring to the chain or rod L the vane C will be drawn broadside to the wind until it overcomes the pressure of the weight or spring, the wheel-blades being turned flatwise to the wind to a corresponding degree. It will thus appear that an increase of pressure of wind, by deflecting the governor-vane C in opposition to the pressure of the counter weight or spring, will tend to turn the wheel-blades edgewise to the wind, whereas a reduced pressure of the wind, permitting the vane C to be drawn around by the action of the counter weight or spring, will present a greater surface to the wheel-blades, thus regulating the pressure as required under control of an adjustment or variation of pressure in the counter weight or spring which is regulated to correspond with the power required for use.

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

1. The combination, with counterbalance
rod and chain L and feathering-rod N, of the
rack G, and vertical governor-shaft A, pro-
vided with vane-arm A', arm E, and segment-
5 arm F, as set forth.

2. The combination of feathering-rod N,
rack G, governor-shaft A, arms E, F, and A',

vane C, bracket B, turn-table B', collar I,
lug K, and securing device J, as set forth.

BLANCHARD CHAMBERLAIN.

Witnesses:

J. O. SWEET,

E. J. HOWENSTIN.