(No Model.)

L. WILCOX.

WINDMILL.

No. 278,842. Patented June 5, 1883.

Fig. 1.

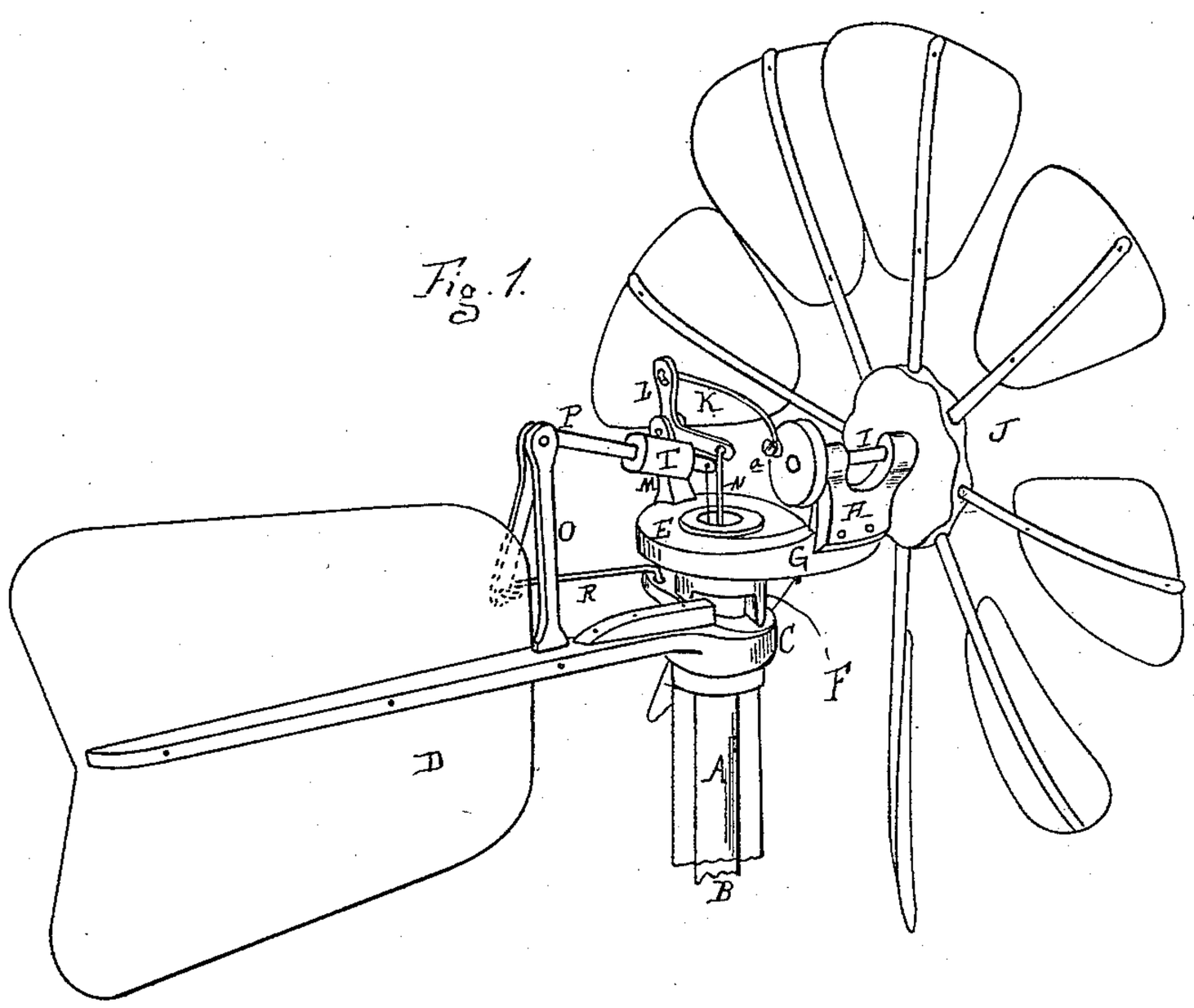
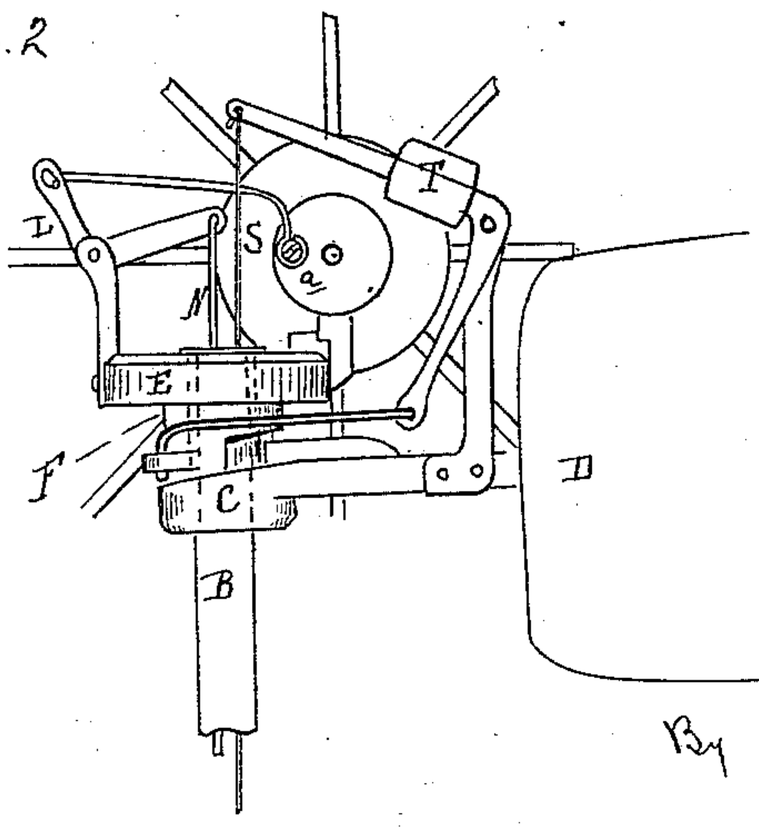


Fig. 2.



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UNITED STATES PATENT OFFICE.

LYMAN WILCOX, OF CONE, MICHIGAN.

WINDMILL.

SPECIFICATION forming part of Letters Patent No. 278,842, dated June 5, 1883.

Application filed October 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, LYMAN WILCOX, of Cone, in the county of Monroe and State of Michigan, have invented new and useful Improvements in Windmills, and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in the construction of windmills; and it consists in the peculiar construction of the turn-table, and in the peculiar construction, arrangement, and various combinations of the parts, all as more fully hereinafter set forth and claimed.

Figure 1 is a perspective view of my invention. Fig. 2 is an elevation, with the wind-wheel at right angles to the position shown in Fig. 1.

In the accompanying drawings, which form a part of this specification, A represents a hollow standard, which is designed to be supported by any suitable frame-work. Within the upper end of this standard A is placed the bent tube B, upon which the head C of the tail-vane D is rigidly secured in any convenient manner, the head C being free to rotate upon the end of the standard A, while the upper face of the head C serves as a rest for the turn-table E, which is sleeved upon the upper end of the tube B. The upper face of the head C is slightly inclined, as shown clearly in Fig. 2, while the hub F of the turn-table E has its lower face, which rests upon the head C, similarly formed. The turn-table E is provided at one side with the arm G, from which rises the standard H, provided with suitable bearings, H′, in which the wheel-shaft I is properly journaled, the outer end of which carries the wind-wheel J. The inner end of this shaft I is provided with a crank-pin, *a*, to which one end of the connecting-rod K is secured, the opposite end engaging with one arm of the bell-crank lever L, which is properly pivoted in the upper end of the standard M, resting on the turn-table E, while to the opposite end or arm of this bell-crank lever is secured the pump-rod N, which passes down through the tube B, as in the ordinary manner. Rising from the stem of the tail-vane is a standard, O, in the upper end of which is properly pivoted the bell-crank lever P, one arm of which is connected by a rod, R, to the turn-table E, upon the side opposite to that which supports and carries the wind-wheel. The other arm of this bell-crank lever P is provided with a rod, S, which projects down to within easy reach from the ground, and upon this arm is properly secured the sliding weight T.

In practice, the parts being in position as shown in Fig. 1, the wind will strike directly upon the face of the wind-wheel, causing it to revolve, and, by the connections hereinbefore named, impart a reciprocating motion to the pump-rod. As the wind increases in force the axial center of the wheel, being at one side of the center of the turn-table, will cause the turn-table to turn upon the head C and assume the position in a heavy wind shown in Fig. 2, in which the axial center of the wheel is at right angles to the axial center of the tail-vane and head. This movement causes the rod R to draw upon its respective arm of the bell-crank lever P and raise the arm which carries the sliding weight T, and which latter in this movement will slide down its arm of the lever to or near its pivotal point within the standard. As the wind decreases in force the gravity of the turn-table and wheel will naturally cause them to assume their original position and slide down the incline upon the head C, while at the same time the sliding weight T will likewise assume its original position near the outer end of the lever which supports it, and this weight may be graduated so that the mill or wheel may be thrown out of wind by either a light or a heavy wind, as it is evident that before the wheel can assume the position shown in Fig. 2 the wind must have reached that force sufficient to cause the table to slide upon the incline and also to overcome the gravity of the sliding weight.

What I claim as my invention is—

1. In a windmill constructed substantially as described, and in combination with the turn-table E, formed with suitably-inclined bearing-surfaces and an oppositely-inclined supporting-head, the bell-crank lever P, the connecting-rod R, sliding weight T, standard O, and suitable tail-vane, arranged and adapted for automatically controlling the action of the mill, substantially as set forth.

2. In a windmill, and in combination with

the tube B, head C, formed with inclined bearing-surfaces, and the tail-vane D, constructed as described, the turn-table E, resting upon such head C and provided with oppositely-inclined faces, substantially as and for the purposes described.

3. In a windmill, and in combination with a head, C, having inclined bearing-surfaces, and the turn-table E, having bearing-surface S, resting upon said head C and oppositely-inclined thereto, the wheel J, journaled in suitable bearings, H′, arranged tangential to the periphery of said turn-table and head, substantially as specified.

4. A windmill consisting of the tube B, head C, formed with inclined surfaces, the tail-vane D, turn-table E, provided with oppositely-inclined bearing-surfaces and resting on the head C, the hub F, wheel J, journaled parallel to the axial center of the turn-table E, and eccentrical with respect to the bell-crank levers L P, rods K R, and sliding weight T, when constructed, arranged, and operating substantially as and for the purposes herein set forth.

LYMAN WILCOX.

Witnesses:
L. A. WILCOX,
MILO VAN DEVENTER.