

(No Model.)

2 Sheets—Sheet 1.

T. T. MILLER.

WIND ENGINE.

No. 259,704.

Patented June 20, 1882.

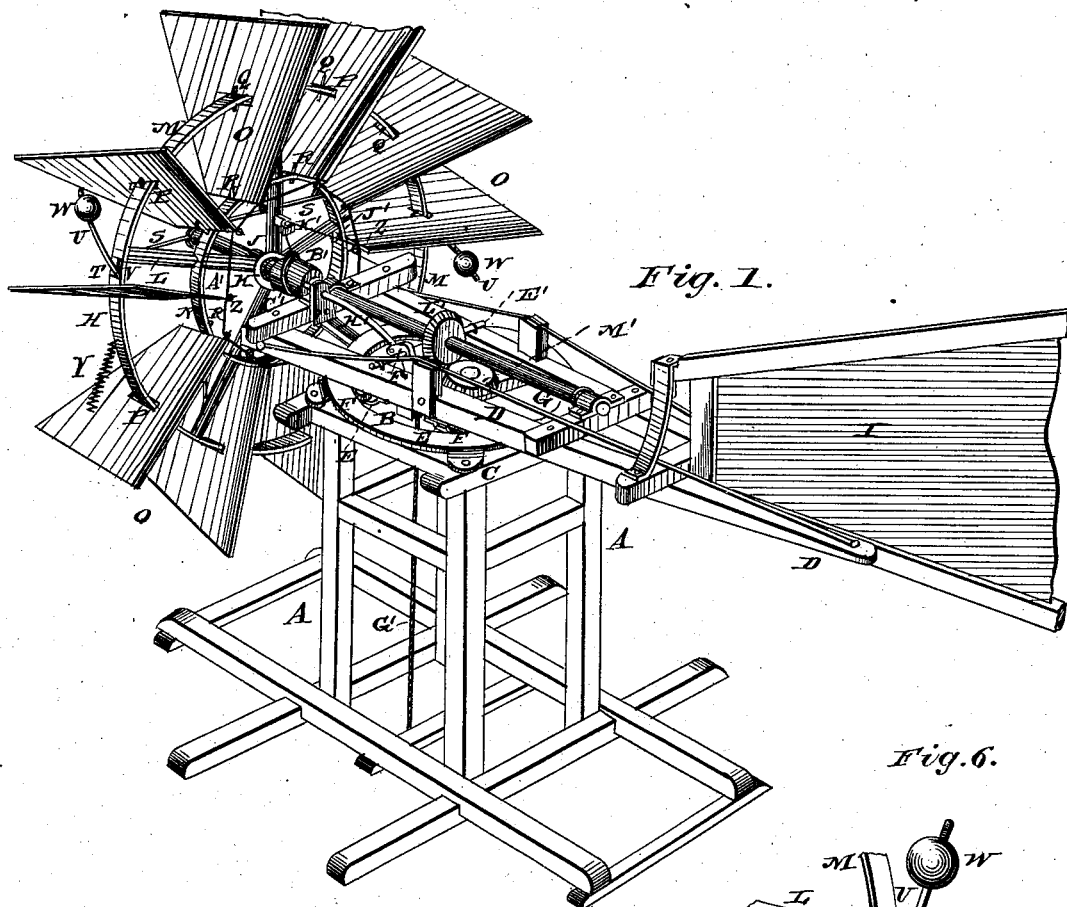


Fig. 1.

Fig. 6.

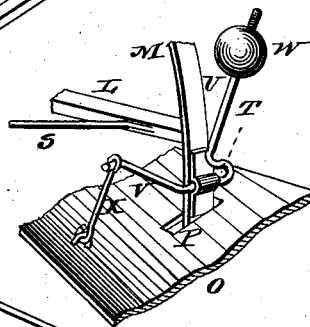
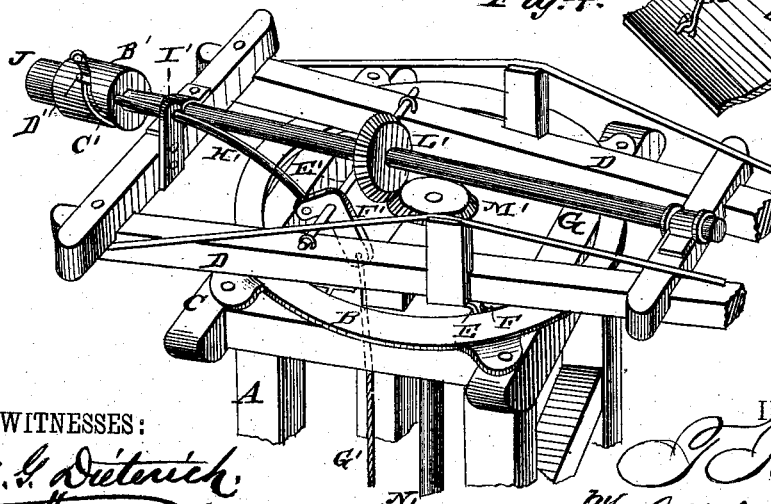


Fig. 4.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

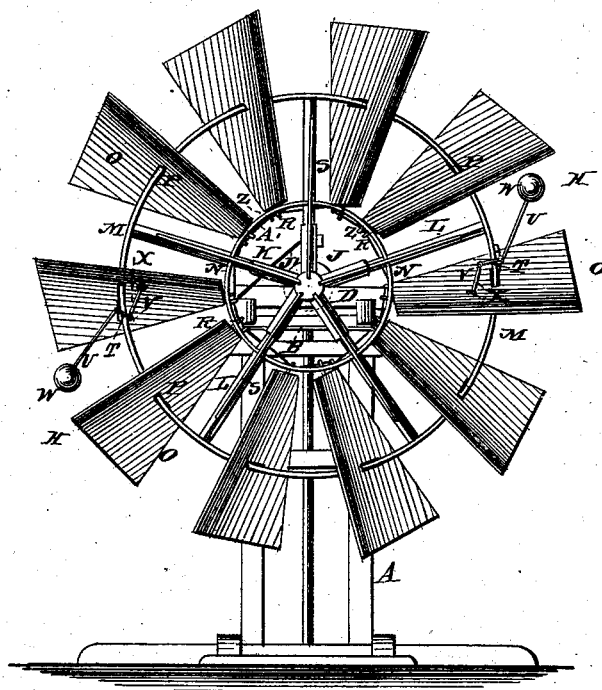


Fig. 3.

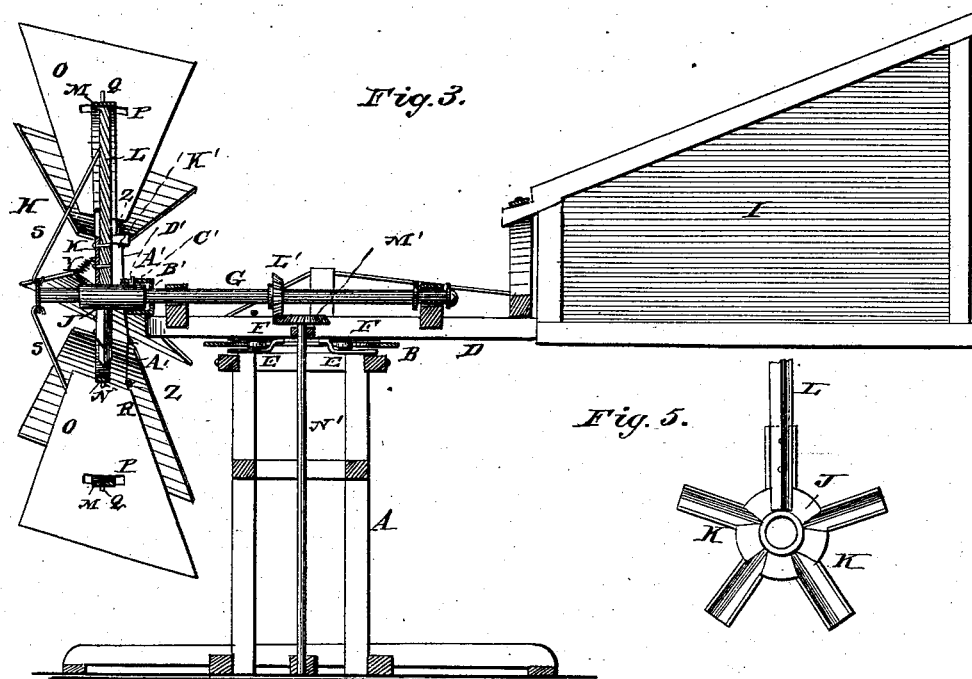
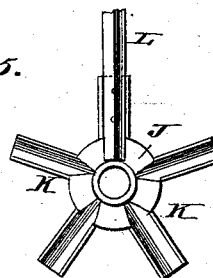


Fig. 5.



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# UNITED STATES PATENT OFFICE.

TEDOR T. MILLER, OF HICO, TEXAS.

## WIND-ENGINE.

SPECIFICATION forming part of Letters Patent No. 259,704, dated June 20, 1882.

Application filed March 29, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, TEDOR T. MILLER, of Hico, in the county of Hamilton and State of Texas, have invented certain new and useful Improvements in Wind-Engines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a perspective view. Fig. 2 is a front elevation. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a detail view of the brake. Fig. 5 is a detail view, showing the construction of the wheel; and Fig. 6 is a detail view of the rock-shaft T and its attachments.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to wind-engines; and it consists in certain improvements in the construction of the same which will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings hereto annexed, A represents the frame or tower of my improved wind-engine, at the top of which a turn-table, B, consisting of a circular frame provided with legs or brackets C, secured to the tower A, is mounted, as shown.

D is a suitably-constructed revolving frame, mounted upon the turn-table B by means of brackets E, in which casters or friction-wheels F, bearing against the inner side or rim of said turn-table, are journaled. Said frame is provided with suitable bearings for the longitudinal horizontal shaft G, carrying at its front end the wind-wheel H. The vane I is suitably attached to the rear or tail end of the frame D, as shown.

The wind-wheel H consists of the hub J, having radiating angular or V-shaped sockets K, in which the wooden spokes L, which are square in cross-section, are secured by bolts or otherwise.

The rim or tire M consists of a metallic band secured to the outer ends of the spokes. The latter also pass through a circular band or brace, N, arranged between the hub and rim, concentric with the latter.

The wings O of the wheel consist of suitably-constructed metallic plates having slots P, by which they are adjusted upon the rim M, upon which they are pivoted by means of pins Q. At their inner ends the wings O are provided with pins R, by which they are pivoted in the brace N, so as to swing freely to any desired angle.

The hub J is mounted securely upon the shaft G, the end of which is connected by braces S with the spokes of the wheel.

Mounted transversely upon the rim of the wheel H, at diametrically opposite sides, are two rock-shafts, T T, provided each with two cranks or arms, U V, the inner long ones of which, U, carry adjustable weights W, while the outer arms, V, are connected by suitable links or pivoted rods, X, with the adjoining wings O of the wheel. The tendency of the weights W, it will be seen, is to keep the wings to the wind, and in this they are assisted by suitably-arranged coiled springs Y, attached to the wings O and to the rim of the wheel. The inner lower corners of the wings O have pins Z, pivoted in suitable bearings in a ring, A', located to the rear of the wheel H, and thus connecting all of the wings O, so that when one of said wings is turned upon its pivots they shall all turn together.

B' is a sleeve fitted upon the shaft G to the rear of wheel H, and having a spiral slot, C', to receive a pin, D', projecting from said shaft. E' is a shaft mounted transversely in the frame D, and carrying a bell-crank lever, F', to one of the arms of which is attached a rope or chain, G', passing down through the tower, while to the other arm is hinged a rod, H', sliding longitudinally in suitable bearings, I', in frame D, parallel to the main shaft G. The end of the rod H' bears against the sleeve B', the front end of which is connected by a cord, J', passing over a pulley, K', attached to the rear side of one of the spokes of wheel H, with the lower rear corner of one of the wings O of the wind-wheel.

The shaft G is provided with a bevel-gear, L', meshing with a pinion, M', upon the vertical shaft N', which is journaled in suitable bearings in the frame or tower A, and from which motion may be taken in any suitable manner.

The operation of my invention is as follows: In ordinary high wind the wings O will turn upon their pivots, thus presenting their edges to the wind, so as to prevent the wheel from revolving too fast. When it is desired to stop the wheel it is only necessary to pull the chain G' or attach a weight to its lower end. The bell-crank lever F' will then throw the rod H' forward, thus pushing the sleeve B' forward, while said sleeve at the same time, owing to the spiral slot C' and pin D', turns upon the shaft G. By thus turning, the sleeve B' pulls upon the cord J', thus throwing the wings O out of the wind. The rod H', by pressing upon the rear end of sleeve B', acts as a brake and stops the revolution of the wheel.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination of the revolving frame D,

shaft G, having wheel H, consisting of the hub J, spokes L, rim M, brace N, wings O, having slots P and pins Q R Z, ring A', forming bearings for the pins Z, rock-shafts T, having arms U V and weights W, connecting-rods X, and springs Y, the shaft E', having bell-crank lever F', chain G', rod H', sleeve B', having spiral slot C' to receive a stud, D', upon shaft G, the pulley K' upon one of the spokes, and the cord J', connecting the sleeve B' with one of the wings, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

TEDOR T. MILLER.

Witnesses:

H. W. ROBERTSON,  
J. S. SPARKMAN.