

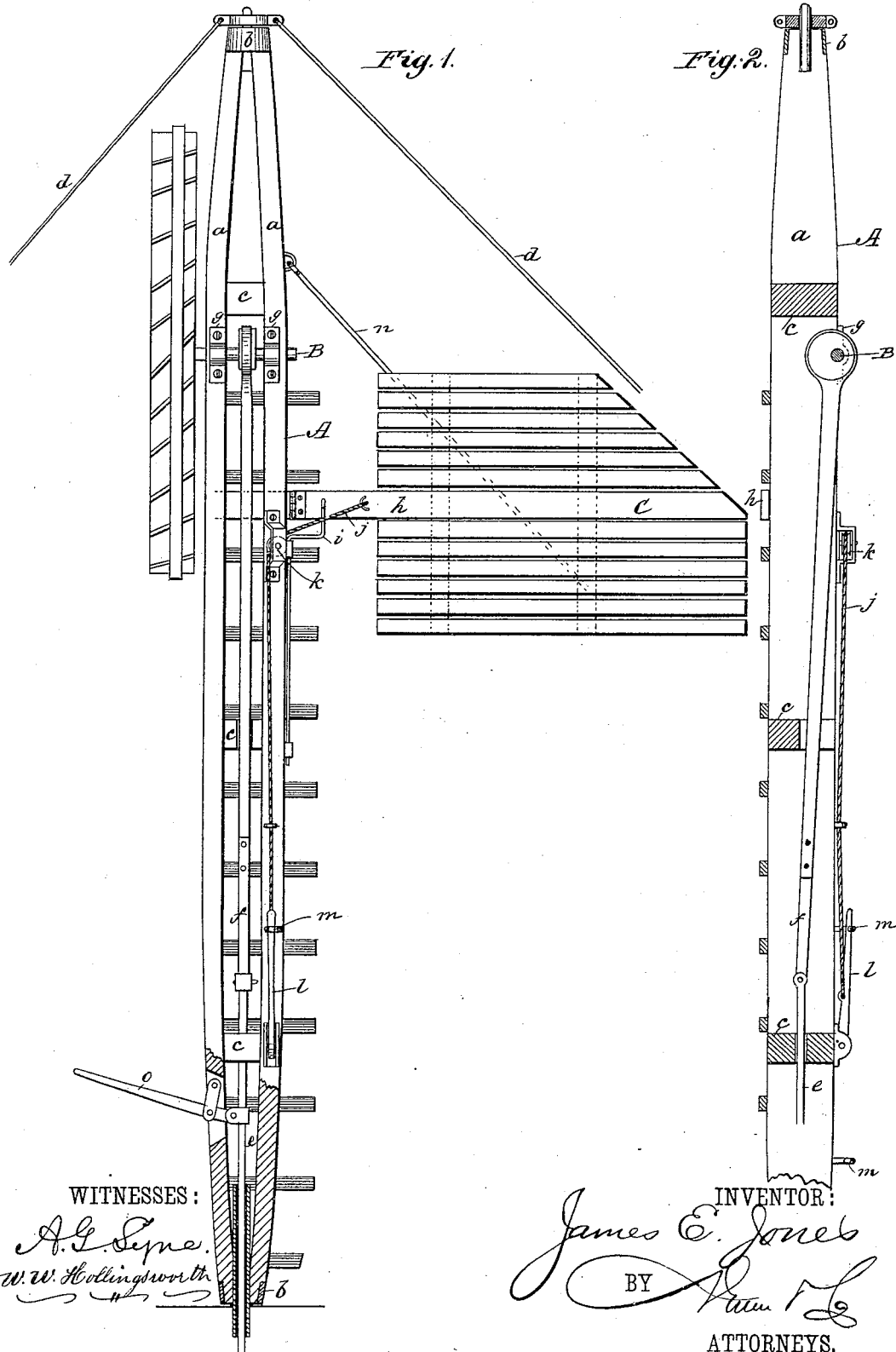
(No Model.)

J. E. JONES.

WIND ENGINE.

No. 263,530.

Patented Aug. 29, 1882.



UNITED STATES PATENT OFFICE.

JAMES E. JONES, OF ABILENE, KANSAS.

WIND-ENGINE.

SPECIFICATION forming part of Letters Patent No. 263,530, dated August 29, 1882.

Application filed May 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. JONES, of Abilene, in the county of Dickinson and State of Kansas, have invented a new and useful Improvement in Windmills, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

This invention consists in certain novel features of construction relating to a windmill having a rotary tower, as hereinafter described.

In the drawings, Figure 1 is a side elevation of my improved windmill; and Fig. 2 is a sectional view, showing certain parts of the same.

Windmills which are constructed with vertically-rotating wheels have heretofore been provided with broad heavy towers, which are objectionable on account of the great surface they present to the wind in a storm. I therefore construct the tower A of two flat pieces of lumber, *a a*, which are secured together at the ends by bands *b b*, and held apart from the center to the ends by intervening blocks *c c c*. The tower is provided with pivots at the ends, and is to be supported in a vertical position by guys *d* in such manner that the tower may be rotated upon its pivots. The pivot at the lower end is made hollow to receive the pump-rod *e*, which passes up through a perforation in the lower block, *c*, and is connected by a flexible joint to the pitman *f*. The upper portion of the pump-rod is to be provided with a swivel-joint in the usual manner to allow the tower a rotary movement independent of the pump. The pitman *f* is accommodated in a slot in the central block, *c*, and is connected by means of an eccentric to the wind-wheel shaft B, which is supported in bearings *g* at the sides of the timbers *a a*. The object of so arranging the said shaft is to allow the pitman to have a vertical position in its upward or lifting movement. The shaft is made of just sufficient length to support the wind-wheel by means of the two bearings *g*, and the vane C is made separate therefrom.

The vane is provided with an arm, *h*, which is hinged to one of the timbers *a* in such manner that the end of the arm shall rest against the opposite timber *a*. A spring, *i*, is secured to the tower in such manner that the crank-shaped end thereof shall tend to hold the end

of the arm against the said timbers in the direction of the shaft B. A chain or cord, *j*, is connected to the said arm near the vane, and passed over a pulley, *k*, thence down one of the timbers *a* to a lever, *l*, pivoted to the tower, and is secured to the said lever near the center thereof, so that by depressing the handle of the lever the vane will be drawn to a position at right angles to its normal position. Suitable catches, *m*, are provided for holding the lever in either of two positions. As shown, also, the vane is strengthened in its connection with the tower by a stay-rod, *n*, which forms a flexible joint with the latter.

The invention is operated in the following manner: When the vane is in its normal position the action of the wind thereon will cause the tower to rotate sufficiently to bring the wheel to face the wind. When it is desired to throw the wheel out of action the lever *l* is to be depressed to draw the vane to a position at right angles to the shaft of the wind-wheel. The action of the wind upon the vane will then cause the tower to rotate to bring the vane in line with the direction of the wind, and this will cause the wheel-shaft to assume a position at right angles to the wind. The periphery of the wheel will thus cut the wind, and no motion will be communicated thereto.

With this construction it will be seen that in case of a storm the tower, the wheel, and the vane may be quickly adjusted with their narrowest surfaces to the wind, thus offering but little resistance and avoiding danger of being blown over.

The connection between the pump-rod and the pitman is such that they may be readily separated, and by means of a pump-lever, *o*, pivoted in a slot in the tower near the lower end, and having suitable means for connection with the pump-rod, the latter may be operated by hand when the wind is not sufficiently strong to drive the wheel.

A ladder is to be formed by means of cross-pieces secured to the upright timbers, as shown, for convenience in reaching any part of the machine.

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

1. The combination of the tower formed of

two upright timbers secured to intervening blocks, and having pivots at the ends, and a socket and guys for supporting the tower, the pump-rod arranged in the hollow pivot at the lower end of the tower, the pitman flexibly jointed to said rod, the wheel-shaft supported at the side of the tower, and the vane secured to the tower apart from the said shaft, substantially as shown and described, and for the purposes set forth.

2. The combination of the tower adapted to rotate horizontally, the wind-wheel supported

on a short shaft at the side of the tower, the vane having an arm hinged to the tower near the end of said arm, the spring secured to the tower and adapted to hold the vane normally with the end of its arm against the side of the tower, and the chain and lever for operating the vane, and devices for holding the lever, substantially as shown and described.

JAMES E. JONES.

Witnesses:

O. L. MOORE,
E. C. ADAMS.