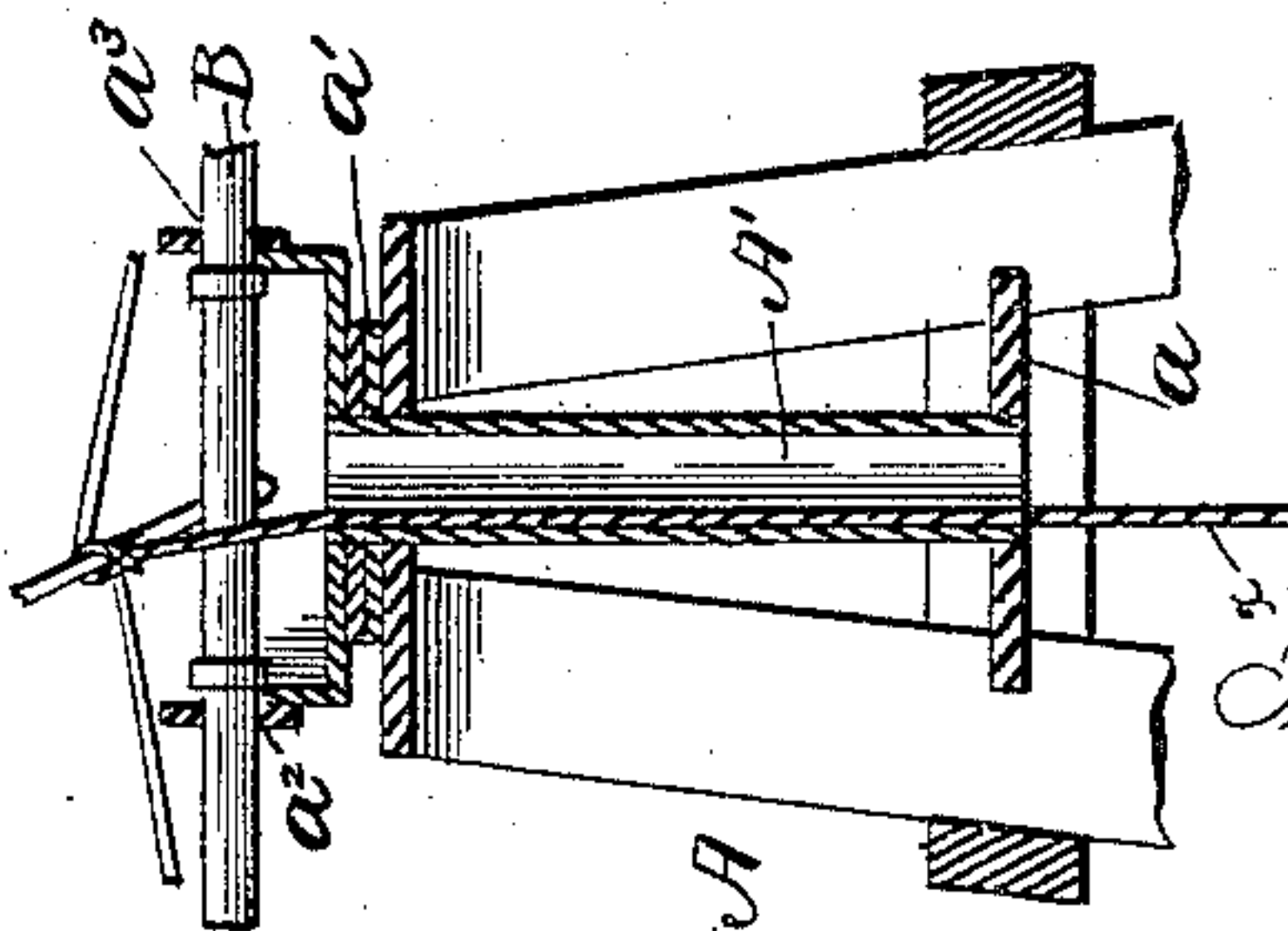
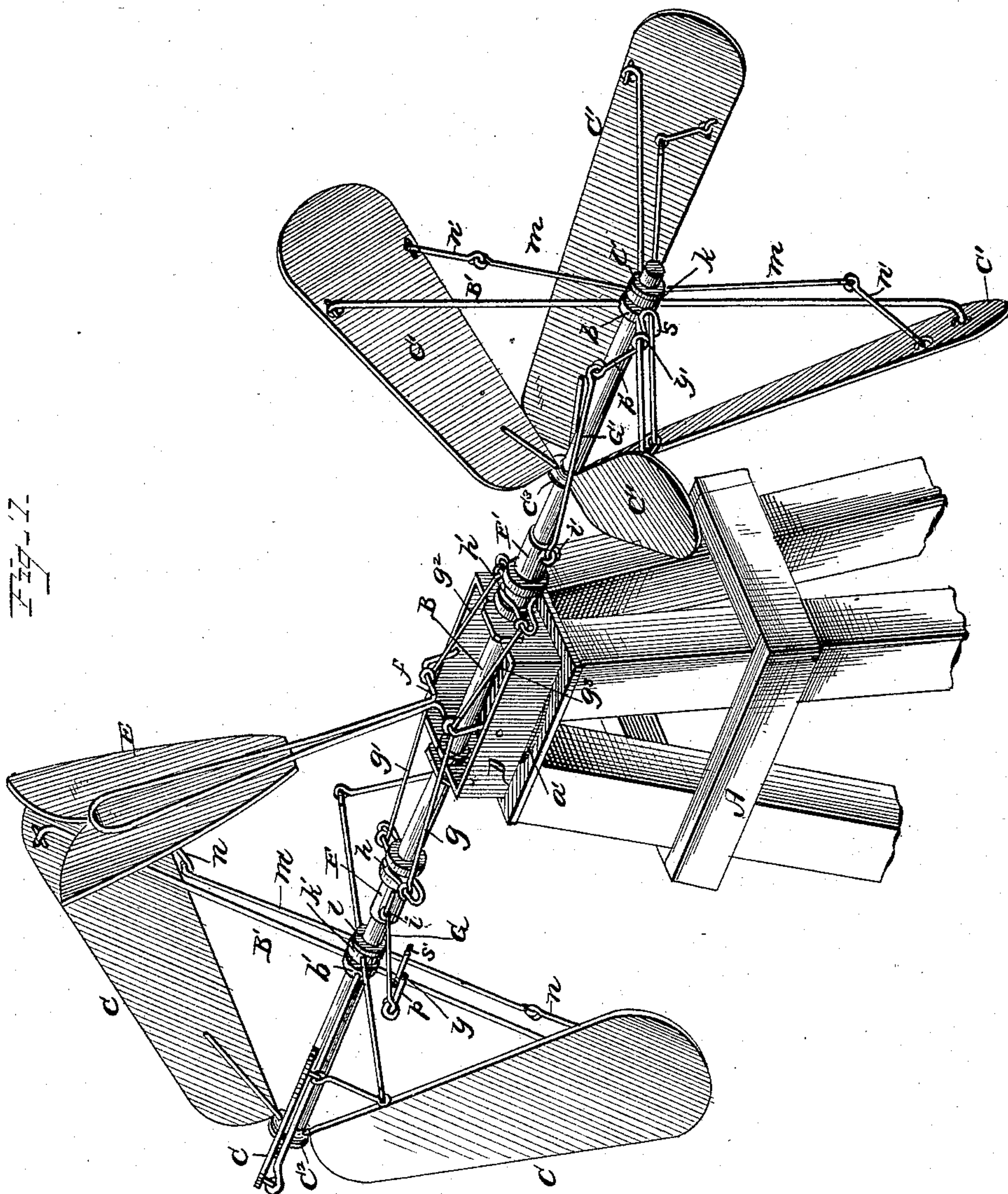


(No Model.)

T. D. POLLOCK.
WIND ENGINE.

No. 316,656.

Patented Apr. 28, 1885.



WITNESSES
F. L. Ouraud
Geob Poulton

INVENTOR
Thomas D. Pollock.
by
A. B. Webb.
his Attorney

UNITED STATES PATENT OFFICE.

THOMAS D. POLLOCK, OF DANBURY, NEBRASKA.

WIND-ENGINE.

SPECIFICATION forming part of Letters Patent No. 316,656, dated April 28, 1885.

Application filed November 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS D. POLLOCK, a citizen of the United States, residing at Danbury, in the county of Red Willow and State of Nebraska, have invented certain new and useful Improvements in Wind-Engines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention has relation to improvements in wind-engines; and it consists in the construction and novel arrangement of parts, as will be hereinafter described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a perspective view of my invention, and Fig. 2 is a detail sectional view thereof.

The letter A represents the tower of my wind-engine, having near its upper end a bearing, *a*, and on its top portion a similar bearing, *a'*, in which is journaled a hollow tube or spindle, A'. This spindle or tube has secured to it a boxing, D, in which is mounted in suitable ways, *a*² and *a*³, a rotating shaft, B, having castings *b* and *b'*, provided with rigid arms B' and B', the upper ends of which are hinged to one edge of the fan-blades C and C'. These bearings are located the one, *b*, at the end of the shaft, while the other one, *b'*, is arranged some distance from the other end thereof. To the end of the shaft is also rigidly secured a bearing, C², having perforations, and between the boxing D and the other end of the shaft is secured a corresponding bearing, C³, having perforations.

The fan-blades C and C' are provided at their lower ends with hooks which engage the perforations of the bearings C² and C³, and are allowed to turn freely therein.

The boxing D is provided with a fan, E, which operates between the blades by means of a crank, *f*, hinged to the sides of the boxing D, at the central portion thereof, and this crank is provided with arms *g*, *g'*, *g*², and *g*³, which are connected to sliding sleeves F F' on the shaft—one on each side of the boxing—by means of braces *h* *h'*, interposed between

grooves on the collars of the sleeves. The sleeves are provided on their under surfaces, or at their sides, with eyes *i* and *i'*, to which are connected arms G and G', for a purpose hereinafter explained.

Between the bearings *b* *b'* and abutments *l* and *l'* are located bearings *k* *k'*, which are allowed to rotate on the shaft, and are provided with arms *m* and *m'*, which are hinged to arms *n* and *n'*, that are pivoted to the edges of the fan-blades opposite those of the arms B and B'.

The arms G and G' of the sleeves are provided with short arms *p* and *p'*, each one of which is twisted at its outer end around one of the rigid arms of both wheels, as shown at *y* *y'*, and they are also provided with loops *s* and *s'*, which are connected to the adjoining hinged arms of both wheels, whereby, by the action of the central vertically-vibrating fan, E, in connection with the sliding sleeves and their attachments, the wings of both wheels, with their hooked pivoted ends, are thrown into or out of the wind.

The fan E is provided with a suitable rope or cord, *x*, which passes down through the hollow tube or spindle, to which weights are attached to assist in bringing the fan back to an upright position.

It will be apparent from the construction thus described that the wheels and their shaft resting in bearings of the boxing D may freely revolve on the spindle A' to bring the wheels into position to be turned upon their axes by the wind. The sliding sleeves and their rods, together with the fan E and its connections, enable the blades of the wheels to be adjusted to best adapt them to receive the force of the wind.

It is evident that numerous changes in the construction and relative arrangement of the several parts of my improvement might be resorted to without departing from my invention; and hence I would have it understood that I do not limit myself to the exact construction shown and described, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

Having described my invention, what I claim is—

The combination, with the tower A, having the rotating boxing D, carrying the shaft B,

having one wheel at one end and the other between the boxing and outer end, of the vertically-vibrating fan E, operated by crank f, having arms attached to sleeves F F', and 5 arms G G', pivoted to the sleeves, and the hinged arms p p', twisted around one of the rigid arms of each wheel, and having loops s s', connected to one of the adjoining hinged arms of each wheel, as shown and described.

In testimony whereof I affix my signature 10 in presence of two witnesses.

THOMAS D. POLLOCK.

Witnesses:

E. J. ALLINGTON,
LAFAYETTE MILLER.